



UiT The Arctic University of Norway

Faculty of humanities, social science, and education

The role of cross linguistic influence in the classroom

Acquisition of English subject-verb agreement by Norwegian and Polish adolescents

Marthe Winther Bråthen

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Abstract

This thesis aims to highlight how learners' native language affects their acquisition of a second language. The study compares how L1 Norwegian and Polish learners acquire subject-verb agreement and discusses how cross-linguistic influence affects their results. Furthermore, the study isolates long-distance and local agreement conditions for each group to further discuss if structural distance affects the groups similarly. The findings suggest that both groups exhibit higher accuracy scores in local grammatical conditions than in long-distance ones. The Polish participants are notably more accurate in identifying local grammatical agreement compared to long-distance, while the Norwegians struggle more with the long-distance plural condition. The study provides tentative support for the Shallow Structure Hypothesis, which suggests that learners may struggle with long-distance agreement due to the complexity of structural distance. The findings also suggest that distance is not necessarily the most challenging factor for learners, as the Norwegians struggle more with overgeneralizing the third person singular – s. The study's results may have implications for instructed settings in terms of how teachers and learners can be more aware of potential bottlenecks in acquiring non-local agreement. Overall, the study highlights the importance of examining cross-linguistic differences in how learners acquire grammatical structures in a second language. Furthermore, the study provides suggestions as to the importance of considering the pupils native language when acquiring a second language. Specifically, the study suggests an increased focus on subject-verb agreement and functional morphology in the English classroom.

1 Introduction

One of the main differences between acquiring a first language and a second language is age (Hummel, 2014, p. 18). In essence, all L1 learners are exposed to the target language from birth. This exposure to the first language happens simultaneously as other developmental processes begin to appear (Hummel, 2014, p 18). Comparatively, second language acquisition entails that a first language is already acquired, and as such, the second language is acquired beyond childhood and early infancy. Second language learners have thus, by definition, the benefit of already having gone through several cognitive stages (Hummel, 2014). Additionally, a key difference that distinguishes L1 and L2 acquisition is that L2 learners already have a linguistic system to fall back on (Hummel, 2014, p 19). For most of the world, this second language is usually English. English has gradually become the lingua franca of the world, the importance of being able to effectively communicate using English has become a greater focus. This is reflected through the English curriculums that emphasise that being able to use English to communicate effectively with others is one of the core aspects of the English subject (LK20). English grammar, for instance important features such as subject-verb agreement is thus a fundamental aspect of the English language and is crucial for effective communication as it can be described as the backbone of English sentence structure (Ping, 2012). Despite its importance, many non-native speakers of English struggle with this area of the language, and it remains a challenging area for them to master (Ping, 2012). The challenge of learning correct SV-agreement is its belonging to the domain of morphology. As highlighted by Slabakova (2008) who presents functional morphology as the bottleneck in language acquisition.

In this study, I aim to investigate the difficulties faced by non-native speakers of English, specifically Norwegian and Polish learners, in mastering subject-verb agreement. The current study also aims to highlight how cross-linguistic influence is a factor behind the issues of acquiring functional morphology and examine the impact that these difficulties have on their overall language proficiency. The implications of cross-linguistic influence on subject-verb agreement are far-reaching, affecting both the learner's language development and their overall language proficiency (Jensen et al. 2021). Inconsistencies in subject-verb agreement can make a person's speech or writing difficult to understand and can negatively impact their ability to communicate effectively in academic, professional, and social contexts (Hummel, 2014). Furthermore, persistent errors in subject-verb agreement can signal to others that the learner is not proficient in English and may reduce their chances of success in English-speaking

environments. To address the implications of cross-linguistic influence, it is essential to be aware of the different grammatical rules that exist in different languages and to take steps to help learners overcome the influence of their first language when learning English. This may involve providing explicit instruction on subject-verb agreement and providing opportunities for learners to practice and receive feedback on their language use. Based on this, the hypothesis that the current thesis explores is that cross-linguistic influence is a key factor that teachers must consider when instructing pupils in English SV-agreement as their native languages will affect how efficient they are in acquiring it. To investigate this, I pose the following research questions:

RQ.1 Are the challenges in learning English subject-verb agreement the same for L1 Norwegians and L1 Polish learners?

RQ.2 Which linguistic domain is the most challenging for L2 English learners in regard to local and long-distance agreement?

2 Theoretical background

The focal point of this chapter is to present the theoretical framework of this thesis and highlight key issues related to the role of native languages and cross-linguistic influence in the classroom. As such, this chapter will consider why the role of native languages is essential to consider for teachers as well as the implications it has on language teaching. I will firstly discuss some wider terms such as first and second language acquisition, cross-linguistic influence, and the role it has in the classroom. Finally, the chapter will highlight some theories that provide potential explanations as to why learners may struggle with acquiring certain aspects of the L2.

2.1 Second language acquisition

The term second language acquisition implies that a first language has already been attained. Having a fundamental knowledge of how learners acquire a first language is arguably essential in order to better understand the process of second language learning. In short, first language acquisition typically concerns the acquisition of a native language or a first language. Lightbown et al (2013) remarks that one of the most remarkable aspects of first language acquisition is the high degree of similarity in the early language of children. In other words, despite having different language backgrounds and cultures, children seem to reach the same milestones and developmental sequences according to FLA research (Lightbown et al. 2013). The current thesis is concerned with how the native language affects the acquisition of a second language. Therefore, it is important to consider the linguistic differences between the L1 and L2 in order to consider the possible implication that the L1 has some effect on the L2. Specifically, this thesis will consider how structural differences in the L1 and L2 affect the acquisition of functional morphology. As such, it is essential to first discuss the process of how learners first acquire a L2 in order to better understand how the L1 can be both a source of difficulty as well as a tool that can aid language learning.

Considering how this paper delves into phenomena related to both second language acquisition (henceforth SLA) and First language acquisition (henceforth FLA), it is necessary to include some key definitions and differences between the two. SLA is the process of acquiring an L2 after the L1 is already acquired. Though the apparent distinction is that L2 learners have the benefit of previous language knowledge, whereas L1 learners are essentially starting from scratch. Further similarities include the need for interaction and development through the use of instruction. Thus, in both FLA and SLA, comprehension of the target language is more

accessible than production in the initial stages, and prior knowledge is helpful (Lightbown et al, 2013). As a scientific field of research, SLA research is devoted to studying the process L2 learners go through to achieve L2 attainment. The academic field of SLA is a sub-discipline of applied linguistics. SLA is also closely related to psychology and education. As such, many SLA researchers consider how cognitive predispositions and instructed teaching affects the process of L2 acquisition. Historically, SLA began as an interdisciplinary field. It is thus difficult to pinpoint precisely when it was established as a scientific field of its own. However, Pit Corder's (1967) and Larry Selinker's (1972) respective publications are primarily credited as instrumental in the development of SLA as a modern field of research with both disciplinary and theoretical perspectives in mind. The main focus of SLA has nevertheless been to study how exactly languages are learned. Though there several theories exist that stem from SLA research, the issue is still unresolved due to the interdisciplinary nature of SLA as well as many theories not being accepted by all SLA researchers. Some notable approaches in SLA research include Chomsky's universal grammar (Chomsky, 1988) and Krashen's five stages of language acquisition (Krashen et al. 1983). Despite no theory being universally accepted as the quintessential answer to language learning, many theories are worth considering in terms of language instruction. SLA research does not necessarily provide teachers with explicit ways of structuring language teaching sequences. However, it can provide teachers with useful knowledge that can inform them about potential factors that affect the acquisition of a new language. For instance, SLA research can provide learners and instructors alike with knowledge about how the first language can be implemented in the L2 learning process to facilitate positive transfer. Moreover, it can provide useful insights into which areas of language that will be the most challenging for learners to acquire based on the structure of the learners L1.

2.2 CLI: Cross-linguistic influence

As the notion of being a multilingual, a person who has acquired two or more languages, has become less the exception and more the standard due to a globalized world, the effects of language interference have become a relevant topic for teachers to consider. Cross-linguistic interference or influence refers to the influence of one language on the acquisition and use of another language. It can occur in both first and second language acquisition and can manifest in various forms, such as the transfer of grammar, vocabulary, and pronunciation from one language to another. As such, language interference can in turn manifest language transfer. Language transfer can be positive asset when learners are acquiring a new language as well as

a potential obstacle. Factors such as language similarity, exposure to the languages, and the learner's age and motivation can all play a role in the degree and nature of cross-linguistic interference. Cross-linguistic interference can occur in first language acquisition when a child is exposed to more than one language from a very early age, such as in a bilingual or multilingual household or community. It can also occur when a child is exposed to a non-native language in a specific context, such as in a classroom setting. For example, a child who is learning English in school while their primary language spoken at home is Spanish may transfer features of Spanish grammar to English, leading to errors in English sentence structure. In both cases, the child is still able to acquire the first language, but with some interference from the other languages.

CLI as a linguistic term was hypothesized to be the cause of grammatical errors in second language learning. This was the general notion in the late 60s and 70s, which was a period where behaviourist views were dominant in the field of linguistics. However, behaviourism as a general view was already the preceding school of thought in psychology from the 1920s. Nevertheless, in behaviourist terms, language learning was described as "habit-forming." Grammatical errors, in that case, were theorized to be the result of interference. In other words, the process of acquiring language as a habit is disturbed when the learner is subsequently exposed to another language. Thus, leading to grammatical errors. Behaviourist description of language acquisition entails that children form syntactic and phonological habits, such as placing the verb-second (V2) in Norwegian. If a child is exposed to English SVO structure, it could result in interference. Another perspective worth considering is that L1s and L2s are acquired independently and in the same way. Meaning children go through the same phases of development in both languages without specific issues regarding transfer and the effects of transfer. However, it is now generally accepted that language transfer does occur, though the implications of it are much more complex than previously assumed. Recent studies in cross-linguistic influence leads to the following conclusion: influence from a second language is not the sole reason behind grammatical errors, nor does it always lead to error (Benson, 2002). There are several theories that concern the role of the native language in regard to the acquisition of a second language. One of the most prominent theories is the Structural Transfer Hypothesis.

The Structural Transfer Hypothesis (henceforth STH) is a theory in second language acquisition (henceforth SLA) that suggests that learners transfer their first language grammatical structures

to their second language when acquiring the latter. This theory proposes that the L1 grammar serves as a template for the L2 grammar and that learners rely on their L1 knowledge to understand and produce L2 structures. The STH supplies conditions for three different types of cross-linguistic influence in bilingual first language acquisition, acceleration, delay, and interference (Hisn, 2012). As opposed to the interface hypothesis that predicts only negative results from linguistic influence, the STH suggests that, in some respects, influence may result in positive results. Acceleration caused by influence results in bilingual speakers acquiring certain linguistic aspects at earlier stages compared with their monolingual peers. Additionally, bilinguals may experience delays where they acquire a construction in later stages compared with monolinguals. Finally, interference, where bilinguals go through stages of development that monolinguals do not. Evidence that supports the STH includes the study *Accelerated Acquisition in Spanish-English Bilinguals: The Structural Transfer Hypothesis* (Hisn, 2012). Hisn (2012) finds that Spanish-English bilingual children show accelerated acquisition of wh-questions. Wh-questions are known to pose difficulties in monolingual language development, hence why it was chosen to find signs of acceleration. On the other hand, a learner whose L1 is Spanish, which has a grammatical gender system, may transfer this feature to their L2, English, which does not have grammatical gender, leading to errors in the use of English articles and pronouns. The result of this error may thus lead to signs of delay.

In the paper, *An investigation of cross-linguistic transfer between Chinese and English: a meta-analysis* (Coco et al. 2017), CLI, or rather, one's first language is described as a possible fundament to acquire a second language. In other words, cross-linguistic influence can thus be defined as knowledge of one language being carried over to another (Coco et al. 2017). Knowledge, in this context, is anything related to either morphosyntax or phonology. To paraphrase, CLI is the linguistic knowledge of, for example, the Norwegian V2 rule, being carried over to German. German, like Norwegian, is a V2 language, resulting in a positive transfer that may, in turn, be a factor in the accelerated acquisition of German. The issue of CLI becomes clear if the Norwegian and German V2 rule was carried over to English, a Subject-Verb- object language. This, in turn, may result in a delay in the acquisition of English syntax. This definition of CLI is closely similar to that of code-switching, where learners use words, structures, and patterns from one language to another. It is, therefore, necessary to distinguish between the two. However, both CLI and code-switching are pervasive features of bilingual speech.

2.3 The role of the native language in the classroom

When pupils acquire a target language in a classroom, they may bring with them the knowledge and skills they have acquired in their first language. This can be both beneficial and challenging. On the one hand, it can help them understand and learn new concepts more easily. On the other hand, it can also lead to errors and confusion. The issue of the role of native language is a debate that has long persisted in the field of second language acquisition, where the earliest stages of the debate were centred around its role in the classroom (Gass, 1988). Today, this debate is still relevant to consider as the notion of children speaking multiple languages before starting school is one many teachers will no doubt experience. Crystal (1997) highlights that around two-thirds of the world's population grows up in multilingual settings, which means that children are exposed to more than one language from birth. For teachers, the fact that most pupils are subject to more than one language is vital to consider when considering which ways these languages affect the process of acquiring a target language. In the case of this study, teachers must consider how native languages, or second languages affect learners whose aim is to acquire English. Specifically, the aim of this chapter is to highlight how the native language impacts language learning. A critical area to consider is thus language transfer. Though, the issue of transfer is, as highlighted by Gass (1988), not without controversy. Gass (1988) discusses that applying a simple definition to the term is not an easy task. However, this thesis will consider the definition provided by Hummel (2014).

Transfer refers to the application of one language's linguistic properties to another (Hummel, 2014). In simple terms, transfer occurs when a learner acquires a new language. It is not limited to a second, third, or fourth language. As such, transfer is also not limited to bilingual learners, though naturally, the term is often linked with bilingualism due to the nature of them often acquiring two languages simultaneously. Transfer can, as briefly discussed earlier, be divided into distinct categories: positive and negative. A positive transfer is when a linguistic property of one language is similar enough to the target language that a transfer results in correct grammaticality. A negative transfer is when the properties of two languages differ to such an extent that the result of a transfer lead to grammatical errors. To exemplify this further, we can consider a Spanish and French learner acquiring English as a second language (henceforth L2). A Spanish learner may be prone to drop the subject in an English sentence that does not allow it due to the complexity of Spanish verbs. In short, Spanish verbs change their conjugation depending on their subject. A Spanish learner of English who transfers this linguistic element

to English may thus experience a negative transfer as the Morphosyntax of English does not allow for the same subject drops. On the other hand, a French learner would likely avoid committing the same grammatical mistake due to French also not allowing for subject drops. Language interference is often discussed as a factor in negative transfer. However, transfer itself can be both conscious and unconscious. Learners often transfer some parts of their grammar onto the target language they are acquiring due to unconsciously assuming that the language structures of the language in question are like the target language. Consciously, however, learners might guess when faced with producing either speech or text because they have perhaps yet to learn it or have forgotten the correct usage.

In terms of relevancy for teachers, the concept of language transfer can be directly applied in the classroom. The similarities between L1 and L2 is essential for teachers to consider if the aim is to apply the potential benefits of language transfer in the classroom. The more significant the difference between the two languages, the greater the chance for negative transfer. Similarly, the more linguistically similar two languages are, the higher the chance of a positive transfer. From a language teaching perspective, this is highly relevant. C. Chen (2020) explores the similarities between English and Chinese in her study on the positive transfer of native languages. In addition to revealing how similar English syntax is to Chinese, C, Chen (2020) also suggests how this knowledge can be further applied in the classroom. Though the dissertation by C, Chen (2020) is not aimed as pedagogical, it provides data and research that can inform and inspire other studies more directly linked with pedagogy as the main focus. The dissertation implies that knowledge about the native language of the speaker can in turn help identify problematic areas of grammar that pupils typically struggle. For teachers, the challenge is then to identify which areas of grammar may prove challenging with respect to the grammatical similarities and differences between the native language and the target language.

In summary: it is essential for teachers to be aware of the cross-linguistic influence and to understand the similarities and differences between the languages their students speak if the aim is to apply the knowledge of language transfer in the classroom. This can aid teachers anticipate as well as addressing potential challenges and misunderstandings. Teachers can also apply the pupils' native languages as a resource to support their learning of the target language. This can be done in several ways, for example by providing positive examples from the native language's grammar that is similar to the target language. With respect to this study, this can be the similar rules of inflection for English and Norwegian plurality. However, teachers must

also be aware of pupils applying these rules where they do not match the target language, resulting in grammatical errors and misunderstandings.

2.4 Overgeneralization

As pupils transfer different aspects of their native languages onto the target language, the results vary between positive and negative transfer. While positive transfer can be used as a tool for learners to acquire certain rules or structures, it may also give the pupils a false sense of understanding the fundamental rules of the language. As such, a potential difficulty for pupils is overgeneralizing rules and applying them where they do not belong.

In linguistics, overgeneralization refers to the application of a rule or pattern from one language construct to another, resulting in errors in language use. It is a common phenomenon in language acquisition, particularly in children learning a second language (McKercher, 2018). For example, in English, regular past tense verbs are formed by adding -ed to the base form of the verb, as in "talked." However, some irregular verbs, such as "go," have a different past tense form, "went." A child learning English may overgeneralize the rule and say "goed" instead of "went" because they have not yet learned the irregular form (Hummel, 2014, p 24). Another example is when a child learning English as a second language overgeneralizes the rule of adding -s to make a noun plural and may say "foots" instead of "feet" because they have not yet learned the irregular plural form. Overgeneralization can also occur in adult second language learners, but it is more common in children due to the way their brain processes and learns languages (Hummel, 2014, p 24). Overgeneralization is a natural part of the language acquisition process, and it is often corrected as the child's language ability develops and they learn more about the complexities of the language. However, overgeneralization is not limited to first language acquisition. When learners acquire an L2, a typical occurrence of overgeneralization is the transfer of syntax. As such, it is reasonable to consider how language transfer contributes to overgeneralization.

In the classroom, the role of overgeneralizing grammar rules can be both positive and negative. Overgeneralization can indicate that learners are trying to apply the language rules they have acquired. This can also be a sign that they are beginning to notice patterns and generalizations in the language (Lightbown et al. 2013). Moreover, overgeneralization can provide opportunities for teachers to identify and address gaps in the learners' understanding.

By analysing the errors learners make and understanding the underlying causes, teachers can design effective language lessons that target learners' specific needs. To further exemplify, Norwegian learners typically struggle less with word structure and more so with functional morphology (Slabakova, 2008), (Jensen et al. 2019). Therefore, a natural way for teachers to address this issue is including more explicit instruction in, for example, subject-verb agreement as an effort to rectify this problem. Otherwise, overgeneralization can lead to persistent errors and misunderstandings if not addressed properly. Learners may internalize the incorrect rule or pattern and continue to make the same mistake, which can be detrimental to their language development (Hummel, 2014, p 140).

2.5 Markedness theory

As previously discussed, the differences in the structure of the native language and target language are key factors when considering the effects of cross-linguistic influence. Perhaps especially significant to consider is how different structures in the L1 poses difficulties in the acquisition of the target language. Marked structures for instance, can provide learners with an additional challenge when they go through the process of acquiring a new language.

Markedness theory was first introduced in the 1930's by Prague School (Jong, 2021). However, there does not exist a universally accepted definition of the term. Still, the essence of markedness theory entails that there does exist an asymmetrical relationship between linguistic forms or structures. A form is considered "marked" if it has additional features or constraints that are not present in the "unmarked" or default form. The unmarked form is therefore typically considered to be the simplest form. Comparatively, the marked form is considered as more complex. The plural form of most nouns in the English language is, according to markedness theory, unmarked and simply involves adding the suffix "-s" to the end of the singular form (e.g., cat-cats). However, some nouns have marked plural forms that deviate from this pattern, such as "mouse-mice" or "goose-geese". These marked plural forms require additional changes to the stem of the noun, which makes them more complex and less common than the unmarked plural form. Hummel (2014, p 140) notes that specific predictions regarding markedness theory is rooted in Eckman's (1977) markedness differential hypothesis. The hypothesis states that the specific areas of grammar that learners will experience as challenging can be predicated with the use of a systematic comparison of the native and target languages as well as the markedness relations (Hummel, 2014, p 140). As such, Eckman (1977, p. 321) predicts the following:

Grammatical areas of the target language that differ from the native language and are more marked than the native language will be difficult to acquire (Eckman, 1977, p. 321). Secondly, if the areas of the target language differ from the native language but are not more marked, the acquisition will not be difficult.

With consideration to markedness theory and how it relates to classroom instruction, we may also consider how markedness overall provides learners with an additional challenge in language acquisition if the native language does not contain similar marked features. Second language learners of English might, for instance, struggle with the marked and unmarked articles in English if their first language does not use articles. To further exemplify, the English definite article “the” does not exist in Norwegian grammar. Instead, Norwegian syntax forms the definite article by adding the suffixes -en, -a or -et depending on the gender of the word. As such, it is important to consider the implications of language transfer with specific consideration to the differences in markedness rules.

2.6 Bottleneck hypothesis

When we consider the acquisition of a target language as a process that encompasses several stages that the learners pass, it is inevitable that some stages will prove to be more challenging than others. As briefly discussed in the section covering the field of SLA, learners typically go through the same stages despite having different language backgrounds. Typically, learners will begin the process of language acquisition by producing utterances which later develops into full sentences (Hummel, 2018), while more complex areas of grammar, functional morphology for instance, is acquired later. However, due to the complexity of functional morphology, learners may experience it as a greater challenge compared to the acquisition of sentence structure. This is hypothesized in Slabakova’s (2008) Bottleneck hypothesis.

The bottleneck hypothesis, proposed by Slabakova (2008, 2013), suggests that the acquisition of functional morphology is the most challenging part of second language learning. Morphology generally appears early in learners, and studies show that they appear in a specific order. However, the bottleneck hypotheses suggest that while it appears early, it is not fully acquired until much later stages in development. Further, the hypothesis proposes that syntax, semantics, and pragmatics are fully acquired before morphology. The bottleneck hypothesis is based on the fundamentals of universal grammar (henceforth UG), a theoretical concept proposed by Noam Chomsky. Radically different from behaviourists conceptions about

language acquisition, UG holds that the environment serves only as the trigger for language learning (Hummel, 2014, p 28). Hummel (2014, p 14) thus defines the term UG as “The innate principles and properties that characterize the grammars of all human languages”. Slabakova (2008, 2013) advocates the bottleneck hypothesis and argues on the basis of the fundamental tenants of UG. Namely that learners have an innate ability to acquire language and that learners typically begin this process by producing full sentences. As such, sentence structures for example can be acquired with ease, while functional morphology, such as SV-agreement, is acquired later and with more difficulty (Slabakova 2006, 2008, 2013, p. 1).

Slabakova (2013) argues that the bottleneck hypothesis is relevant for understanding the challenges that learners face when trying to process complex sentence structures in a second language. She suggests that the limited processing capacity of the human brain can make it difficult for learners to simultaneously consider multiple linguistic features, such as word order and inflection. In essence, the study highlights the importance of considering the cognitive limitations of learners when designing language instruction (Slabakova, 2013). By focusing on key features of language and providing opportunities for learners to practice and consolidate their knowledge, teachers can help learners to overcome the processing limitations of their brains and improve their ability to comprehend and produce complex language structures. For language teaching purposes, applying the fundamentals of the bottleneck hypothesis would thus include extensive instruction in functional morphology (Slabakova, 2013). It also helps to explain why many learners may struggle with grammatical errors in morphology, but struggle less so with, for instance, sentence structure. In other words, teachers are made aware of a bottleneck that halts the acquisition of the second language. As such, it becomes vital for the pupils to receive enough instruction for them to progress through the bottleneck.

2.7 The Shallow Structure Hypothesis

The Shallow Structure Hypothesis suggests that there is a difference in acquiring local and long-distance SV-agreement. Specially, Clashes et al. (2006) highlights that L2 learners of English cannot acquire long-distance agreement in a native-like way. Local agreement refers to the matching of grammatical features, such as number or gender, between a subject and a verb within the same clause. Long-distance agreement, on the other hand, involves the matching of features between elements in separate clauses, which may be separated by other words or

phrases. Clahsen et al. (2006) suggests that children are able to acquire local agreement at a relatively early age, suggesting that the ability to match grammatical features within a single clause is an important building block for language acquisition. However, the acquisition of long-distance agreement is more complex and takes longer to develop. This implies that acquiring long-distance agreement as a L2 learner of English will be more challenging than acquiring local agreement. This is rooted in long-distance agreement being influenced by a range of factors, including the complexity of the grammatical structures involved and the frequency of exposure to those structures.

2.8 Subject-verb agreement

The current thesis seeks to investigate the effects of cross-linguistic influence in Norwegian and Polish L2 learners of English with a specific emphasis on the acquisition of subject-verb agreement. This section will thus provide a brief introduction to the differing rules of subject-verb agreement in Norwegian and Polish while also comparing them respectively the English subject-verb agreement.

2.8.1 Subject-verb agreement in Norwegian and English

Subject-verb agreement is the grammatical rule that dictates that the verb or verbs in a sentence must match the number, person, and gender of the subject. In other words, a sentence's subject and verb must agree with each other if the sentence is deemed grammatical. For example, the singular subject "one dog" agrees with the singular verb "is», and the plural subject "two dogs" agrees with the plural verb "are".

As Mallinson & Blake (1981) remark, approximately 70% of languages in the world have some form of grammatical rule for agreement. English subject-verb agreement dictates that a singular verb must follow a singular subject. This also applies to plural subjects and verbs. Using the pronoun "you" is an exception, as it must be followed by a plural verb. Similarly, to English grammar, Norwegian also uses the two number classes, singular and plural. However, in Norwegian grammar, there is no overt agreement between the subject and verb (Holmberg, 1995, p. 3). The tables below exemplify the differences in Norwegian and English SV agreement and how the verb “likes” in Norwegian remains unaffected by different subjects. The same verb changes form in line with the rules of SV agreement in English.

Table.1 *English verb conjugation*

Singular	Verb, like	Plural	Verb, like
1 st person	Like	1 st person	Like
2 nd person	Like	2 nd person	Like
3 rd person	Likes	3 rd person	Like

Table.2 *Norwegian verb conjugation*

Singular	Verb, liker	Plural	Verb, liker
1 st person	Liker	1 st person	Liker
2 nd person	Liker	2 nd person	Liker
3 rd person	Liker	3 rd person	Liker

2.8.2 Subject-verb agreement in Polish

Polish grammar is distinctively affected by a high degree of inflection, meaning that Polish morphosyntax is marked for certain grammatical features. Additionally, Polish differs from both English and Norwegian as it has a relatively free word order, no articles, and frequently drops subject pronouns. Some distinct feature of Polish grammar concerning SV agreement is the treatment of masculine personal nouns in plural cases. Polish is a pro-drop language. When the subject is omitted overtly, it is possible to say whether the subject is 1st person singular, 2nd person singular, or 3rd person plural based on the agreement of the verb. The table below considers the verb "Chodzę" which translated to English means "I am walking". The table also exemplifies the high degree of inflection in Polish verbs.

Table. 3 *Polish verb conjugation*

Singular	Verb, Cchodzę	Plural	Verb, chodzę
1 st person	Chodzę	1 st person	Chodzimy
2 nd person	Chodzisz	2 nd person	Chodzicie
3 rd person	Chodzi	3 rd person	Chodzą

3 Empirical background

In this section I discuss previous research of L2 acquisition with a specific emphasis on the effects of cross-linguistic influence, the challenges of functional morphology and lastly the effects of structural distance. The studies presented in this section all consider the challenges of acquiring SV-agreement in addition to other language features such as word order and syntax-semantics. Relevant for the current studies are the findings that concern the effects of cross-linguistic influence and SV-agreement.

3.1 Jensen et al. (2019)

Previous research that focused on functional morphology as the bottleneck of L2 acquisition has primarily stated that grammatical subject-verb agreement is notoriously difficult for learners to acquire (Slabakova, 2009). Jensen and colleagues (2019) investigate whether functional morphosyntax is indeed the most challenging domain of language acquisition. The study considers SV agreement and word order using an acceptability judgment test. These constructions were chosen due to them not matching in English and Norwegian. SV agreement in the present tense is obligatory in L2 English but does not exist in L1 Norwegian. The V2 rule (verb second) in Norwegian syntax is obligatory but restricted only to certain contexts in English.

The study uses a combination of grammaticality judgment tasks and sentence completion tasks to elicit data from the L1 Norwegian learners (Jensen et al. 2019). In the grammaticality judgment task, the participants were presented with English sentences that contained errors in either syntax or morphology and were asked to indicate whether each sentence was grammatically correct or not (Jensen et al. 2019). In the sentence completion task, the participants were presented with English sentence fragments and were asked to complete the sentences in a way that they judged to be correct (Jensen et al. 2019). In total, sixty Norwegians participants were tested and were divided into two age groups: 11–12-year-olds and 15–18-year-olds (Jensen et al. 2019). Additionally, all the participants were native speakers with Norwegian being their only L1. Finally, the general proficiency of the participants was measured using a subset of the Oxford proficiency test that included a total of 40 conditions.

The results indicate that the L1 Norwegians struggle more with certain aspects of English syntax and morphology, such as the use of articles and plural forms, compared to aspects, such

as SV-agreement (Jensen et al. 2019). This finding supports the Bottleneck Hypothesis, as it suggests that the functional morphology of the L2 is more difficult to acquire than others linguistic conditions. Additionally, the study explores the role of transfer from L1 Norwegian to L2 English. Jensen et al. (2019) find that some features of English syntax and morphology that are similar to Norwegian are acquired more easily by the learners, while other features that are different from Norwegian are more difficult to acquire. This suggests that transfer from the L1 plays a role in L2 acquisition. However, Jensen et al. (2019) highlights that language transfer is not the only factor that determines which features of the L2 are easier or harder to learn.

3.2 Jensen et al. (2021)

Cross-linguistic influence in L3 acquisition across linguistic modules (Jensen et al. 2021) studies CLI in different developmental stages of L3 acquisition of English by Norwegian-Russian children. Third language acquisition concerns multilinguals who acquire an additional language. It narrowly contrasts second language acquisition which concerns the acquisition of a second language by monolinguals.

By testing seven linguistic properties within three different models and comparing the results with Norwegian and Russian second-language learners of English. The three modules tested were syntax, morphology, and the syntax-semantics interface. The findings suggest that the L1 is not the sole factor of CLI. Additionally, the results show that on one property, the L3 learners were different from both L2 groups. On four conditions, they performed more equally to their L2 peers. The findings suggest that factors such as complexity and saliency need to be considered when we compare CLI. Research in SLA suggests that there is a strong consensus that the native language exerts a decisive influence over the L2 (Jensen et al., 2021). The full transfer hypothesis supports this theoretical view. An opposing view, the full potential approach, suggests that any property from the L1 may influence the L2 (Jensen et al., 2021). Furthermore, if a learner discovers a match in structures between their L1 and L2, the L1 representation of this property will be activated, thus resulting in CLI. The study nevertheless suggests that the scalpel model best captures the results, as the model predicts cumulative influence from previously acquired languages.

3.3 Ågren, Michot et al. (2020)

This study examines the impact of cross-linguistic influence on subject-verb agreement in the writing of French as a Second Language learners. The study found that L2 learners who were proficient in their first language were more likely to make errors in subject-verb agreement in English due to the influence of their first language (Ågren, Michot et al., 2020). The study also found that the degree of cross-linguistic influence varied depending on the linguistic complexity of the sentences being written. Specifically, by cross examining a total of 114 participants with Italian, Dutch, Swedish and German as their L1, the results suggest a significant difference each of the L1 language groups in terms of correct subject verb agreement (Ågren et al. 2020). However, they also show that the presence of a rich verb morphology present in the L1 does not alone result in more correct SV agreement. By comparing the participants at two separate proficiency levels, the study highlights observations in the rate of L2 development that can be explained as a possible effect of Cross linguistic influence. To summarize, the results indicate a complex interplay of different factors, where the role of CLI must be further investigated in future studies in relation to L2 French (Ågren et al. 2020).

3.4 Ocampo (2013)

Ocampo's (2013) dissertation aims to investigate how structural distance, as well as the number of the subject, affects subject-verb agreement. In order to do this, she uses three groups of participants: 20 Spanish learners of English L2, 28 native speakers of English, and the third group consists of 28 native speakers of English who participate in a stressed test (Ocampo, 2013, p 20). Participants completed an online reading task using a moving window self-paced reading paradigm. Singularity and plurality were manipulated in the task to examine whether the marked plural feature facilitated agreement establishment even as distance increased (Ocampo, 2013, p 3). The result of the study suggests that L2 learners were affected by structural distance, as learners became less sensitive to violations in the relative clause intervener condition (Ocampo 2013, p 3). Effects of markedness in the plural condition emerged in the results as well. This evidence was indicated by greater sensitivity to errors in a pairwise comparisons to the plural subject-relative clause intervener condition over the singular subject counterpart (Ocampo 2013, p 3). Finally, weak similarities in variability between the L2 learner and the native speaker group under a concurrent processing load tentatively suggest that learner variability may be caused by processing limitations and not necessarily deficits in L2 grammatical knowledge (Ocampo 2013, p 3). These findings correspond to Bock and Miller

(1991) Bock and Cutting (1992) in terms of locality in first language acquisition. Additionally, Franck et al. (2002), McCarthy (2008) and Lopez-Prego (2012) supports the argument of accurate long-distance agreement is affected by an intervening noun for second language learners. In other words, agreement errors on long-distance agreement may be caused by learners making the verb closest to the noun agree with said noun (Ocampo 2013, p3).

3.5 Summary

This chapter has considered three different studies on cross-linguistic influence (CLI) in language acquisition and one study on the challenges of acquiring functional morphology. The first study discussed, by Jensen et al. (2019) investigates the role of functional morphology and word order in L2 acquisition and suggests that some aspects of English syntax and morphology are more difficult to acquire than others. The study also explores the role of transfer from L1 Norwegian to L2 English. Jensen et al. (2021) examines CLI in different developmental stages of L3 acquisition of English by Norwegian-Russian children and suggests that factors such as complexity and saliency need to be considered when comparing CLI. The third study considered, by Ågren, Michot et al. (2020), examines the impact of CLI on subject-verb agreement in L2 French learners with different L1 backgrounds and suggests that the degree of cross-linguistic influence varies depending on the linguistic complexity of the sentences being written. The fourth study by Ocampo (2013) explores the role of CLI in L2 Spanish acquisition by English-speaking learners and suggests that CLI plays a significant role in the acquisition of Spanish. A knowledge gap that this thesis aims to highlight is the need for further studies on the specific factors that determine which features of the L2 are easier or harder to learn, as well as the need for more research on the role of CLI in L2 acquisition. Additionally, this thesis aims to highlight that research in CLI can be applied in teaching practices to identify how different native languages can provide different challenges in the language learning process. As such, it would be beneficial for future research to investigate how the findings from these studies can inform and improve teaching practices for L2 and L3 learners.

4 Research design

The following chapter will first discuss the research questions and predictions in 4.1 that this paper aims to highlight. Secondly, a discussion on the research participants in 4.2. The methodology will be discussed in 4.3 within the following subsections: 4.3.1 on the standardized proficiency test, 4.3.2 covering the AJT, and finally, 4.3.3 highlighting the procedure of the study. The Norwegian Centre of Research Data (NSD) has registered and approved of the project.

4.1 Research questions and predictions

The following two research questions are discussed in the current study:

RQ.1 Are the challenges in learning English subject-verb agreement the same for L1 Norwegians and L1 Polish learners?

RQ. 2 Does structural distance in SV-agreement affect Norwegian and Polish L2 learners of English?

The discrepancies in Norwegian and Polish morphosyntax have a significant influence on the study's findings, making it an important aspect for both research questions concerning the CLI issue. Based on the linguistic background and structure of Polish and Norwegian, it is expected that the Norwegians will outperform the Polish in some areas. Specifically, with regards to CLI, the L1 Polish participants are expected to perform better than the L1 Norwegians due to the prominence of SV agreement in Polish and its absence in Norwegian. However, in linguistic domains present in Norwegian morphology, such as articles, the Norwegian participants are expected to outperform their Polish peers. Additionally, since the proficiency test does not test specific SV-agreement conditions, the Norwegian participants are expected to score higher. This means that the test is less likely to disadvantage Norwegian speakers who are less familiar with SV-agreement patterns than their Polish counterparts. As a result, the test is expected to reflect that the Norwegian group will outperform the Polish group. With respect to the different SV agreement conditions, the study predicts that local agreement will be easiest due to processing limitations causing variability in long-distance agreement, rather than limited knowledge of subject-verb agreement as previously suggested by Ocampo (2013). I further base this prediction in the Shallow Structure Hypothesis which predicts that L2 learners of non-local

agreement will not acquire like L1 learners do and will struggle with long-distance agreement as they rely on surface cues instead of deeper grammatical knowledge (Clashen et al. 2006).

4.2 Methodology

In the current study, the data was collected by using an acceptability judgment test. An acceptability judgment test is a type of linguistic evaluation that assesses a person's ability to identify grammatically correct sentences in a language. The test involves presenting participants with sentences, and they are asked to judge whether the sentence is grammatically correct or not. This type of test is typically used to assess the acquisition of specific grammatical structures as it measures a person's understanding of the grammatical rules of a language and their ability to apply those rules when evaluating language. It relies on participants' intuitive sense of what is grammatical and what is not. Since participants are not consciously applying explicit rules, but rather relying on their implicit knowledge of the language, this method is believed to provide a more accurate measure of language acquisition. Additionally, this type of test can be administered to speakers of different languages and can be used to compare language acquisition across populations.

The AJT is a quotative research method commonly used in linguistic research as it allows for systematic analysis of the given responses from the participants. Specifically, the AJT and other quotative methods collect numeric data and with statistical analysis, it is possible to highlight common trends in the observations (Johnson, 2008, p. 4). Therefore, a quotative method was chosen to highlight the trends in SV agreement acquisition. However, using an AJT test as the primary tool for data collection introduces some fundamental limitations. Firstly, the term acceptability and grammaticality are often used synonymously. As such, acceptability judgment tests are also referred to as grammatical judgment tests. However, as Chomsky (1965) states, grammaticality is only one possible factor that makes a sentence appear acceptable. By definition, a grammatical sentence is a sentence that follows the given morphosyntactic rules of a language. Acceptability refers to a sentence that the learners deem as acceptable, even though the sentence itself is categorized as ungrammatical. Chomsky (1965) furthers that acceptability is rooted in performance, whereas grammaticality belongs to competence study. The current study asks the participants to judge sentences as acceptable or not based on their intuition. As such, the data collected using this method can, as White (2003) highlights, arguably be described as intuitional data as it cannot directly reflect the metalinguistic awareness of the participant. Thus, a significant criticism towards AJT testing is that the overall

score of the participants may be affected by performance factors and does not accurately measure participants' linguistic competence (Leow, 1996). Sprouse, Almeida (2011) argues similarly that because of the link towards performance factors, AJT tests may lead to false conclusions as it is easy to make either type 1 or type 2 errors, i.e., false positive or false negative conclusions. This criticism towards AJT testing, as outlined by Leow (1996) and Sprouse, Almeida (2011), highlights the potential for false positive or false negative conclusions to be made when using this method. Therefore, the argument is relevant because it contributes to the ongoing debate about the validity of AJT testing and highlights the importance of considering the limitations of the data collected when making conclusions about linguistic competence.

Nonetheless, AJT tests have been proven to be reliable by Sprouse et al. (2012) and Leow (1996), who found that there was no evidence to suggest a reliability issue. By testing 365 phenomena's from Adger's (2003) textbook in syntax, Sprouse et al. (2012) found a replication rate of 98%. Similarly, Leow (1996) did a comparative analysis of acceptability judgments in L2 Spanish to oral and written productions tasks. This comparison showed a correlation between the scores of the production tasks and the AJT. As such, this evidence suggests that AJT tests are reliable for measuring learners' linguistic competence in an L2 (Jensen, 2016).

4.3 Procedure

4.3.1 Language background questionnaire

The test used in the current study is divided into three parts. Firstly, a background questionnaire that asks the participants to note if they speak any other language besides their native language and L2 English. This question was included in order to highlight the effects of an L3 and how this might affect the end result. Secondly, the participants were asked to note if they have lived in a different country for more than a year, and if so, which country. None of the participants crossed out that they have lived in another country, as such this factor will not be included in the data analysis and discussion chapter since it does not hold as a factor that may explain the differences in test results. The tasks used in the current thesis is designed by fellow MA student Sarajeva (2023).

4.3.2 Acceptability judgment test

The second part of the test was the acceptability judgment test. The AJT used in the current study consists of a total of 60 sentences, where 24 of the sentences are designed to incorporate subject-verb agreement, 24 sentences for determiners, and the remaining 12 sentences as fillers. The sentences can be further divided into ten sub-categories, where each of the categories includes 6 test sentences. These categories will be further exemplified.

List 1. Mary took a test yesterday. The test was difficult.

List 2. Mary took a test yesterday. Test was difficult.

The sentences designed to incorporate SV agreement can be further divided into four sentence structures: long-distance agreement and local agreement, including the plural and singular variants. These sentence variations are exemplified in (1)-(4).

(1) SVA with local agreement, singular subjects

- a. The girl drinks a lot of water every day
- b. *The girl drink a lot of water every day

(2) SVA with local agreement, plural subjects

- a. The kids like to play in the park every weekend
- b. *The kids likes to play in the park every weekend

(3) SVA with long-distance agreement, singular subjects

- a. The house with yellow and white doors looks nice
- b. *The house with yellow and white doors look nice

(4) SVA with long-distance agreement, plural subjects

- a. The girls with short blond hair like to read
- b. *The girls with short blond hair likes to read

All the sentences included in this test include prepositional phrases and do not include any irregular verbs. All the verbs used in the sentences receive the suffix -s when the subject is third-person singular. Additionally, each verb only appears once in each experimental list to avoid priming effects connected to repetitions. This was also done with all the nouns to ensure

sufficient diversity. Finally, in the long-distance conditions, the intervening noun and subject of each sentence have opposite numbers. As Jensen (2019) highlights, if the subject and the object have the same number, this may lead to number attraction errors, i.e., the participants may accidentally judge the sentences based on the intervening noun present in the sentence and not the subject of the sentence.

4.3.3 Standardized proficiency test

The final part of the test included a sub-set of the standardized proficiency test. This was included for two reasons. Firstly, to establish that the Norwegian and Polish pupils were matched in proficiency and secondly, to see how the general proficiency correlates to the specific linguistic properties tested. Though the age of the participants should provide some indication of their proficiency, one cannot assume that every pupil has achieved the level of proficiency expected for their age group or grade. The standardized test used in this study is derived from the standardized Oxford proficiency test used in several previous studies within the field of SLA. Examples of studies where it has been used prior include Jensen (2016) and Slabakova and Garcia Mayo (2015). Furthermore, the current study utilizes a subset of the proficiency test formulated by Saraeva (2022), where the items for subject-verb agreement are taken from Jensen (2016), and the remaining sentences are designed by Saraeva (2022). The test is structured as a forced-choice test where the participants are asked to fill in the correct form or word given. The questions are formulated as such:

3. In cold countries people wear thick clothes _____ warm.
a) for keeping b) to keep c) for to keep

The current study follows some alterations, made by Sarajeva (2023), from the initial proficiency test. Firstly, changes were made in consideration of the lexical content of some of the sentences, where certain words were replaced with more frequent variants that carry the same grammatical meaning. The justification for this change is rooted in wanting to eliminate the possibility of pupils answering incorrectly due to a lack of understanding of the meaning of the sentence due to infrequent words.

4.3.4 Participants

The age group of the participants was chosen based on the start of the formal instruction in English. Norwegian pupils begin their formal education in English as a compulsory second language as early as first grade, where the children are between the ages of 5-6 and finish mandatory education at ages 15-16. Comparatively, Polish pupils begin acquiring a second language in grade zero, between the ages of 6-7, and finish at age 14, which is equivalent to 8th grade in most other countries, including Norway. The pupils included in this study were selected due to their formal education in English as a second language and their respective ages. As this thesis aims to highlight the potential of cross-linguistic influence, it is vital that the L1 is already acquired to the extent where it can be considered native. By testing similar-aged Norwegian and Polish pupils, I hoped to see a clear difference in performance based on the syntactic and morphological differences and similarities between their respective L1s and L2 English.

One 7th-grade teacher in Tromsø accepted the request to participate in the study, where the participants made up one class, a total of 20 participants. The test was carried out during school hours, where I led the lesson with the teacher present. The participants were informed orally of how the test was structured and were given instructions on how to answer questions. To exemplify and ensure the pupils understood the procedure, I gave them a test sentence and explained how they would answer the question. This information was presented in Norwegian to ensure mutual understanding. The pupils were handed out the test, which was printed beforehand. The decision to use printed copies was due to this data being shared with another study that chose to use printouts, for the sake of continuity. Furthermore, by not opting for an online survey, the decision to use printouts was a measure to prevent the pupils would not skim through the test and clicking an answer at random to finish the test as quickly as possible. Similarly, the Polish data was collected with the help of Professor Magdalena Wrembel and her contacts in schools who agreed to help with the data collection. The Polish group consisted of 17 participants. The procedure was identical to the Norwegian one. However, instruction and answers to questions were given in Polish to ensure mutual understanding.

5 Data analysis and results

The results of the current study were first coded in an excel spreadsheet and then imported and analysed in R. The statistical analysis was performed with the help of Sergey Minor. The results will only focus on the SV-agreement conditions collected from the acceptability judgment test. The P-value is set to 0.05 which is standard for the null hypothesis testing in frequentist statistics, thus, any number smaller than this value is considered to be significant. Finally, this section will also present the results from the English proficiency test and any potential difference in these scores between the groups. This is done in order to check if there is a correlation between the proficiency scores and the scores from the AJT.

Table.1 *Summary of the participants demographics.*

	PARTICIPANT NUMBER	AGE	GRADE
NORWEGIAN	21	11–12-year-old	7 th grade
POLISH	17	11–12-year-old	6 th grade

5.1 Results from the proficiency test

As previously described, the English proficiency of the participants was measured using a subset of the standardized Oxford proficiency test. The standardized test used in the current study utilizes 40 multiple-choice questions. There was only one correct answer to each of the questions, and the participants got one point if the question is answered correctly. Thus, the highest possible score was 40 points. For the purposes of this experiment, if the participants scored above 32 points, they were considered advanced speakers. If they scored anything between 10 and 32 points, they were considered intermediate, and if they scored below 10 points, they were considered beginners. Additionally, the intermediate category was further split into low intermediate (11-17 points), intermediate (18-25 points), and high intermediate (26-32 points).

In this study, the proficiency scores ranged from 7 points to 38 points (See appendix 7) The results are presented for the two participant groups, Norwegian and Polish. The Norwegian

group consisted of two low intermediate speakers, five intermediate speakers, and nine high intermediate speakers, while five participants were considered advanced. The average score of the Norwegian group was 28,33 points. The Polish group consisted of seven beginner speakers, seven low intermediate speakers, and three intermediate speakers. The average score of the Polish group was 12,64 points. As these scores clearly show, the Norwegian group significantly outperformed the Polish group. The Norwegians slightly outnumber the Polish participants with four fewer participants. Based on the results, we observe that the lowest points scored from the Polish group was 7 points, while the lowest Norwegian score was 16 points. Additionally, the highest Polish score was 18 points, and the highest Norwegian was 39 points. However, due to the low number of participants in each group, it does not seem possible to control for overall proficiency effects. Therefore, the current study will not select participants matched by proficiency, instead I will present the results as is.

5.2 Results of the acceptability judgment test

The accuracy scores from the AJT test will be presented in tables displaying all four conditions for both groups divided in grammatical and ungrammatical. The motivation behind considering the grammatical and ungrammatical accuracy results as separate can be considered exploratory because I did not initially have a specific hypothesis about how the participants would perform on these groups of items. However, we noticed that the patterns of responses were different with respect to the grammatical and ungrammatical items.

In the acceptability judgment test, the participants were asked to judge sentences as either grammatically acceptable or grammatically unacceptable. The total number of sentences the participants were asked to judge was 60. For the analysis we will only focus on the sentences that include the different conditions targeting subject-verb agreement which amount to 20 sentences. In the following paragraphs, I will consider the results of the study using the mean scores of each participants group in the grammatical and ungrammatical conditions as well as the singular and plural conditions. In total, each participant group will be discussed based on their mean score in four different categories. The categories are as follows, grammatical singular, ungrammatical singular, grammatical plural, and ungrammatical plural. The results are presented in tables 2 and 3 bellow.

5.2.1 SV agreement singular subjects (local and long-distance agreement)

Using the statistical analysis program R, the data provided from the Norwegian and Polish groups suggest that the singular form of SV-agreement is the easiest to judge correctly. Overall,

the accuracy scores for both languages are lower for ungrammatical sentences in comparison to the grammatical ones. Additionally, we can observe that there is a greater gap in accuracy scores in the grammatical and ungrammatical conditions by the Norwegian participants.

Table 2. *Mean scores of the AJT test, divided into grammatical and ungrammatical singular sentences for both participant groups.*

	GRAMMATICAL SINGULAR	UNGRAMMATICAL SINGULAR
NORWEGIAN	0.823	0.44
POLISH	0.63	0.56

5.2.2 SV agreement plural subjects (local and long-distance)

The Norwegian group had a mean score of 0.691 and 0.350, shown in table 7, in the grammatical and ungrammatical plural conditions respectively. Similarly, the mean scores collected from the Polish group were 0.519 and 0.352. The differences between the Norwegians and Polish participants are insignificant considering that the mean score in the ungrammatical plural condition is close to identical in both groups. The grammatical plural condition however shows that the Norwegian group outperforms the polish group.

Table 3. *Mean scores of the AJT test, divided into grammatical and ungrammatical plural sentences for both participant groups.*

	GRAMMATICAL PLURAL	UNGRAMMATICAL PLURAL
NORWEGIAN	0.6916667	0.3500000
POLISH	0.5196078	0.3529412

5.2.3 Subject-verb conditions

Table 4. *Isolated accuracy scores for the grammatical SV conditions for each participant group.*

NORWEGIAN	CONDITION	ACCURACY	SE (STANDARD ERROR)
	Local plural	0.7166667	0.05866532
	Local singular	0.8500000	0.04648674
	Long distance plural	0.6666667	0.06137164
	Long distance singular	0.8000000	0.05207556
POLISH	Condition	Accuracy	SE
	Local plural	0.6274510	0.06837489
	Local singular	0.7450980	0.06163229
	Long distance plural	0.4117647	0.06960094
	Long distance singular	0.5098039	0.07069708

Table 5. *Isolated accuracy scores for the ungrammatical SV conditions for each participant group.*

NORWEGIAN	CONDITION	ACCURACY	SE
	Local plural	0.3000000	0.05966005
	Local singular	0.4500000	0.06476817
	Long distance plural	0.4000000	0.06377928
	Long distance singular	0.4333333	0.06451324
POLISH	Condition	Accuracy	SE
	Local plural	0.3137255	0.06562039
	Local singular	0.6078431	0.06904634
	Long distance plural	0.3921569	0.06904634
	Long distance singular	0.5098039	0.07069708

Table 5 provides an overview of all ungrammatical conditions. The mean scores of the Norwegian participants are all closer to 0 than to 1, which means that the ungrammatical sentences are often accepted as grammatical. Comparatively, the Polish mean scores show that they are more proficient in correctly judging the local singular and long-distance singular as ungrammatical while the other conditions are prone to being accepted as grammatical. Compared with the grammatical sentences, there is a clear deviation between the accuracy ratings of grammatical and ungrammatical sentences. Comparatively, the Polish group outperforms the Norwegians in all but one condition, long distance plural, however, the

difference in accuracy score in the long-distance plural condition is so small that it cannot be considered significant. Additionally, the scores from the ungrammatical conditions also suggest a pattern where singular forms are more accurately judged correctly compared to their plural counterparts.

Figure 1. Bar chart illustration of all items tested by both groups.

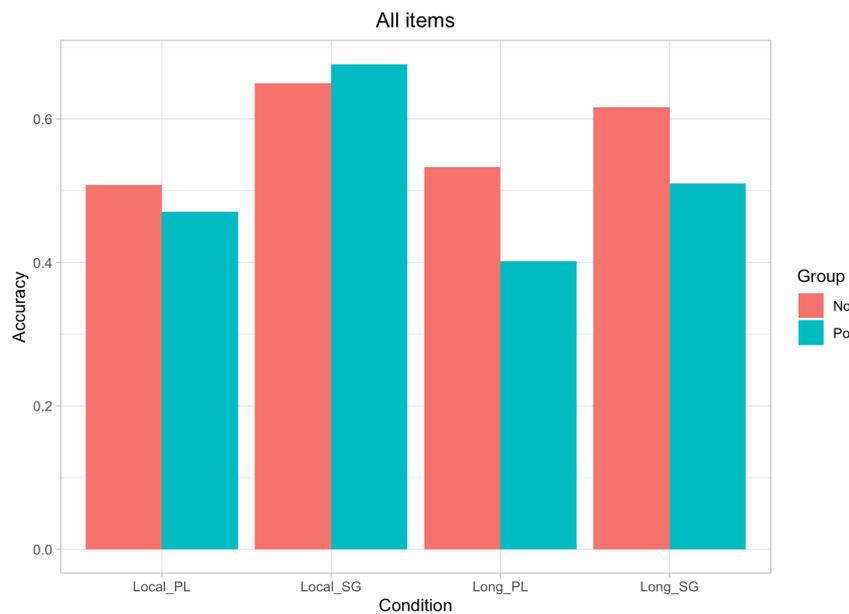
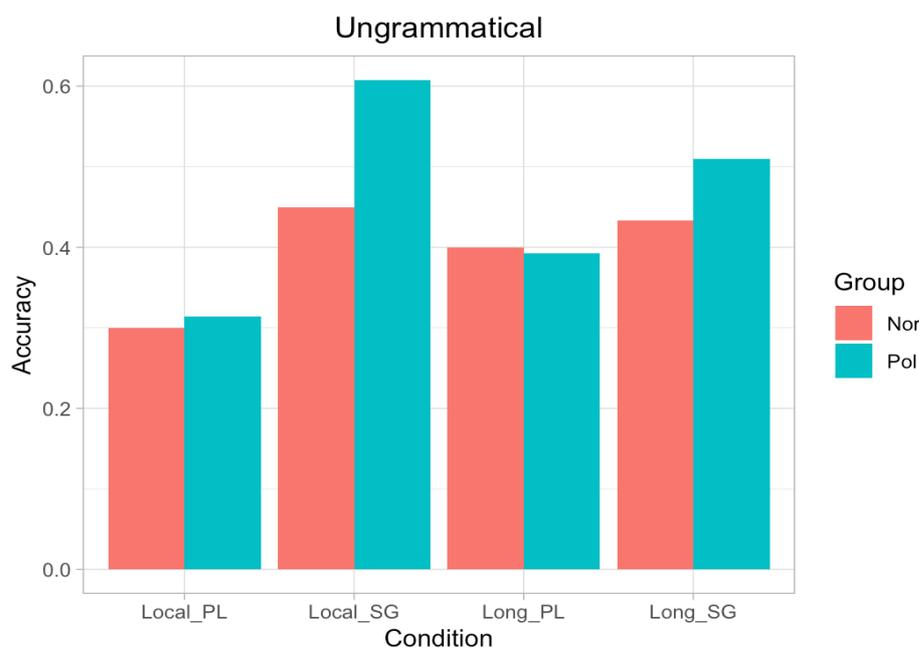
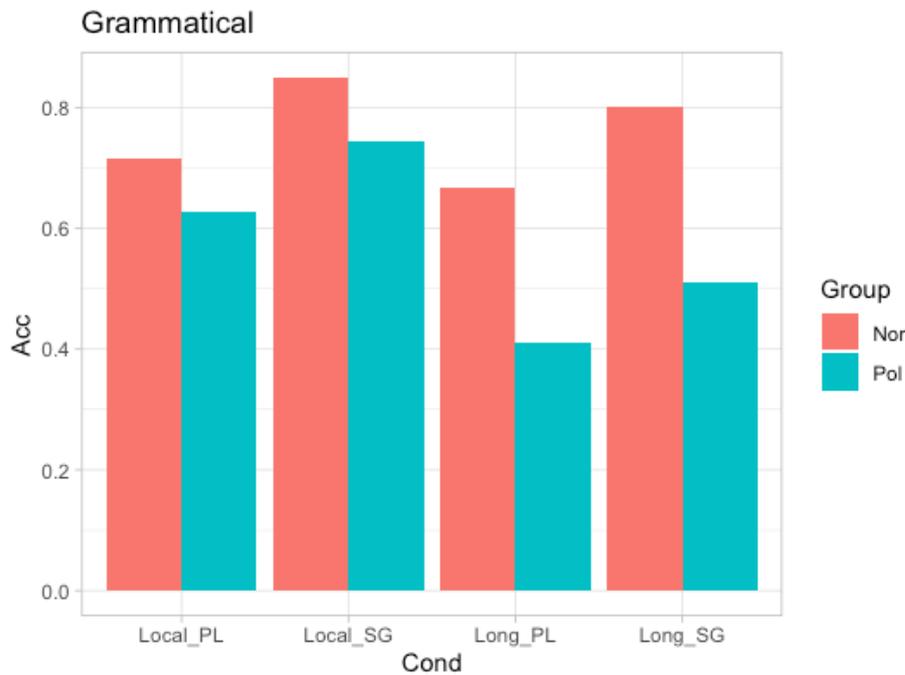


Figure 2. Bar chart illustration of accuracy scores in all ungrammatical SV-conditions.



In the ungrammatical conditions, the Polish participants seem to outperform their Norwegian peers, most notably in the Local singular and long-distance singular conditions. The three remaining conditions seem to be evenly matched with only a slight difference that can be deemed not significant.

Figure 3. *Bar chart illustration of accuracy scores in all grammatical SV-conditions.*



5.3 Statistical modelling

We fitted mixed effect logistic regression model with a post hoc to compare the differences between Norwegian and Polish L2 learners of English in their accuracy to correctly judge SV conditions. As such, the model considers accuracy (binary) as the dependent variable. The fixed effects were group and condition. Furthermore, the scores from the proficiency test were used as a co-variate to accommodate for the overall proficiency differences between the two groups. The random effects included the random intercepts of item and participant. Lastly, The Norwegian participants were used as a baseline. The post-hoc pairwise comparisons estimated marginal means, with adjusted alpha levels (0.05) were fit to investigate contrasts between the groups across all four experimental conditions. Based on the logistic regression models we fitted, it appears that there are significant differences between the two groups in their ability to judge both grammatical and ungrammatical sentences. These results are presented in the tables below.

To begin with, we first fit a model for all responses by the two groups, both grammatical and ungrammatical. The results displayed in Table 6 below display the output for the full model.

Table 6. Output table for the full model testing all items.

<i>Predictors</i>	Response		
	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	0.53	0.15 – 1.88	0.327
Cond [Local_SG]	2.06	0.76 – 5.61	0.157
Cond [Long_PL]	1.13	0.42 – 3.05	0.802
Cond [Long_SG]	1.66	0.62 – 4.48	0.314
Group [Pol]	1.19	0.51 – 2.78	0.685
Score	1.02	0.99 – 1.06	0.215
Cond [Local_SG] × Group [Pol]	1.37	0.59 – 3.16	0.460
Cond [Long_PL] × Group [Pol]	0.66	0.29 – 1.48	0.311
Cond [Long_SG] × Group [Pol]	0.74	0.33 – 1.65	0.458
N _{Item}	24		
N _{Code}	37		
Observations	888		
Marginal R ² / Conditional R ²	0.046 / 0.213		

We then tested the main effects of the individual predictors by comparing the full model to models that exclude these predictors. The reasoning being that if the smaller models are significantly worse than the full model, then the predictor is significant. Table 6. Shows that there are no significant main effects of condition, group, and score. The first model compares group as the only fixed effect to the full model which includes both condition and group as fixed effects to see if the addition of the condition variable significantly improves the model fit. If the p-value is less than the significance level, less than 0.05, then the conclusion would be that full model provides a significantly better fit than the smaller model. Similarly, the second model compares condition as the only fixed effect to the full model to see if there are any significant differences. The test found no significant main effects of condition, group, or

score. We then performed a post-hoc comparisons of the groups within each condition. The results are presented in the table below show that there was no significant difference.

Table 7. Post-hoc comparison of both groups in all conditions.

Condition	Estimate	SE	DF	Z-ratio	P-value
Local plural	-0.175	0.432	Inf	-0.406	0.6851
Local singular	-0.490	0.443	Inf	-1.108	0.2681
Long distance plural	0.242	0.429	Inf	0.564	0.5731
Long-distance singular	0.129	0.427	Inf	0.303	0.7620

The table show no P-values under 0.05, thus none of the conditions tested provided significant results. Next, we looked at the grammatical and ungrammatical conditions separate and fit a model for the grammatical conditions first. The table below shows the output for the grammatical model testing each of the predictors.

Table.8 Output table for the grammatical model.

<i>Predictors</i>	Response		
	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	3.25	0.51 – 20.54	0.210
Cond [Local_SG]	2.47	0.84 – 7.22	0.099
Cond [Long_PL]	0.78	0.30 – 2.04	0.607
Cond [Long_SG]	1.66	0.60 – 4.62	0.328
Group [Pol]	0.59	0.16 – 2.19	0.428
Score	0.99	0.94 – 1.06	0.868
Cond [Local_SG] × Group [Pol]	0.76	0.21 – 2.75	0.673
Cond [Long_PL] × Group [Pol]	0.48	0.15 – 1.56	0.222
Cond [Long_SG] × Group [Pol]	0.35	0.10 – 1.18	0.090
N _{Item}	12		
N _{Code}	37		
Observations	444		
Marginal R ² / Conditional R ²	0.117 / 0.247		

After testing for the main effect of predictors, we found no significant difference in the main effects of condition, group, or score. The Post-hoc comparison revealed that there was a significant difference in the long-distance singular condition where the Norwegians outperformed the Polish. Additionally, the Norwegians were also marginally better in the long-distance plural condition as shown in the table below.

Table 9. Post-hoc comparison of grammatical conditions

Conditions	Estimate	SE	DF	Z-ratio	P-value
Local plural	0.532	0.672	Inf	0.792	0.4284
Local singular	0.810	0.723	Inf	1.120	0.2625
Long-distance plural	1.264	0.668	Inf	1.892	0.0586
Long-distance singular	1.581	0.688	Inf	2.298	0.0215

As evident from the table, the groups are significantly different in two experimental conditions: long-distance plural and long-distance singular. The estimates for the long-distance plural and long-distance singular conditions were both significant, with p-values of 0.0586 and 0.0215, respectively. This suggests that there were differences in the ability of the two groups to judge sentences with long-distance subject-verb agreement. The estimates for the local agreement conditions were not significant, indicating that there were no significant differences between the two groups in their ability to judge sentences with local agreement.

Next, we considered the ungrammatical conditions and fitted a similar model. Again, we tested the effects of the main predictors using the formula: Accuracy ~ Condition*Group + Score + (1|Item) + (1| participant). Again, we found no significant main effects of condition or group, but there is a marginally significant main effect of score for the ungrammatical items ($p = 0.05$). Table 10 display the output for this model. We then performed a post-hoc comparison, the results are presented in the table 11.

Table 10. Output table for the ungrammatical model.

Predictors	Response		
	Odds Ratios	CI	p
(Intercept)	0.09	0.02 – 0.48	0.004
Cond [Local_SG]	2.08	0.70 – 6.17	0.185
Cond [Long_PL]	1.65	0.56 – 4.89	0.367
Cond [Long_SG]	1.95	0.66 – 5.74	0.228
Group [Pol]	2.37	0.72 – 7.82	0.155
Score	1.05	1.00 – 1.11	0.046
Cond [Local_SG] × Group [Pol]	1.87	0.58 – 6.04	0.294
Cond [Long_PL] × Group [Pol]	0.89	0.28 – 2.86	0.841
Cond [Long_SG] × Group [Pol]	1.28	0.40 – 4.05	0.677
N _{Item}	12		
N _{Code}	37		
Observations	444		
Marginal R ² / Conditional R ²	0.064 / 0.180		

Table 10. Post-hoc comparison of ungrammatical conditions

Conditions	Estimate	SE	df	z-ratio	p-value
Local plural	-0.865	0.608	Inf	-1.421	0.1552
Local singular	-1.492	0.594	Inf	-2.513	0.0120
Long-distance plural	-0.745	0.591	Inf	-1.261	0.2072
Long-distance singular	-1.110	0.584	Inf	-1.901	0.0573

Table 10 consider the ungrammatical conditions, and based on the post-hoc comparison, we can conclude that the groups differ in two conditions: local singular and long-distance singular. The Polish group is significantly better in the local singular condition ($p=0.01$) and marginally better in the long-distance singular condition ($p=0.06$). However, the model found no significant differences between the two groups in the local and long-distance plural conditions, as their p-values are all above 0.05.

To summarise: in the grammatical conditions we can observe a greater difference between the two test groups. The Norwegians outperforms the Polish in all four conditions in terms of accuracy scores. The most significant difference is observed in the long-distance plural and singular conditions. Comparing the findings presented in tables 4 and 5 leads to the following conclusion: Norwegians outperforms the Polish group in correctly identifying grammatical sentences that incorporate the four SV conditions. Comparatively, the polish group outperforms the Norwegian in correctly identifying ungrammatical SV agreement. However, both groups score significantly lower in the ungrammatical conditions compared to the grammatical conditions. The models testing the grammatical and ungrammatical conditions separate and the post-hoc comparison found that the Norwegians were significantly better.

6 Discussion

This section will consider the findings presented in Chapter 5. For clarity, the research questions and predictions are repeated here. The questions will be discussed in turn.

RQ.1 Are the challenges in learning English subject-verb agreement the same for L1 Norwegians and L1 Polish learners?

RQ. 2 Does structural distance in SV-agreement affect Norwegian and Polish L2 learners of English?

Prediction 1: L1 Polish participants will outperform the L1 Norwegians due to SV agreement being prominent in Polish and absent in Norwegian.

Prediction 2: Local agreement will be the easiest condition due to variability in long-distance agreement caused by processing limitations.

Both the research questions and predictions are formulated in comparison to studies that consider the effect of cross-linguistic influence as well as previous research on the acquisition of functional morphology. The Bottleneck Hypothesis was relevant to include in the theoretical background as it argues that functional morphonology is the bottleneck in second language acquisition. To briefly summarize the main arguments of the theoretical background, functional morphology is one of the challenging aspects of language acquisition as it is not transferable and must be lexically learned. However, learners can acquire it through exposure to the target language and with explicit instruction. Therefore, we may observe underlining grammatical features where we can observe the effects of CLI can be transferred (Slabakova, 2008).

The current study aims at investigating the effects of cross-linguistic influence. Thus, the question of whether the challenges of acquiring an SV-agreement are the same for two groups with different L1s was asked. Additionally, and related to the first research question, do the participant groups struggle in the same way? As previously described in section 2.7.1 and 2.7.2, there exists a notable difference in Norwegian and Polish SV-agreement. Additionally, the two languages have different marked structures.

This study's first prediction was based on the similarities in the linguistic properties and possible cross-linguistic influence. The study by Jensen et al. (2019), presented in 3.1, provides a fundament for this prediction, as their findings suggest tentative support of the bottleneck hypothesis due to the mismatch in Norwegian and English morpho-syntax. While the current study tests two groups of different L1 backgrounds, the focus is not to test the bottleneck hypothesis. Instead, the relevance of the hypothesis is to establish that SV agreement is a challenging aspect of language acquisition. Related to the issue of cross-linguistic influence however, Jensen et al. (2019) explores the role of transfer. The study finds that the areas of grammar that are similar were more easily acquired while other areas that are affected by a grammatical mismatch were more difficult. Additional context to this prediction is rooted in markedness theory. In short terms, the theory suggests that markedness can affect language acquisition. In light of cross-linguistic influence, this study tests how the marked structures of the participants first language affect the acquisition of English SV-agreement. Specifically, I will consider the SV-agreement structures of both Norwegian and Polish as well as their respective word orders.

The second prediction of this study is that local agreement will be the easiest of the SV agreement conditions tested. As such, the study predicts that the mean score of the long-distance agreement conditions, both singular and plural, will be lower compared with the local singular and plural conditions. The empirical framework related to this prediction is discussed in section 3.5. To briefly repeat, Ocampo (2013) investigates how structural distance and number affect SV-agreement. The findings suggest that learners were affected by structural differences (Ocampo, 2013). As all four conditions of SV agreement used in the current study contain structural differences, i.e., local, and long-distance agreement, it is expected that the results show a difference in mean score accuracy across the conditions. Nevertheless, Ocampo (2013) emphasizes that it is essential to consider that the participants' judgments may be affected by outside factors such as processing difficulties or the naturalness of the sentence. Thus, incorrect judgments cannot be accurately attested to the participant's lack of knowledge of English grammar. Though the rules of the SV agreement are explicitly taught in both Norwegian and Polish schools, the participants still need to internalize and automate the rule. Especially considering that the participants of the current study are 11 years old, it is not expected that the English SV rule has been fully automated.

6.1 Are the challenges in learning English subject-verb agreement the same for L1 Norwegians and L1 Polish learners?

In order to discuss whether the challenges of acquiring SV-agreement are the same for L1 Norwegian and L1 Polish learners, this section will firstly present the relevant results from the post-hoc comparison that document which of the conditions the two groups were found to differ in. The prediction related to research question 1 is that L1 Polish participants will outperform the L1 Norwegians due to SV agreement being prominent in Polish and absent in Norwegian.

As discussed in previous sections, we initially fitted a model that included all the SV-conditions, meaning that this model considered both grammatical and ungrammatical items in addition to local and long-distance singular and plural conditions. The post-hoc comparison, displayed in Table 7 shows that there were no significant findings that could suggest that the two groups performed differently in any of the conditions. Thus, we separated the conditions into grammatical and ungrammatical to further explore the possibility of a significant difference. The post-hoc comparison of the **grammatical** conditions revealed that the groups were different in two of the four conditions. First, there was a significant finding in the long-distance singular condition (p-value: 0.02) and a marginal difference in the long-distance plural condition (p-value: 0.058). By examining the accuracy scores, displayed in Table 4, we can observe that the Norwegian participants are significantly more accurate in identifying grammatical long-distance conditions compared to the Polish group. The post-hoc comparison of the **ungrammatical** conditions, displayed in Table 10, found a significant difference in the local (p-value: 0.01) and long-distance (p-value: 0.057) singular conditions. The results highlight that the Polish participants outperformed the Norwegians in the ungrammatical conditions as well as underlining that there is a significant difference between the two groups in the two conditions mentioned.

The mean accuracy scores from the AJT test were firstly divided into grammatical and ungrammatical singular and plural. The results are presented in Table 2 and Table 3. The difference between the accuracy scores in the grammatical and ungrammatical conditions display that both groups were significantly more accurate in correctly judging grammatical sentences than they were in rejecting ungrammatical ones. However, the Polish participants were to that extent, more accurate than the Norwegians. Furthermore, examining the accuracy

scores produced by the Norwegian and Polish group in the isolated grammatical conditions, displayed in Table 4, highlights that the Norwegians outperformed the Polish participants all of the experimental conditions. On the other hand, they score significantly lower in the isolated ungrammatical conditions, seen in Table 5, whereas the Polish participants are more accurate.

The high accuracy scores by the Norwegians in the study do not necessarily indicate that they are more advanced compared to their Polish peers in SV-agreement. In fact, the low accuracy scores in the ungrammatical conditions suggest that their overall performance and knowledge of SV agreement is not target-like as they accept both grammatical and ungrammatical conditions, supporting the claim that the Norwegians are subject to overgeneralization. Comparatively, the Polish group accepts fewer ungrammatical sentences, although their overall accuracy is still low. According to the data, the Polish participants demonstrate less evidence that suggest overgeneralization compared to the Norwegians, as they exhibit greater accuracy in identifying ungrammatical sentences. Furthermore, the difference in accuracy between the grammatical and ungrammatical conditions is smaller for the Polish participants than for the Norwegians. Despite this, the study's results finds that the prediction that Polish participants would outperform the Norwegians based on the linguistic similarities between Polish and English is not corroborated, and thus, the null hypothesis cannot be rejected. These findings may be attributed to the difference in the proficiency test results that showed that the Norwegian participants were significantly more accurate than the Polish speakers.

The difference in proficiency between the Norwegian and Polish participants is an important factor to consider when interpreting their performance on the AJT. The fact that the Norwegian group outperformed the Polish group on the proficiency test suggests that the Norwegian participants may have had a better understanding of English grammar, including subject-verb agreement, prior to taking the test. This difference in proficiency could also explain why the Norwegians performed better overall on the AJT, particularly in the singular conditions. The higher accuracy scores in the singular conditions for the Norwegian group may indicate a better understanding of subject-verb agreement in English, which could be a result of their higher proficiency in the language. Additionally, the Norwegian and Polish groups lower scores in the plural conditions suggests that these conditions may be a more challenging aspect of English grammar for non-native speakers, regardless of their proficiency level or L1 background. However, the difference in performance on the local plural and long-distance singular conditions between the Norwegian and Polish groups may indicate that the two groups approach

SV-agreement differently, possibly due to the differences in Norwegian and Polish morpho-syntax in regard to English.

Comparatively to this thesis, Jensen et al. (2021) found that despite their participants being matched in proficiency, the Russian group still outperformed the Norwegians on SV-agreement. This suggests that, despite having relatively high levels of overall proficiency in English, the Norwegian group still faced challenges in acquiring SV-agreement. Additionally, it suggests that while the groups were matched in overall proficiency, the results from the three modules tested did not correlate as the Russian group significantly outperformed the Norwegians. This supports the findings from the current study, and the argument that high proficiency levels does not necessarily correlate to high accuracy scores in specific grammatical conditions. As such it we may consider how the participants first language affects their accuracy in the target language. In other words, what role does cross-linguistic influence have in the results of this study?

The extent of cross-linguistic influence can depend on several factors such as input and the differences and similarities that the native language shares with the target language. As discussed in section 2.2, the nature of CLI and its overall effects of it can be divided into positive transfer, where the L1 and L2 share similarities, and negative transfer, where there is a key difference in grammatical aspects. This type of transfer facilitates a mismatch that may cause language errors. Concerning the current study and the research question asked, there exists a discrepancy in grammar for both participant groups regarding English. This could mean that the participants in the current study are subject to negative transfer, where their L1 grammar is negatively affecting their ability to learn and use English grammar correctly. This would entail that there exists a significant difference between the participants L1 and L2 grammar that has directly affected their performance.

Since Polish is a morphological rich language, many aspects of grammar are present in both Polish and English. Based on the fundamentals of markedness and transfer, this should, in theory, entail that Polish learners struggle less due to SV-agreement being prominent in both Polish and English. However, this does not necessarily mean that Polish learners of English will not struggle with subject-verb agreement. Language learning is a complex process that involves many factors, including individual differences in language learning ability, instruction, and

most importantly, exposure to the language. Additionally, differences in the grammar and word order of the L1 and L2 can affect the language learning process.

Norwegian grammar on the other hand is not as morphologically rich as Polish. Norwegian lacks overt subject-verb agreement, making it difficult for Norwegian learners of English to transfer their knowledge of SV-agreement from their native language as there is none. More specifically, the verbs in Norwegian themselves indicate SV-agreement as opposed to English which uses an over marker. Jensen et al. (2019, p 30) concluded that SV agreement is challenging for Norwegians to acquire due to a mismatch in Norwegian and English overt agreement. Eckman (1977) highlights that linguistic transfer is likely to occur when the native language is unmarked, but the target language is marked, as is the case with the unmarked Norwegian and marked English language.

Consequently, in light of markedness theory, the acquisition of SV agreement should in theory not provide Polish learners with much difficulty due to the language's overt SV agreement. However, the data collected in this study only supports this theory in part due to the differences in mean scores documented in the results section. As already discussed, the Polish are more accurate in the ungrammatical conditions. However, in the isolated grammatical conditions, they are outperformed. If the results agreed with the markedness theory, then the Polish participants should have outperformed the Norwegians in the SV-agreement conditions. Yet, they only provide higher scores in the ungrammatical conditions. These results indicate that markedness may not be a key factor in the participants accuracy results.

Word order can affect learners' ability to acquire English SV-agreement if there is a mismatch in the word order of their native language and the target language. When a non-native speaker of English who is used to a different word order begins to acquire SV-agreement, they may struggle to identify the subject and verb in a sentence due to their expectations of word order. As is the case for the participants of this study. Norwegian word order is mostly similar to English as they both tend to follow the SVO word order. English word order is flexible even though English is considered a V2 language, thus allowing it to be similar in structure as Norwegian in some cases. Due to its similarity, Norwegian learners may find it easier to find the verb in an English sentence which then helps them identifying the subject and verb that has to agree with one another. However, it is important to note that there are also some differences in how word order is used in Norwegian and English, such as the placement of adjectives and

adverbs, which can create challenges for Norwegians. Contrastively, Polish word order is very different from English as it typically follows a SOV order. In other words, the verb in Polish sentences is usually preceded by both subject and object, making it challenging for Polish learners to identify the verb in English sentences if they follow the same structure as their native language.

6.2 Does structural distance affect SV agreement in Norwegian and Polish L2 learners of English?

The shallow structure hypothesis proposes that L2 learners cannot acquire non-local agreement in a native-like way (Clahsen et al., 2006). This argument is based on the hypothesis's core claim; that L2 speakers, even those who possess a high level of proficiency, encounter difficulties in constructing or manipulating abstract syntactic structures in real-time, thereby exhibiting a heightened reliance on semantic, pragmatic, or surface-level cues, relative to their L1 counterparts (Clashen et al. 2018). Additionally, Clahsen et al. (2006) suggest that the lack of agreement error sensitivity in L2 learners can be predicted by the Shallow Structure Hypothesis. The SSH proposes that agreement can only be established locally for L2 learners, while long-distance agreement imposes a significant cognitive load. The hypothesis thus predicts that long-distance agreement is more challenging than local agreement for L2 learners.

The prediction for research question 2 is that long-distance agreement will be the most challenging condition to judge correctly due to the complexity of structural distance. Long-distance agreement can be difficult for learners because it requires them to establish a grammatical relationship between two distant elements within a sentence. This can be challenging for learners because they must remember the agreement rules for the distant elements while processing the sentence. Additionally, long-distance agreement often involves more complex syntactic structures, such as embedded clauses, which can further increase the cognitive load for learners (Clashen et al., 2006). As a result, learners may need additional help, for example, increased amounts of input, maintaining agreement across longer distances in a sentence. Keating (2009) regression analysis found that native Spanish speakers were sensitive to agreement mismatches in both long-distance agreements and local agreements. Advanced L2 learners were only sensitive to errors in the shortest conditions, while intermediate and beginners displayed no sensitivity in the agreement conditions. Further research that explores

the effects of local and long-distance agreement in SV-agreement include Ocampo (2013) whose findings suggest that L2 learners of English SV-agreement were indeed affected by structural distance. Ocampo argues that agreement errors in long-distance agreement is caused by learners making the verb closest to the noun agree with each other. As such, the complexity of long-distance agreement makes it harder for learners to acquire than local agreement. These findings are represented in the current study as well.

The local grammatical conditions, presented in Table 8, display a higher accuracy score for both participant groups compared to the long-distance conditions. More specifically, the accuracy scores from the Polish group indicate that they are indeed more accurate in correctly identifying local grammatical agreement compared to long-distance. The Norwegian grammatical scores also show that the lowest accuracy scores were in the long-distance plural condition. Additionally, the singular long-distance condition has a higher accuracy score than the local plural condition. In the ungrammatical conditions, presented in Table 5, we observe that accuracy scores in local and long-distance singular conditions by the Norwegians are close to identical. The Norwegians also produce a higher accuracy score in the long-distance plural condition which overall leads them to be more accurate in the ungrammatical long-distance conditions. Comparatively, the Polish participants are more accurate in the local singular condition than they are in the long-distance condition, which differs from the Norwegians. However, like the Norwegians, the Polish participants are also more accurate in the plural long-distance condition. Overall, the Polish participants produce balanced results, as they do not show signs of being significantly better in either ungrammatical local or long-distance agreement. They are however significantly better in singular conditions. Still, it is important to consider that the overall scores in the ungrammatical conditions are significantly lower than the grammatical, indicating that both groups are not proficient in correctly identifying grammar violations as the accept many ungrammatical sentences as grammatical.

These mixed findings indicate that structural distance alone is not the most challenging factor for the Norwegians, as the accuracy scores previously discussed find that they are in fact more accurate in singular condition and less accurate in plural conditions regardless of structural distance. The Polish participants on the other hand fit the predictions of the Shallow Structure Hypothesis as they seem to struggle more with long-distance conditions overall. To further explore the implications of these results in light of previous research, we may consider Ocampo

(2013) who in addition to exploring the effects of structural distance also investigates how the number of the subject affects SV-agreement. Additionally, the findings suggested by Jensen et al. (2019) also provide support that Norwegians typically struggle more with plural agreement than they do with aspects such as long-distance SV-agreement.

The findings discussed suggest that structural distance alone does not affect the overall accuracy results. As such, and in line with Jensen et.al (2019) 's findings, I argue that plural agreement creates more errors in judgement for the Norwegian participants than they do for the Polish participants who struggle more with long-distance agreement as a whole. This is based on the following argument. First, we observe that the accuracy scores from both the grammatical and ungrammatical conditions tested show that the Norwegians score significantly lower in all plural conditions, that is in both local and long-distance grammatical conditions. As such, the current study indicates the opposite of Ocampo (2013) 's findings which, to briefly repeat, find that the participants were less sensitive to agreement errors when the subjects are singular. Based on those findings, Ocampo (2013) argue that there was a weak plural markedness affect. In other words, the participants were more likely to detect agreement errors when the subject was plural, and less so when the subject was singular. Thus, the participants were more accurate in the plural conditions. These findings were not found in the current study. Rather, we found that both participant groups were more accurate in both grammatical and ungrammatical singular conditions than they were in plural conditions. However, the findings also highlight that while the grammatical singular conditions were observed to have higher accuracy scores than the plural overall, the local conditions were indeed the easiest for both groups.

I argue these numbers reflect that the Norwegian participants overgeneralize plurality. More specifically, the Norwegians overgeneralize the third person singular -s and apply it in plural conditions where they facilitate agreement errors. The Polish group on the other hand, I argue are more affected by structural distance and not the number of the subject. I base these arguments on the accuracy scores presented in table 4 and 5 that highlight low accuracy scores for the Norwegians in the plural conditions and low accuracy scores in the long-distance conditions by the Polish participants. Still, the Polish participants may also experience a tendency to overgeneralize because, as observed in the ungrammatical condition, they are more proficient in the singular conditions. The overall low scores in the ungrammatical condition show that they tend to accept ungrammatical as grammatical based in number, yet the score in

the singular conditions do not display that they are very confident in marking them as ungrammatical either. Conversely, the Norwegians do not show any significant signs of struggling more with long-distance agreement than with local agreement. The results thus provide tentative support for the Shallow Structure Hypothesis as the Polish participants are able to judge correct agreement more correctly in local conditions and less capable in long-distance agreement while the Norwegians seem to struggle more with overgeneralizing grammar rules.

The higher accuracy scores of the Polish participants in identifying local grammatical agreement compared to long-distance may be linked to the fact that Polish is a language with more extensive agreement morphology than English. Polish has a rich system of inflectional endings on nouns, adjectives, and verbs that mark gender, number, and case, whereas English has relatively few inflectional endings. Moreover, and as previously stated, Polish word order follows a SOV structure whereas English typically follows a V2 rule. Therefore, when Polish learners are faced with complex English sentences, e.g., long-distance agreement, they may experience that it becomes more difficult to identify which word is the verb is supposed to agree with the primary subject of the sentence. With local agreement, this process is simplified as the verb is always the preceding word after the subject. Nevertheless, a key issue with considering the predictions of the shallow structure hypothesis in the context of this study is that a native group of English speakers was not included as a control group. Thus, it is impossible to argue that the evidence found in this data provides tangible evidence that the Norwegians and Polish participants acquire non-local agreement in a non-nativelike way as the hypothesis suggest. Rather, the comparison shows that the two groups struggle in different ways. Still, the study finds that the long-distance conditions were overall more challenging than the local conditions which correlates to the SSH. Thus, supporting the second prediction of this study, namely that local agreement will be the easiest condition for the participants. For teachers of English, this suggests that learners will likely struggle more with long-distance SV-agreement than they will with local agreement. As such, it is imperative that they are exposed to enough input and are given sufficient instruction in long-distance agreement in order to facilitate better understanding of it.

7 Concluding marks

This chapter concludes the current study by summarizing the findings presented and the discussed effects of cross-linguistic influence based on the two test groups differing first languages. Additionally, this chapter will provide implications and suggestions as to how this thesis is relevant in a pedagogical perspective as well as future research directed at the issue of subject-verb agreement. Lastly, I will discuss the limitations of the thesis as well as providing notes as to how it could be altered for future experiments.

7.1 Summarized findings

This thesis investigated the effects of cross-linguistic influence in native Norwegian and Polish L2 learners of English with a specific focus on the acquisition of subject-verb agreement. The subject-verb conditions tested include both local and long-distance agreement. All conditions were further divided into grammatical and ungrammatical conditions as the results from a combined analysis did not prove any significant differences. To test this, we implemented a modified acceptability judgment test combined with a standardized proficiency test provided by Saraeva (2023). This test was printed out and given to the participants who answered the questions with pencils. 21 Norwegian and 17 Polish participants were required for this experiment. All the participants were between the ages of 11-12.

The data results were then annotated in Excel before being imported into R-studio. Firstly, we analysed the accuracy scores divided by grammatical sentences and ungrammatical sentences as well as singularity and plurality. The results indicated that the Norwegian participants outperformed the Polish participants in the grammatical conditions, while the Polish participants were more accurate in correctly rejecting both singular and plural ungrammatical sentences. In other words, the findings suggest that the Norwegian participants are more hesitant to judging a sentence as ungrammatical compared to their Polish peers. Moving forward, we fitted a mixed effect logistic regression model to find any significant intercepts. Finally, a post-hoc comparison revealed that there was a significant find in the grammatical long-distance conditions and the ungrammatical singular conditions. Thus, implying that there does exist a difference in the acquisition of English SV-agreement between the two test groups. However, whether this is solely due to the participants L1, and the cross-linguistics influence

is difficult to determine. It is possible, based on the results from the proficiency test, that the Norwegians outperformed the Polish participants because they were overall more adapt in English. Nevertheless, the study found that the groups struggle in different ways, but overall, none of the groups displayed a high enough accuracy score in the SV-conditions to be considered advanced learners. As such, the acquisition of subject-verb agreement was found to be challenging for both groups which correlates to the bottleneck hypothesis proposed by Slabakova (2008) and the findings in Jensen et.al (2019) who provides tentative support of the hypothesis. Finally, the findings suggest that learners generally struggle more with long distance agreement, however other factors such as plurality and overgeneralization seem to affect the overall accuracy scores.

7.2 Implications

The findings in this thesis are in line with the hypothesis that functional morphology may be challenging in L2 acquisition and susceptible to the effects of cross-linguistic influence. We also discuss some pedagogical implications of this.

As previously discussed in the theoretical chapters of this thesis, the differences in structure and grammatical rules between languages are imperative for teachers to consider. Markedness theory provides us with a framework that highlights that instructors of English as a second language should focus on the marked linguistic features of English. As the findings of the current thesis in addition to previous research discussed suggest, key areas of grammar to consider are subject-verb agreement and structural distance. By increasing the amount of input intensity and occurrence of marked structures learners are exposed to, White (1987) suggests that learners will then acquire marked conditions earlier. For pedagogical aims, that would entail that teachers of English increase the amounts of input and frequency of the target conditions, for instance subject-verb agreement.

Dypedahl (2020) remarks that explicit instruction has been the core of language pedagogy. The fundamental idea was that the language learning process consisted of a series of grammatical forms and structures that could be acquired through explicit instruction. As marked structures in English such as SV-agreement are especially frequent, it is imperative that learners are provided with enough explicit instruction in order to acquire it. One approach to this is focused

grammar instruction. While the role of implicit learning has been an important discussion in the teaching practice, Dypedahl (2020) states that teachers must also provide learners with direct explanations and practice opportunities in specific grammar structures, for example SV-agreement. This would also entail that teachers explain the basic rules, highlight common errors, provide input stimulus, and discuss how the learners L1 can be applied.

Teachers can include comparisons of the target language's structure and grammar and the pupils first language to facilitate positive language transfer. As highlighted in this thesis, the learner's native language can be responsible for errors in the target language. However, and as previously discussed, teachers must also be mindful to include explicit instruction where the grammar or structure of the learners first language differ with the target language so as to avoid a negative transfer. This would also help both teachers and learners to be aware of typical errors that can occur when learners apply their knowledge of their first language as a tool in L2 acquisition.

7.3 Limitations and future research

In this thesis, I conducted study that used an acceptability judgement test and standardized proficiency test that were handed out to two different classes. One Norwegian class and one Polish class. The study focused on L2 learners of English within the age group of 11–12-year-olds. Due to the lack of range in different age groups, the data is not representative of Norwegian and Polish L2 learners of English as a whole. Future research might then include learners from different age groups to better represent how Norwegian and Polish learners differ. Including several age-groups might also better highlight how age-related effects are key factors in language acquisition. These effects can for example include the participants level of input in the target language and how that affects their results. Moreover, the study consists of 20 Norwegian participants and 17 Polish participants that were tested once. Therefore, in future research, it would be beneficial to include a greater number of participants so that the statistical findings are more reliable and representative. Additionally, a longitudinal study of the process of second language acquisition would serve to be more representative as well due the individual differences and external factors that could potentially affect this study. In conclusion, future research focusing on the effects of cross-linguistic influence and SV-agreement could be conducted using participants from different language backgrounds and age groups using the same method as the current thesis.

8 Bibliography

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9 Appendix

Appendix 1: NSD approval

Vurdering av behandling av personopplysninger

Skriv ut

03.11.2022

Referansenummer
937585

Vurderingstype
Standard

Dato
03.11.2022

Prosjekttittel
Subject-verb agreement in Norwegian-English and Polish-English speakers

Behandlingsansvarlig institusjon
UiT Norges Arktiske Universitet / Fakultet for humaniora, samfunnsvitenskap og lærerutdanning / Barentsinstituttet

Prosjektansvarlig
Natalia Mitrofanova

Student
Marthe Bråthen

Prosjektperiode
03.10.2022 - 16.05.2023

Kategorier personopplysninger
Alminnelige

Lovlig grunnlag
Samtykke (Personvernforordningen art. 6 nr. 1 bokstav a)

Behandlingen av personopplysningene er lovlig så fremt den gjennomføres som oppgitt i meldeskjemaet. Det lovlige grunnlaget gjelder til 16.05.2023.

[Meldeskjema](#)

Kommentar
OM VURDERINGEN
Personverntjenester har en avtale med institusjonen du forsker eller studerer ved. Denne avtalen innebærer at vi skal gi deg råd slik at behandlingen av personopplysninger i prosjektet ditt er lovlig etter personvernregelverket.

Personverntjenester har nå vurdert den planlagte behandlingen av personopplysninger. Vår vurdering er at behandlingen er lovlig, hvis den gjennomføres slik den er beskrevet i meldeskjemaet med dialog og vedlegg.

VIKTIG INFORMASJON TIL DEG
Du må lagre, sende og sikre dataene i tråd med retningslinjene til din institusjon. Dette betyr at du må bruke leverandører for spørreskjema, skylagring, videosamtale o.l. som institusjonen din har avtale med. Vi gir generelle råd rundt dette, men det er institusjonens egne retningslinjer for informasjonssikkerhet som gjelder.

TYPE OPPLYSNINGER OG VARIGHET
Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til 16.05.2023.

LOVLIG GRUNNLAG
Prosjektet vil innhente samtykke fra foresatte til behandlingen av personopplysninger om barna. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 og 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse som kan dokumenteres, og som den registrerte/foresatte kan trekke tilbake.

Lovlig grunnlag for behandlingen vil dermed være foresattes samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a.

PERSONVERNPRINSIPPER

Personverntjenester vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

- lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at foresatte/registretre får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

DE REGISTRERTES RETTIGHETER

Personverntjenester vurderer at informasjonen om behandlingen som de registrerte og deres foresatte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18) og dataportabilitet (art. 20).

Vi minner om at hvis en registrert/foresatt tar kontakt om sine/barnets rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

FØLG DIN INSTITUSJONS RETNINGSLINJER

Personverntjenester legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1 f) og sikkerhet (art. 32).

Ved bruk av databehandler (spørreskjemaleverandør, skylagring, videosamtale o.l.) må behandlingen oppfylle kravene til bruk av databehandler, jf. art 28 og 29. Bruk leverandører som din institusjon har avtale med.

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og eventuelt rådføre dere med behandlingsansvarlig institusjon.

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til oss ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde:

<https://www.nsd.no/personverntjenester/fylle-ut-meldeskjema-for-personopplysninger/melde-endringer-i-meldeskjema>. Du må vente på svar fra oss før endringen gjennomføres.

OPPFØLGING AV PROSJEKTET

Personverntjenester vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Kontaktperson: Silje Fjelberg Opsvik

Lykke til med prosjektet!

Appendix 2: Informasjonsskriv

Vil du delta i forskningsprosjektet

«Samsvarsbøying i norsk og engelsk»

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å samle data på hvordan norske elever presterer i samsvarsbøying. Resultatene vil sammenlignes med polske elever som også undervises i engelsk. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Prosjektet ditt barn nå får muligheten til å ta del av er en del av en masteroppgave i Engelsk. Prosjektet dreier seg om hvordan Engelskelever presterer i samsvarsbøying. Altså hvordan elever bøyer verb. Vi samler inn deres svar og sammenligner dem med andre klasser og analyserer hva disse resultatene forteller oss om språklæring.

Formål

Dette er en master oppgave i lingvistikk, der formålet er å sammenligne resultatene fra de forskjellige elevgruppene for å se om det finnes noen likheter eller ulikheter. Problemstillingen vi ønsker å besvare er om Norske elever presterer på samme nivå som Polske elever i samsvarsbøying i Engelsk.

Hvem er ansvarlig for forskningsprosjektet?

UiT, Norges arktiske universitet.

Hvorfor får du spørsmål om å delta?

Ditt barn får spørsmål om å delta i undersøkelsen fordi:

- 1: Barnet har formell undervisning i engelsk
- 2: Barnet er mellom alderen 10-15 år gammel

Hva innebærer det for deg å delta?

Hvis du velger å delta i prosjektet får du utdelt et spørreskjema som inneholder en tre-delt test. Spørsmålene er på engelsk, og du svarer på engelsk. Svarene dine vil ikke blitt vurdert, det forventes kun at du svarer så godt du kan. Spørsmålene ber deg svare «yes» eller «no» til diverse engelske setninger. Du svarer «yes» hvis du synes at setningen høres korrekt ut. Om du synes setningen ikke høres korrekt ut svarer du «no». Svarene dine blir samlet inn og lagt til i et elektronisk dataskjema. Svarene blir da anonymisert.

Foreldre kan få se spørreskjema/intervjuguide etc. på forhånd ved å ta kontakt. Selve prosjektet vil ta ca. 45 minutter.

Det er frivillig å delta

Det opplyses om at barn under 15år selv ønsker om de vil ta del i prosjektet og kan trekke sin tilslutning dersom de ikke ønsker å delta. Det er frivillig å delta i prosjektet. Prosjektdeltaker kan når som helst trekke samtykket tilbake uten å oppgi noen grunn. Prosjektdeltaker kan også velge å ikke ta del i prosjektet selv om samtykkeskjema er signert. Alle personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser hvis barnet ikke vil delta eller senere velger å trekke seg. Om ditt barn velger å ikke delta vil det heller ikke ha noen effekt på resultater i engelskfaget. Dette er et prosjekt som ikke inngår i normal undervisning.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger.

Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. De eneste med tilgang til dine resultat er master student, Marthe Bråthen og veiledere Natalia Mitrofanova og Marit Westergaard. Navnet og kontaktopplysningene dine vil jeg erstatte med et nummer som lagres på egen navneliste adskilt fra øvrige data. Deltakerne vil ikke kunne gjenkjennes i publikasjon. Resultatene vil bli vurdert som en helhet, enkelt svar vil derfor ikke være relevant å vurdere.

Hva skjer med personopplysningene dine når forskningsprosjektet avsluttes?

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er i midten av mai 2023. Deretter vil all data som ikke blir presentert i masteroppgaven bli slettet.

Hva gir oss rett til å behandle personopplysninger om deg?

Vi behandler opplysninger om deg basert på foresattes samtykke. På oppdrag fra *Norges arktiske universitet (UiT)* har Personverntjenester vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Dine rettigheter.

Så lenge barnet kan identifiseres i datamaterialet, har du og ditt barn rett til:

- innsyn i hvilke opplysninger vi behandler om deg, og å få utlevert en kopi av opplysningene
- å få rettet opplysninger om deg som er feil eller misvisende
- å få slettet personopplysninger om deg
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger
-

Hvis du har spørsmål til studien, eller ønsker å vite mer om eller benytte deg av dine rettigheter kan du ta kontakt med min veileder Natalia Mitrofanova (natalia.mitrofanova@uit.no, Tlf. 77644230

Hvis du har spørsmål knyttet til Personverntjenester sin vurdering av prosjektet, kan du ta kontakt med: Vårt personvernombud: Joakim Bakkevold, personvernombud@uit.no 776 46 322 og 976 915 78

- Personverntjenester på epost (personverntjenester@sikt.no) eller på telefon: 53 21 15 00.

Med vennlig hilsen

Marthe Bråthen

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet *samsvarsbøying i norsk og engelsk*, og har fått anledning til å stille spørsmål. Jeg samtykker til:

- At mitt barn deltar i spørreundersøkelse

Jeg samtykker til at mitt barns opplysninger behandles frem til prosjektet er avsluttet

(Signert av prosjektdeltaker, dato)

(Signert av foresatt, dato)

Appendix 3: Language background questioner

Your full name:

Age:

Grade:

Is Norwegian your only native language? Yes / No

What language(s) do you speak with the members of your family?

Have you ever lived in a country/place where Norwegian is **not** the dominant communicating language for a period longer than **1 year**? Yes No

If yes, please indicate where and for how long? _____

Thank you for participating!

Appendix 4: Acceptability Judgement test

Task 1. Acceptability Judgement Test

You are going to read sentences in English. Some of them contain mistakes. There are no punctuation or spelling mistakes. Write **OK** if the sentence sounds correct to you, write **NO** if you think that the sentence contains a mistake. Don't spend much time on one sentence, try to make a decision based on your intuition. Some sentences contain additional information in brackets [...] for better understanding of the situation. You have 15 minutes to complete the test.

Example: *She is going to school now.* **OK** (Sounds correct to me, so I write OK)
She go to school now. **NO** (Sounds wrong to me, so I write NO)

1. *[Mary took a test yesterday].* The test was difficult.
2. The boy like to go swimming in the ocean.

3. I have strange feeling.
4. The house with yellow and white doors looks nice.
5. Susan always drinks coffee in the morning.
6. A teacher must be smart.
7. The kids like to play in the park every weekend.
8. [*Katherine bought a red dress*]. Colour suits her well.
9. The boys in the black car look very scary.
10. Once a month go they to the cinema.
11. The cats are independent animals.
12. The girl drinks a lot of water every day.
13. The life can be difficult.
14. The book about fast cars make the girl happy.
15. Yesterday I talked with my best friend.
16. Teenagers spend a lot of money on clothes.
17. The teacher with black shoes walk to work every day.
18. We believe in the democracy.
19. The students sits in the park after school.
20. We usually eat porridge for breakfast.
21. [*Susan thought that her dog was lazy*]. Dog slept a lot.
22. Those tourists with the heavy suitcase seem tired.
23. The elephants are the largest animals.
24. The kids with the red bike plays in the garden.
25. Patrick plays often computer games.
26. John is bright student.
27. The teacher eats fish for dinner every Friday.
28. [*There will be no class tomorrow*]. The teacher is sick.
29. The sisters love to run in the forest.
30. Every week cleans Julia her room.
31. Laura is married to a student.
32. The student love to read books about football.
33. The lions can hunt alone.
34. The boy with broken arms tries to read a book.
35. Last year they worked from home.
36. Many people are afraid of the death.

37. The cats play with the yellow and green balls.
38. [*Jack met a pretty girl yesterday*]. Girl studies linguistics.
39. The girls with short blonde hair like to read.
40. We see rarely our grandparents.
41. Manchester is a city in England.
42. The boy with blue eyes seems very happy.
43. It is important to reduce unemployment.
44. The parents with the nice car talks to their kids.
45. Mary eats never breakfast.
46. [*They have recently bought a new apartment*]. The apartment is on the first floor.
47. The cats with long white fur drinks milk every day.
48. History repeats itself.
49. The brown dog play with the yellow ball.
50. Every Friday eat we pizza for dinner.
51. He is famous painter.
52. Dogs are friendly animals.
53. The girl with golden earrings take the bus to school.
54. The girl drives to work every Wednesday morning.
55. Last week they went to the cinema.
56. The brothers attends football practice every day.
57. Birds lay eggs.
58. Time will show.
59. The teachers gives their students a lot of homework.
60. They regularly go to church.

Appendix 5: The Standardized Oxford Proficiency test

Task 2. The Standardized Oxford Proficiency test

Part 1: Please complete the sentences by selecting one of the answers. There is only ONE correct answer. You have **10 minutes** to complete this part.

1. Water _____ at a temperature of 100° C.
 a) is to boil b) is boiling c) boils
2. In some countries _____ very hot all the time.
 a) there is b) is c) it is

3. In cold countries people wear thick clothes _____ warm.
 a) for keeping b) to keep c) for to keep
4. In England people are always talking about _____.
 a) a weather b) the weather c) weather
5. In some places _____ almost every day.
 a) it rains b) there rains c) it raining
6. In deserts there isn't _____ grass.
 a) the b) some c) any
7. Places near the Equator have _____ weather even in the cold season.
 a) a warm b) the warm c) warm
8. In England _____ time of year is usually from December to February.
 a) coldest b) the coldest c) colder
9. _____ people don't know what it's like in other countries.
 a) The most b) Most of c) Most
10. Very _____ people can travel abroad.
 a) less b) little c) few
11. Mohammed Ali _____ his first world title fight in 1960.
 a) has won b) won c) is winning
12. After he _____ an Olympic gold medal, he became a professional boxer.
 a) had won b) have won c) was winning
13. His religious beliefs _____ change his name when he became a champion.
 a) have made him b) made him to c) made him
14. If he _____ lost his first fight with Sonny Liston, no one would have been surprised.
 a) has b) would have c) had
15. He has traveled a lot _____ as a boxer and as a world-famous personality.
 a) both b) and c) or
16. He is very well known _____ the world.
 a) all in b) all over c) in all
17. Many people _____ he was the greatest boxer of all time.
 a) is believing b) are believing c) believe
18. To be the best _____ the world is not easy.
 a) from b) in c) of
19. Like any top sportsman, Ali _____ train very hard.
 a) had to b) must c) should

20. Even though he has now lost his title, people _____ always remember him as a champion.

- a) would b) will c) did

Part 2: Underline the correct answer to form the continuous story. There is only ONE correct answer. You have **10 minutes** to complete this part.

21. The history of **aeroplane / the aeroplane / an aeroplane** is
22. **quite a / a quite / quite** short one. For many centuries men
23. **are trying / try / had tried** to fly, but with
24. **little / few / a little** success. In the 19th century a few people
25. succeeded **to fly / in flying / into flying** in balloons. But it wasn't until
26. the beginning of **this / next / that** century that anybody
27. **were / is / was** able to fly in a machine
28. **who / which / what** was heavier than air, in other words, in
29. **who / which / what** we now call a 'plane'. The first people to achieve
30. 'powered flight' were the Wright brothers. **His / Their / Theirs** was the machine which was the forerunner of the Jumbo jets
31. and supersonic airliners that are **such / such a / so** common
32. sight today. They **could / should / couldn't** hardly have imagined that
33. in 1969 **not much / not many / no much** more than half a century later,
34. a man **will be / had been / would be** landed on the moon.
35. Already **a man / man / the man** is taking the first steps towards the stars.
36. Although space satellites have existed **since / during / for** less
37. than forty years, we are now dependent **from / of / on** them for all
38. kinds of **informations / information / an information**. Not only
39. **are they / they are / there are** being used for scientific research in
40. space, but also to see what kind of weather **is coming / comes / coming**.

Appendix 6: Mixed effect logistic regression model

Grammatical sentences:				
Scaled residuals:				
Min	1Q	Median	3Q	Max
-2.7983	-0.9024	0.4596	0.6467	1.5285
Random effects:				
Groups Name	Variance	Std.Dev.		
Code (Intercept)	0.24520	0.4952		
Item (Intercept)	0.09544	0.3089		
Number of obs: 444, groups: Code, 20; Item, 12				
Fixed effects:				
	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	1.968877	0.923391	2.132	0.0330 *
CondLocal_PL	-0.870597	0.536589	-1.622	0.1047
CondLong_PL	-1.114095	0.530735	-2.099	0.0358 *
CondLong_SG	-0.380447	0.556164	-0.684	0.4939
GroupPol	-0.741205	0.657478	-1.127	0.2596
Score	-0.003861	0.029308	-0.132	0.8952
CondLocal_PL:GroupPol	0.267224	0.648634	0.412	0.6804
CondLong_PL:GroupPol	-0.435004	0.642823	-0.677	0.4986
CondLong_SG:GroupPol	-0.740699	0.662540	-1.118	0.2636

Ungrammatical sentences

Scaled residuals:

Min 1Q Median 3Q Max
-1.7733 -0.7861 -0.5242 0.9557 2.5987

Random effects:

Groups Name Variance Std.Dev.

Code (Intercept) 0.2113 0.4597

Item (Intercept) 0.2094 0.4576

Number of obs: 444, groups: Code, 20; Item, 12

Fixed effects:

	Estimate	Std. Error	z	value	Pr(> z)
(Intercept)	-1.63546	0.84779	-1.929	0.05372	.
CondLocal_P	-0.72397	0.55157	-1.313	0.18933	
CondLong_PL	-0.23104	0.54161	-0.427	0.66969	
CondLong_SG	-0.06689	0.53812	-0.124	0.90107	
GroupPol	1.49168	0.57375	2.600	0.00933	**
Score	0.05075	0.02683	1.892	0.05851	.
CondLocal_PL:GroupPol	-0.63784	0.59556	-1.071	0.28417	
CondLong_PL:GroupPol	-0.74947	0.58024	-1.292	0.19648	
CondLong_SG:GroupPol	-0.38251	0.57158	-0.669	0.50336	

Appendix 7: Proficiency test results

