-S morphemes in L2 English
An investigation into student essays in grades 6, 9, and 12 in Sweden
Abstract

Swedish students’ morpheme acquisition order in English, including the acquisition of -s morphemes, is a relatively unstudied topic. Given the morphological differences between the English and Swedish languages, students learning English in Sweden may encounter difficulties in the use of the third person singular present tense -s morpheme. Research also shows that Swedish students use the plural -s morpheme rather accurately at 9-10 years old. Mapping out the usage of the -s morphemes may pave the way for understanding the difficulties learners encounter in the use of such morphemes. Furthermore, looking into the usage of morphemes that have the same form but different grammatical functions (e.g., -s morphemes) may help us understand the relationship between different proficiency levels and the accuracy rate of morpheme usage in L2 English. To this end, this study investigates a corpus of texts produced by students learning English in Sweden in grades 6, 9 and 12. The focus is particularly on the frequency and accuracy of the use of -s morphemes, aiming at revealing which type of -s morphemes has a higher accuracy rate. The results show that the accuracy rate with the plural -s morpheme is relatively higher, whereas the possessive -'s morpheme is the most problematic one across all levels. Additionally, the largest issue with the contracted verb form of be -'s was that the students did not add an apostrophe between the word and the -s, rather than not using the form at all. Lastly, the third person singular present tense -s accuracy was very low in grade 6 but increased a lot through grade 9 and 12 where more complex subjects were the largest issue. However, the results indicate that further research with a larger corpus size is required to be able to generalize the findings.

Keywords:

SLA, morphology, plural, third person singular present tense, contracted verb form, possessive, -s morphemes, Swedish, English, transfer, corpus
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1. Introduction

Students learning new languages may struggle with many grammatical issues that are different in their first language. The grammatical structures of their first language may have an impact on their learning and use of an L2. This process is called transfer (Yule, 2010, p. 191). Teachers are often aware of the types of errors students make overall. However, teachers might be less aware of when in the students’ development a previous error is learnt. That is, they may not always be aware of when the students make a transition from struggling with an error to using the structure accurately. Such awareness requires being attentive to student production, both in written and spoken forms. Although some teachers may be more alert to this, we still need empirical research at a larger scale in order to understand the developmental stages of learners of English, including students learning English in Sweden.

In Sweden, the official language is only Swedish and the first second language that is taught in schools at the age of 7 is English (Skolverket, 2016, p. 35). English and Swedish are morphosyntactically different languages. English inflects verbs in third person for example, which Swedish does not. Therefore negative transfer may occur at different stages of learning and this may hinder the learning process (Yule, 2010, p. 191). In particular, words and structures in a language that have multiple meanings and similar forms can pose problems for students, since the same form may appear in different functions in English, including the -s morphemes.

In English, there are four bound inflectional morphemes (see section 2.2) which are almost identical in form but different in function. In this study, these morphemes are going to be referred to as -s morphemes as an umbrella name. Remember, these are four different morphemes and not a variant of the same morpheme. These -s morphemes are:

- Regular plural noun -s (such as dogs and ghosts)
- Third person singular present tense -s (such as runs and writes)
- Possessive -’s (such as Sarah’s and car’s)
- Contracted verb form be -’s (such as it’s and there’s)

The difference in function between the morphemes plural -s and third person singular -s is that the first mentioned morpheme shows number and value (dog – dogs) while the second mentioned morpheme shows tense and grammatical person (she runs – we run). Furthermore, the difference in function between possessive -’s and contracted verb form of be is that possessive -’s shows ownership (The car’s colour – the cars’ colour) whereas contracted verb form of be -’s is an contraction of is from the main verb be (it’s – it is).

Because these morphemes are so alike in form, a hypothesis for this study is that it might take second language students a long time to use all four morphemes accurately together. The students’ morpheme usage will be more or less frequent and more or less accurate, depending on how their interlanguage is being expressed.

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1 In this study, L2 will be used as an umbrella term to refer to second, foreign, and additional languages.
Against this background, the aim of this study is to map out Swedish students’ -s morpheme usage and investigate in what grades these morphemes are used accurately and inaccurately. The purpose is also to highlight the problematic morphemes according to the grade, so teachers can be informed to be more aware of what morphemes students struggle most with. The analysis involves looking into the frequency of all four -s morphemes individually in grades 6, 9 and 12 respectively and look into the accuracy rate in each grade. Additionally, the possibility of a morpheme acquisition order of these morphemes will be discussed.

In order to carry out this study, the Uppsala Learner English Corpus (ULEC) was used. Per grade, eighteen essays on the topic of ghosts has been analysed. These 54 texts contain 11 339 words in total, approximately 210 words per student. Although morpheme acquisition has been studied in Swedish learners of English, studies on -s morphemes are scarce. It is fundamental to study this topic more in order to discover why students might struggle with these morphemes.

The coming sections will provide more background into the field as well as the method for how the study was carried out. In the results section the frequency and accuracy of the morphemes will be presented and thereafter discussed.
2. Background

In this section, a comprehensive review of topics related to this study will be brought up. These topics are second language acquisition and morphology. The section will also cover factors that may affect the students’ production of the morphemes under investigation.

2.1 Second language acquisition

Second language acquisition (SLA) is a field within linguistics where a single person’s or group’s learning of a second language (L2) is studied. An L2 is often also called a target language (TL). TL is the language that the second language learner (L2L) aims to learn. An L2 could be learnt for example at home (informal learning) or in a classroom (formal learning) (Saville-Troike & Barto, 2016, p. 2). The word ‘second’ in SLA does not necessarily mean the second language a person learns. It means any language that is not the person’s first language (L1). Therefore, SLA also studies the acquisition of a third or fourth language (Ellis, 2003, p. 2). This study investigates SLA and therefore many of the coming sections are valuable to include in the background in order to draw any relevant conclusions about the findings.

A large part of SLA research has been dedicated to the issue of transfer. When learning a new language, the L2L may resort to grammatical structures of their L1 to fill in gaps resulting from the lack of knowledge in the L2 (Gass & Selinker, 1992, p. ix). There is positive and negative transfer. Positive transfer takes place when the rules of the L1 are applicable in the L2; the L2L uses the language correctly because of the knowledge of the L1. On the other hand, negative transfer occurs when the L1 interferes with the L2, when the rules of the L1 differ from the L2 (Yule, 2010, p. 191). One reason students in this study might make errors with the studied morphemes could have to do with negative transfer.

Swedish and English use the same word order formation. Therefore, an example of positive transfer would be when Swedish students use the subject-verb-object (SVO) structure when forming sentences in English (1). In comparison, Swedish and English use different prepositions in different contexts. Thus, negative transfer would be when Swedish students use the preposition on in sentences where at would be grammatically correct in English (but not in Swedish) (2).

(1) I like school.
    S  V   O

(2) *I stay on the hotel.

In negative transfer, the L2L makes errors because s/he applied the rules of the L1 in the L2 and therefore it becomes incorrect (Yule, 2010, p. 191). Some studies suggest that languages from the same language groups have similar types of transfer. Indo-European languages like Swedish and Spanish share more similar transfer than non-Indo-European languages like Finnish and Basque that share more similar transfer with each other (Cenoz et al., 2001, p. 475). Other studies suggest
that Swedish students that study English in their last year of secondary school do not get disturbed by negative transfer when using prepositions, possibly because they have transitioned past the point in their interlanguage where negative transfer affects their preposition use. However, positive transfer was still present in their usage (Johansson, 2017, p. 19).

As mentioned before, ‘interlanguage’ (IL) is another term within SLA. IL was coined by Larry Selinker and describes what the L2L uses when s/he expresses her-/himself in the L2. It is seen as a linguistic system in itself, in the learner, which is not like the L1 or L2, although linked to both. IL could be considered a mix between two languages, just not a fully developed language yet. Some argue that an adult L2L will never be able to speak a TL as well as any child could speak their L1 because of what is called fossilization. This term refers to when a L2L stops developing their TL (Tarone, 2006, p. 747). However, some still disagree about fossilization and while they agree that the IL “may stabilize” it does not mean that the L2L loses the possibility to still learn more and develop (Long, 2015, p. 570). Learner language (LL) is a type of IL. While IL is a term that describes the linguistic system inside the L2L, IL is the language that the L2L produces (Ellis, 2003, p. 140).

Once more, learner language (LL) is the produced language of the L2L during their acquisition, both written and spoken (Ellis, 2003, p. 140). It is the main source of data for SLA researchers since it is not possible to study much else than learner language (Ellis & Barkhuizen, 2005, p. 4-6). One way of researching LL is through learner corpus research (LCR), which this study is concerned with.

LCR is a relatively new way of studying LL since it was first used in the 80’s. LCR opens up for large qualitative studies as it is easier to collect and store a great amount of student texts (Granger et al., 2002, pp. 4-5).

2.2 Morphology and morphological research

In morphology, one or several elements that make up a word are studied. These elements are called morphemes. Yule (2010) describes morphemes as “a minimal unit of meaning”, such as you or -ly (as in gladly). There are several categories of morphemes (see figure 1). There are free and bound morphemes, lexical and functional morphemes, and derivational and inflectional morphemes. Yule (2010) describes free morphemes are morphemes that can stand on their own, such as you. Bound morphemes cannot stand on their own, such as -ly. Instead, bound morphemes are attached to other forms (-ly attached to glad forms gladly). Free morphemes can be put into two categories, lexical and functional morphemes. Lexical morphemes are words such as nouns and adjectives (you). Functional morphemes are words such as prepositions and conjunctions (in). Bound morphemes can also be put into two categories, derivational and inflectional morphemes. Derivational morphemes are prefixes and suffixes that create new words or change the word’s word class (as can be seen above when the adjective glad became the adverb gladly). Inflectional morphemes do not create new words. Instead, inflectional morphemes change the grammatical function of the word. That means expressing e.g. plural, tense or possessive (-s attached to dog changes the number from singular to plural, dogs) (Yule, 2010, pp. 67-70). This study is only concerned with inflectional morphemes.
There are other things to consider apart from morphemes that matter in the students’ learner language: allomorphs. Allomorphs are a part of morphology but differ from morphemes in that they regard speech more. Morphemes and allomorphs are closely related. However, allomorphs are variants of morphemes, often with a close phonological pronunciation. For example, the regular plural -s morpheme can be pronounced both /s/ and /z/. But there are other examples, like comparative morphemes -er and -est (*large*, *largest*). Both morphemes conjugate adjectives but they do not sound the same (McGregor, 2015, para. 3.4).

There is a scarcity of research compiled in allomorph studies. There is one study on how students of English pronounce the allomorphs of the -ed tense marker, i.e. like [d] or like [t] (as in the difference in tried ([d]) and liked ([t])), in Malaysian speakers. The study shows that the students were rather accurate in their pronunciation of the allomorphs (Lotfie et al, 2017, p. 452).

As this study is concerned with written production, phonological allomorphs cannot be analysed, but they could possibly influence the students' perception of the spelling of some morphemes.

Studies on first language learners (in the United States) show that younger learners (aged 6) can interpret -ed as a tense marker, but not the third person singular present tense -s (Beyer & Hudson, 2009). Researchers (ibid.) argue that because the ending -s “corresponds to multiple meanings” (p. x) in English, such as plural on nouns, the genitive, and third person singular present tense, it can lead to confusion for the learners and will not be acquired until a later stage. Beyer and Hudson (2009) have based this on other studies (Brown (as cited in Saville-Troike & Barto, 2016, p. 43-44) & Slobin, 1985) that also argue that morphemes are acquired earlier if they have a “one-to-one correspondence”. The fact that young learners can interpret -ed as a tense marker, but not the third person singular present tense -s, and that the -s morpheme has multiple meanings can make it harder to learn the third person singular present tense -s (Beyer & Hudson, 2009, p. 214). Few researchers have tested if morphemes with multiple meanings are more difficult to acquire for Swedish students or students with English as their L2. This study wants to discover if Swedish students are likely to find the -s morphemes difficult due to the fact that they...
have multiple functions as it has not been studied before. It is possible that Swedish students also struggle with the third person singular present tense -s, like the L1 children.

Some research has also been carried out on Swedish students’ learning of English as an L2. For example, Khor (2012, pp. 1-44) looked into Swedish 6th and 7th graders’ usage of plural -s, together with some other grammatical structures. Khor (2012) found that students in grade 6 struggle with some plural -s morphemes but still have a high accuracy score (83 % accurate). In grade 7, the students were even more accurate with the plural -s (90.6 %). Even though the accuracy is higher, the types of errors are the same in both grades. Khor (2012) argues that age may be regarded as an important factor in students’ use of correct morphological structures, as age is one of the factors in SLA. The accuracy score should come close to 83 % for 6th graders as well and go beyond 90 % for the 9th graders in my study too if this study is reliable. As Khor (2012) is only a degree project, there is a possibility the results may differ to mine however.

Another study on Swedish students was carried out by Feltsen (2009, pp. 1-26) that studied 9-10 and 16-18 year old students’ grammar, including morphology. Out of five categories of errors (grammatical, words missing, morphological, word order, spelling) morphological errors came in third place, both for the younger and the older students. It could be assumed that the study indicates that morphology is not the largest issue to the students but also not their smallest. The 9-10 year old students found it difficult to use the plural -s morpheme but used it accurately sometimes too. The 16-18 year old students’ largest morphological issue was morphemes ending with -s in general. Feltsen (2009) is also a degree project and there is a possibility these results might not be as reliable as some other studies either.

Neither of the two aforementioned studies have investigated the possessive -'s and the contracted verb form of be -'s however which would add value to the understanding of these specific morphemes.

However, a corpus study, carried out by Murakami and Alexopoulou (2016) included possessive -'s in their study. All in all, they studied articles (a, an and the), past tense -ed, plural -s (and -es), possessive -'s, progressive -ing and third person singular present tense -s. The participants in the study had different L1s (Japanese, Korean, Spanish, Russian, Turkish, German and French) and were categorized into five different levels of proficiency. The results in the study (Murakami and Alexopoulou, 2016, pp. 381-384) show that plural -s is the first morpheme that the students are accurate with. The second morpheme would be the possessive -'s and lastly the third person singular present tense -s. However, when you look at the individual progression of each L1, some use the third person singular present tense -s accurately even in the lowest level of proficiency. Moreover, this is also true for possessive -'s (Murakami and Alexopoulou, 2016, pp. 381-384). This suggests that L1 has an influence of the acquisition of each morpheme. Although, there are patterns that suggest that many of the language progress similarly. One could assume that the acquisition would be the same for students with Swedish as their L1. However, it has to be studied in order to be confirmed as there are varieties in the acquisition depending on what L1 the student has. As this has not been done in Swedish, this study will try and fill that gap. However, it is still possible to hypothesize that Swedish students might score closely to the
Some researchers argue that all morphemes are acquired in a certain order. For example, Brown made observations on the order of the acquisition of English morphemes in both L1 and L2 learners (as cited in Gass & Selinker, 1992, p. 36). The children in the study acquired the studied morphemes in roughly the same order even though they were not all the same age when they learnt them. The conclusion was that the acquisition of morphemes had a specific order for all L2L, independent of the students’ L1 and possible L1 transfer (Gass & Selinker, 1992, p. 36). Such findings suggest that there may be a natural order in the acquisition of morphemes in an L2, in a way that resembles L1 acquisition. To establish this, one would have to compare this to other L2Ls’ acquisition of English which can only be done after an order has been created for Swedish. As this has not been created, the first step would be to create a morpheme acquisition order which is what this study will attempt at doing.

The natural order hypothesis was put forward by Dulay and Burt that morphemes are acquired in the same order in all L2s (as cited in Saville-Troike & Barto, 2016, p. 43-44). This suggests that all L2L, no matter what native language they speak, will acquire the English morphemes in a predictable order (Saville-Troike & Barto, 2016, p. 43-44). In the 1970’s, there was little focus on L1 transfer and the influence of the L1 in general (Gass & Selinker, 1992, p. 131). Nowadays, it is more common to think that L1 transfer has a much bigger impact than researchers thought in the 1970’s and few rely on the natural order hypothesis as much (Kwon, 2005, p. 16).

2.2.1 The morphemes in question

The English language has four different -s morphemes which are all bound inflectional morphemes. The morphemes are the plural noun -s (1), the third person singular present tense -s (2), the possessive -’s (3), and the contracted verb form of be -s (4). This study is only concerned with the written forms of these morphemes, as there are more variants to include in speech.

(1) Five dogs
(2) She runs fast
(3) Sarah’s book
(4) It’s cloudy today

(1) In English, the majority of nouns are count nouns. The most common plural form for count nouns is the -s morpheme (fools, cars). However, there are other morphemes that indicate plural as well. Nouns that end with an -s or a sibilant have an -es added to them instead (fishes, bosses). -Es is added to avoid two -s sounds colliding. Some nouns that end with a -y replace the -y with an -i and then add -es (-ies) (countries, bunnies) while some gets an -s added to them while the -y stays (donkeys, boys).

In Swedish, plural on nouns is formed by several different morphemes (-or, -ar etc.) (Josefsson, 2009: 70). This could lead to negative transfer. Both Swedish and English use
suffixes to create plural number. However, as the forms are completely different for different reasons, it could be difficult to learn the foreign forms.

The plural noun -s morpheme is not completely learnt by Swedish students in primary school grades 3 and 4 (Feltzen, 2009, p. 10). One can assume that two years later the students’ plural noun -s usage has developed. Therefore, a hypothesis is that the plural noun -s will be the first of the morphemes in this study that the students learn.

(2) The third person singular present tense -s verb has three inflections. These inflections are: -s, -es and -ies (calls, passes and tries), which of only -s is relevant for this study.

There are -s morphemes on verbs in Swedish but only when using the passive voice (snöbollarna kastades av barnen) and some present tense verbs that end with -s (such as att slåss). However, the present tense verb forms stay the same for all subjects (Josefsson, 2009, p. 76-77).

The hypothesis for the acquisition of the third person singular present tense -s is that the students learn this morpheme late in their language development. Firstly, the third person singular present tense -s is a feature that does not exist in the students’ L1. Secondly, people with English as their L1 learn the third person singular present tense morpheme late in their language development too (Saville-Troike & Barto, 2016, p. 43-44).

(3) Phonologically, possessive -’s and plural -s are pronounced the same. However, orthographically the possessive -’s distinguishes itself from the plural -s because an apostrophe is added before the -s. In the singular form, the apostrophe is added before the -s (my mother’s) and in the plural form after the -s (my parents’). There are other ways of forming possessive in English that are irrelevant for this study (Greenbaum et al., 2012, p. 25-108).

One could argue that the possessive -’s morpheme should not be learnt very late by the students as Swedish also uses an -s for the genitive form. On the other hand, there might be errors found in the students’ texts as Swedish does not add an apostrophe before the -s. The form -’s can also indicate is which makes the possessive -’s morpheme difficult to learn as it has multiple functions.

The hypothesis for the acquisitions of the possessive -’s morpheme is that the possessive -’s morpheme is learnt rather late as students might not understand the function of the apostrophe and confuse it with the contraction for is.

(4) Auxiliary verbs can be contracted in informal writing (she will - she’ll and I am - I’m). Contractions with be often include an -’s, such as she’s and it’s (Cobuild, 2007, p. 220).

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2 English uses different types of -s-constructions to avoid pronunciation problems. Swedish plural suffixes have different forms partly depending on what article is used (en or ett).
However, main verbs cannot be contracted (Crystal, 2003, p. 85). There are other ways of contracting verbs (such as in a negated sentence) but those do not include an -’s (Greenbaum et al., 2012, p. 25-108).

Estling-Vannestål (2007, p. 154) mentions the contracted verb form of be -’s as an auxiliary. She writes that the students happen to confuse there’s with theirs for example. Additionally, the contracted verb form of be can be confused with more than one other morpheme (possessive pronoun (their) and possessive -s (the boy’s)) (Estling-Vannestål, 2007, p. 300). Moreover, Swedish grammar books do not bring up contractions at all. This suggests that contractions are an unknown grammatical feature for the students, in contrast to plural which is a grammatical feature in Swedish as well. Thus, it could be difficult to apply. Of course, all grammatical features are difficult for L2 students to apply in the beginning but some features might be more or less difficult.

The contracted verb form of be is not included in Brown, and Dulay and Burt list of morphemes (as cited in Saville-Troike & Barto, 2016, p. 43-44) which makes it hard to hypothesize about when it should be learnt approximately. The contracted verb form -’s can be confused with more than one other morpheme (possessive pronoun (their) and possessive -s (the boy’s)) (Estling-Vannestål, 2007, p. 300).
3. Method and material

3.1 Material and procedure
The data in this study was acquired from the Uppsala Learner English Corpus compiled by Christine Johansson and Christer Geisler in 2009. The corpus consists of computer written texts (without any spelling or dictionary support etc.) from Swedish students of English in grades 6, 9 and 12, females and males, all from schools in Uppsala. The specific grades were chosen simply because those are the only grades that the corpus consists of. In this study, 18 texts per grade were chosen. Hence, a total of 54 texts were chosen. These essays contain 11,339 words in total, averaging at approximately 210 words per student. The topic of the texts is ghosts and whether the students believe in ghosts and supernatural phenomena. The students also answer why they think we, as humans, are prone to believing in ghosts.

The method of using a corpus is a relatively new way of studying language as it was not possible to store large data before the technology for it was invented. Corpus studies enable larger quantities of data as well as less time to collect material and more time to analyse the data instead (Ghadessy et al, 2001, p. xvii). Since this is a descriptive study with a focus on frequency of morphemes the results ahead will be reported quantitatively.

All texts were copied from a PDF-file into a word file to enable marking and commenting. The texts were read several times. The first time, the texts were simply read without marks and comments. After that, instances of each of the four morphemes were looked for, one by one, and marked by colour for morpheme type and crossed through for incorrect usage (see appendix 1). Lastly, all individual morphemes were counted and written down. Total number of instances, correct instances and incorrect instances were noted.

This study does not investigate the progress of 18 students longitudinally in year 6, 9 and 12. Instead, since this study is cross-sectional, it compares different levels to each other. This means that the progress of each individual student is not analysed but rather, a general view of students in different grades is studied.

3.2 Error analysis
In this study, errors are analysed based on the error analysis (EA) method often used within SLA. According to Saville-Troike & Barto (2016, p. 39-40), EA includes five steps:

1. Collection of data
2. Identification of errors
3. Description of errors
4. Explanation of errors
5. Evaluation of errors

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3 See Doehler, 2010, for an overview of cross-sectional and longitudinal studies, pp. 105-126.
Firstly, one must collect data. Data can be collected in many different ways (one speaker versus several speakers etc.). Secondly, the errors have to be identified. The researcher searches for the specific errors for the study, or often also instances where the learner is not making an error and is using the feature correctly. One can differentiate between errors and mistakes. Corder distinguishes between errors and mistakes by categorizing errors as systematic and mistakes as “some kind of processing failure such as a lapse in memory” (as cited in Saville-Troike & Barto, 2016, p. 39). However, this study does not engage with mistakes. Thirdly, the errors are described, or classified. The errors get a language level classification (phonological, morphological etc.) and a specific linguistic element classification (article, preposition, verb form). Step four is explaining the errors. “Why is there a verb form error here?” or “why is the learner making this specific mistake?”. Saville-Troike & Barto (2016, p. 39-40) claims that the most important step in error analysis, and SLA, is figuring out why errors are being made (step 5). Often, the answer to “why?” can be negative transfer, for example.

This study carried out error analysis in this way:

1. **Collection of data**
   The 54 texts were collected from the corpus.

2. **Identification of errors**
   The morphemes were looked at one by one and marked as correct or incorrect.

3. **Description of errors**
   All errors in this paper were described as morphological as nothing else was looked at.

4. **Explanation of errors**
   In the results section, the errors were all explained as either errors as it cannot be determined which errors are simply mistakes.

5. **Evaluation of errors**
   The results section also tries to look at the reason why these errors were made.

In EA, it is not always clear what constitutes an error and it becomes the researcher’s task to determine what is an error and what is not. Sometimes, this process becomes subjective as there is not a clear line between what is a mistake and what is an error. A student could simply forget to add an -s only once in their text but that does not mean the student does not know how to apply the rule. There is also always the risk of missing errors when going through the texts. This, of course, limits the study.

Another limitation is that other ways of indicating plural, like -es (boxes), will not be looked into (as well as other ways of forming possessive (the colour of the car or her) etc.). This narrows the results as the question of whether the students are not using the -s morphemes or if the students
are not using the functions at all cannot be answered. It would broaden the results if the analysis included looking at other ways of forming the different grammatical structures (such as possession). Students that do not use the possessive ‘s might still use the of-construction, showing that the general understanding of possession might be present. In that case, not using the ‘s construction would possibly be avoided because it could be more difficult than the of-construction or possibly the ‘s construction has not been learnt yet at all.

In this study, a morpheme that is used incorrectly will count as an error. Mistakes cannot be detected and are therefore counted as errors as well. It is difficult to know whether misuse of a morpheme is a mistake or an error. The only way to know without knowing your students is by looking at the rest of the text and look at if the student has used the same form, preferably on the same word, correctly before. Therefore, all incorrect instances of a morpheme will constitute an error.

Spelling mistakes do not count as errors, for any morpheme, as spelling does not concern morpheme acquisition order. Because the use of -s in *the doggs run fast is correct it will be treated as correct in the study.

3.3 Defined errors
With the third person singular present tense form, these guidelines were followed to determine errors:
• There is a missing -s where there should be one (*She run fast).
• There is an -s where there should not be one (*We runs fast).
• There is an apostrophe between the verb and the -s (*She run’s fast).

With the plural form, these guidelines were followed to determine errors:
• There is a missing -s where there should be one (*Five dog).
• There is an -s where there should not be one (*One dogs).
• There is an apostrophe where there should not be one (*Five dog’s).

With the possessive form, these guidelines were followed to determine errors:
• There is an -s missing where there should be one (*Sarah book).
• There is no apostrophe between the noun and the -s (*Sarahs book).
• There is an apostrophe where there should not be one (*Sarahs’ book).

With the contracted verb form, these guidelines were followed to determine errors:
• There is a missing -s where there should be one (*it fun)
• There is no apostrophe between the subject and the -s (*its fun).

After the process of finding all the correct and incorrect morphemes and marking them in text, a native speaker inter-coder was consulted for inter-coder reliability. She was sent about 1 100
words from the corpus (approx. a 10 % extract). She would then analyse the marked errors. An agreement rate of 90 % (in 81 of the 90 errors) was achieved, which satisfies inter-coder reliability. There were a few missed plurals that had been left unmarked as well as some tricky structures that were agreed upon. After discussing the errors and exchanging perspectives there was only one error left that we did not share viewpoints on making us agree on 98.9 % of the errors. The error we did not agree on was *ghost want*. The inter-coder agreed with me that the correct structure would be *ghost wants*. However, as the student had used *ghost wants* several times before, the inter-coder argued that this was simply a mistake and did not change her view after discussion. We agreed that the example is possible to be a mistake but as the study is not concerned with determining mistakes and counts all faults as errors, I decided to keep it as an error. Overall, the inter-coder reliability test concludes that the error analysis has been very accurate in this study even though the human factor can overlook some errors occasionally.

4. Results

4.1 Overall results

This section covers a brief overview of the overall results in this study. In the following sections, each morpheme is presented individually with comments.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total morphemes</th>
<th>Total plural morphemes</th>
<th>Total third person singular present tense morphemes</th>
<th>Total possessive morphemes</th>
<th>Total contracted verb form morphemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>261</td>
<td>183 (70.1 %)</td>
<td>46 (17.6 %)</td>
<td>6 (2.3 %)</td>
<td>26 (10 %)</td>
</tr>
<tr>
<td>9</td>
<td>320</td>
<td>243 (76 %)</td>
<td>30 (9.4 %)</td>
<td>7 (2.2 %)</td>
<td>40 (12.4 %)</td>
</tr>
<tr>
<td>12</td>
<td>302</td>
<td>212 (70.2 %)</td>
<td>56 (18.5 %)</td>
<td>4 (1.3 %)</td>
<td>30 (10 %)</td>
</tr>
<tr>
<td>Total</td>
<td>883</td>
<td>638 (72.3 %)</td>
<td>132 (14.9 %)</td>
<td>17 (1.9 %)</td>
<td>96 (10.9 %)</td>
</tr>
</tbody>
</table>

In total, Table 1 shows that there were 883 instances of the -s morphemes to analyse in the student texts. In all grades, the total morphemes were about as many. Additionally, the percentages were also almost alike in all grades. Only third person singular present tense -s is slightly lower in 9th grade. The fact that the students are more and less accurate with the morphemes in the different grades even though the total morphemes are approximately the same makes it easier to determine when the students truly are more or less accurate with a morpheme. In other words, the fact that there are more or less errors is not determined by the fact that some grades have much higher or lower amounts of any of the morphemes.
4.2 Plural -s

In Table 2, the results of the plural -s are shown.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total instances</th>
<th>Correct instances</th>
<th>Incorrect instances</th>
<th>Accuracy score</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>183</td>
<td>147</td>
<td>36</td>
<td>80.3 %</td>
</tr>
<tr>
<td>9</td>
<td>243</td>
<td>232</td>
<td>11</td>
<td>95.5 %</td>
</tr>
<tr>
<td>12</td>
<td>212</td>
<td>194</td>
<td>18</td>
<td>91.5 %</td>
</tr>
<tr>
<td>Total</td>
<td>623</td>
<td>561</td>
<td>62</td>
<td>90 %</td>
</tr>
</tbody>
</table>

Table 2 shows that the students’ accuracy score with the plural -s morpheme increases, not every grade, but at least a progression can be noted (from 80,3 % to 91,5 %). It is difficult to draw any conclusions as to why the students in grade 9 have a higher accuracy score than in grade 12. A possible explanation is simply that the fact that there are relatively few analysed students in this study or that there are a few very accurate students in grade 9 by chance (or vice versa in grade 12). In all grades, the students are very accurate in their usage of the morpheme. Additionally, the plural -s has a very high frequency compared to the other morphemes.

In grade 6, the students are often less likely to add an -s to nouns that should have one (1).

(1) *I don’t believe in ghost

Of course, the students seem to make mistakes as well (2). It might, however, be difficult to figure out whether this is a mistake or an error.

(2) *…their brothers and sister

It seems to be more difficult to find consistent errors in grade 9. The errors that occur seem much more to be at individual level. It is not possible to establish what types of plurals they struggle with. This could also be due to the fact that relative to the other grades, there are fewer incorrect instances to analyse.

As can be seen in example 3-6 there are different plural errors in all of them. Example (4) used -es instead of -s for example. As very few of these errors are reoccurring it is difficult to draw any substantial conclusions about the plural -s errors in grade 9.

(3) *…I can’t blame parent trying to make their kid stay away…
(4) *I do have friendes that don’t…
(5) *All the movies and shows’ on TV…
In grade 12, however, it is easy to see that the students practically only make errors with more complex nouns (such as irregular nouns or nouns where the subject and verb are not in close connection to each other) (7 and 8) or nouns that usually do not take an -s (9), rather than forgetting to add the common -s.

(7) *...supernatural phenomenas
(8) *...supernatural phenomenons
(9) *...our fantasys

4.3 Third person singular present tense -s

In Table 3, the results of the third person singular present tense -s are shown.

Table 3. Third person singular present tense –s frequency and accuracy score

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total instances</th>
<th>Correct instances</th>
<th>Incorrect instances</th>
<th>Accuracy score</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>46</td>
<td>14</td>
<td>32</td>
<td>30.4 %</td>
</tr>
<tr>
<td>9</td>
<td>30</td>
<td>16</td>
<td>14</td>
<td>53.3 %</td>
</tr>
<tr>
<td>12</td>
<td>56</td>
<td>39</td>
<td>17</td>
<td>69.6 %</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>68</td>
<td>59</td>
<td>53.5 %</td>
</tr>
</tbody>
</table>

Table 3 shows that the students’ accuracy score with the third person singular present tense -s increase distinctly in each grade. From grade 6 to grade 12 the accuracy score has more than doubled. In grade 6, the students are generally inaccurate in their usage (30.4 %) but grade 9 and 12 have a higher accuracy score (53.3 % and 69.6 %). The frequency of the morphemes is not as high as the plural -s (127 instances against 623) but surely not low compared to the other two morphemes (17 and 91).

In grade 6, there seems to be no consistency of how the students use the morpheme. Many students are inconsistent throughout their whole texts. The same student that writes me and my mom look later writes *she meet. Other students might not add an -s to any present tense verb in third person form or only add an -s to most present tense verbs in the third person form. It seems like the students are not familiar with how to use the -s but many are aware that somewhere, sometimes, it should be there. It looks like the students would add the -s randomly, although it is likely there is some thought behind their constructions. This can only be assumed however.

It is again more difficult to find consistent errors in grade 9. However, the students no longer seem to randomly add or remove the -s without a clear reason. The students are much more
accurate with the morpheme. In this grade, the students that use the -s correctly once seem likely to use it correctly throughout their texts and vice versa.

Some errors (10) occur with confusing pronouns where the meaning of the noun is plural but is inflected as if they were singular.

(10) *...everyone believe

The phenomenon transfers to grade 12. Even though the accuracy (and frequency) score is higher in grade 12, the students either use the morpheme accurately almost all the time or almost never at all. The students that use the -s correctly once seem likely to use it correctly throughout the text and vice versa in this grade as well. It is difficult from this study only to establish why some students can be so accurate while others are not.

Moreover, there are additional errors (11) that still occur with pronouns that could be difficult to handle, like in example (10) in grade 9. Pronouns where it is unclear if it is a singular or plural pronoun (or as in the case with no one which some could interpret as neither) the students are often inaccurate.

(11) *...which no one ever see?

4.4 Possessive -'s

In Table 4, the results of the possessive -'s are shown.

Table 4. Possessive -'s frequency and accuracy score

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total instances</th>
<th>Correct instances</th>
<th>Incorrect instances</th>
<th>Accuracy score</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>0 %</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>28.6 %</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0 %</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>2</td>
<td>15</td>
<td>11.8 %</td>
</tr>
</tbody>
</table>

Table 4 shows that the accuracy score for the possessive -'s morpheme is very low. Both grade 6 and 9 have 0 % accuracy. The only correct instances in grade 9 come from 1 of the 18 students. The accuracy score in grade 9 is high compared to the other grades. However, the low frequency in all grades makes the two instances look like a lot when it comes to per cent. The possessive -'s has both the lowest frequency as well as the lowest accuracy score.

In grade 6, the problem partly lies in that students do not use the apostrophe although they are using the –s (12) and also that they avoid the possessive –’s construction overall (13). It is not the
case that they avoid the possessive construction overall since many of the students repeatedly use “my friend” or “her mom” instead. However, there was one student who was not even aware of the possessive pronoun her and instead wrote *She’s mom. In general, the students seem unsure of the how to use possessive construction accurately since both the –’s construction and of-construction is avoided. However, the largest issue is still the fact that the students do not use the apostrophe when they do use the –’s construction.

(12) *… my granddads room…
(13) … my home […] my friend […] my garden […] my granma […] my frends

The problem with not using the apostrophe and avoiding the -’s construction persists in grade 9. The errors look almost exactly the same in almost all the examples (14 and 15) or the –’s construction simply is not used. There is no development in either the frequency or accuracy in grade 12. The students persist with the same problems of not using the apostrophe and they still avoid the -’s construction overall, as can be seen especially in grade 12 (Table 4). Some students avoid the possessive construction completely while others do like the students in grade 6 and use a possessive pronoun instead.

(14) *joke about someones belief
(15) *my best friends aunt

Problems occur for the reader when the students are not using the apostrophe. For example, the possessive form can be confused with the plural -s. One student (16) wrote the plural form when they meant possessive. Surely, native speakers would understand what is meant in this case, but there situations could arise when this becomes misinterpreted.

(16) *…the castles servants.

4.5 Contracted verb form -‘s

In Table 5, the results of the contracted verb form -‘s are shown.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total instances</th>
<th>Correct instances</th>
<th>Incorrect instances</th>
<th>Accuracy score</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>26</td>
<td>21</td>
<td>5</td>
<td>80.8 %</td>
</tr>
<tr>
<td>9</td>
<td>40</td>
<td>32</td>
<td>8</td>
<td>80 %</td>
</tr>
<tr>
<td>12</td>
<td>30</td>
<td>29</td>
<td>1</td>
<td>96.7 %</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>79</td>
<td>12</td>
<td>86.8 %</td>
</tr>
</tbody>
</table>
Table 5 shows that the accuracy score has increased from grade 6 to grade 12, although a slight decrease occurs in grade 9. This is likely because there was one student in grade 9 who used the contracted verb form several times without using the apostrophe, slightly tilting the results, both in frequency and accuracy.

In grade 6, it is difficult to categorize the errors into groups as the errors are so few. The students are very accurate in their usage and seem to make mistakes or struggle with more complex constructions. Take instance number (17) for example. The construction could be considered complex as who is (who’s) and whose are very alike in form, pronunciation and spelling. The student was correct in all the other contractions they used so this could be considered standing out.

(17) It’s one girl who named Vivi.

There is not much to discuss in grade 9. The students are very accurate most of the time apart from one student who is not using the apostrophe at all. Apart from that, the errors are the same: the apostrophe is missing from time to time.

In grade 12, the accuracy score of 96.7% shows that the students are generally aware of how to use the construction. There is only one incorrect instance which happens to be from a student who used the -’s correctly in their text later on so there is the possibility that it is just a mistake.

Again, there is a problem when students make errors with the apostrophe since it leads to confusion, with many words, but especially with it’s and its (18).

(18) *Its so scary

4.6 Morpheme acquisition order
In general, it might not be possible to create a reliable morpheme acquisition order of the morphemes but it is possible to map out the frequency increase and accuracy increase in a list (as illustrated below).

Morphemes in order of frequency:
- Plural -s (72.3 %)
- Third person singular present tense -s (14.9 %)
- Contracted verb form of be -’s (10.9 %)
- Possessive -’s (1.9 %)
Morphemes in order of accuracy:

- Plural -s (90 %)
- Contracted verb form of be -'s (86.8 %)
- Third person singular present tense -s (53.5 %)
- Possessive -'s (11.8 %)

There is a possibility that frequency has a correlation with how comfortable the students feel about using the morpheme but it cannot be established completely as frequency and accuracy do not correlate completely in these lists. Plural -s is the most frequent and accurate morpheme. Moreover, possessive -'s is the least frequent and accurate morpheme. However, third person singular present tense -s and contracted verb form of be -'s do not come in the same order in the frequency and accuracy lists, even though the accuracy of the contracted verb form of be -'s is much higher than the accuracy of the third person singular present tense -s.
5. Discussion and conclusion

The overall purpose of this study was to map out the -s morpheme usage of Swedish students and investigate the accuracy rate and frequencies of use as well as highlight what morphemes are problematic for the students. The possessive -‘s was by far the most problematic for the students. Although this cannot easily be connected to a single factor, one may argue that the students find morphemes with multiple meanings\(^4\) difficult to learn (Beyer & Hudson, 2009).

One could summarize the mapping of the morphemes like this: the students use the plural -s the most in their texts (72.3 \%) and are also the most accurate with this morpheme (90 \%). The least frequent morpheme would be the possessive -‘s with 1.9 \% frequency (and 11.8 \%) accuracy. Third person singular present tense -s and contracted verb form of be -‘s comes in the middle where third person singular present tense -s is the second most frequent morpheme but third most accurate.

The hypothesis that it might take the students more than a few years of acquisition to accurately use all four morphemes together was correct. Not even in secondary school do the students use all of them accurately, although they may be well on their way. However, it cannot, from this study, be determined if this is due to the fact that the morphemes have multiple meanings or something else completely. Additionally, the accuracy scores cannot be compared to other inflectional morphemes which would enrich the results. Further studies that compare additional morphemes would be required.

It is no surprise that the students are more accurate with the plural -s than any of the other morphemes as Feltsen (2009) already discovered. The study made by Murakami and Alexopoulou (2016) would also suggest that the Swedish students might be accurate with the plural -s early in their acquisition. That the students are inaccurate with the third person singular present tense -s neither comes as a surprise (Khor, 2012). Both Khor (2012) and Feltsen (2009) are degree projects but the fact that they both agree with this study at least adds to the reliability. Khor (2012) and Murakami and Alexopoulou (2016) are also in agreement with each other which would also increase the reliability. It seems like a morpheme acquisition order for Swedish learners of English could be established for the plural -s and third person singular present tense -s morphemes, as this study is consistent with the previous three mentioned studies. At least, it is possible to establish in what grade students are accurate with these morphemes. However, a reliable morpheme acquisition order for possessive -‘s and contracted verb form of be -‘s cannot be established after this study. Moreover, if this morpheme acquisition order for plural -s and third person singular present tense -s is the same for Swedish learners of other languages or other L2Ls of English, like Brown would argue (as cited in Saville-Troike & Barto, 2016, p. 43-44), requires further research although some would argue that a natural order hypothesis is already outdated (Kwon, 2005). It is also difficult to tell if the students are confusing the morphemes with each other and if the morphemes are more difficult than other morphemes because they have multiple meanings. Additional methods of data analyses would be required to conclude that.

\(^4\) Like -s morphemes, in difference to the -ly and -ing morpheme which forms only mean one thing.
The contracted verb form of *be* is difficult to discuss in terms of other studies as it has barely been studied at all in Swedish L2Ls. By this study only, one can argue that the morpheme is not particularly difficult nor easy for the students to use. The students were relatively accurate with it compared to the other morphemes but not particularly frequent. There needs to be a lot more investigation into the contracted verb form of *be* as well as other contractions (like *I’m* or *hasn’t*) to reach fuller understanding of the *be*-morpheme as well as the usage and accuracy of contractions.

As the students are the least accurate with the possessive *-‘s* it can be argued that students need more guidance on how to use that morpheme especially. It is also possible that they need more time and help to differentiate the morphemes from each other or be taught the importance of using apostrophes for possessive *-‘s* and contracted verb form of *be*-‘s. One way to do this is to include more explicit grammar instruction to the curriculum of language teaching in Sweden. Another strategy is to include more texts and activities to the materials students are using.

Further studies within all four morphemes could be done with different grades and larger samples to determine the sources of difficulties, especially when it comes to the possessive *-‘s* morpheme. Moreover, studies that include other ways of forming possession and avoiding other structures could be carried out to assess whether the students are not using the structures in their texts at all or whether they just avoid the *-‘s* form. It would also be interesting to study even more proficient students, who study English at university level, to see if their possessive *-‘s* formation is more accurate than students in upper secondary school. Studying how students use the morphemes, and allomorphs, in speech would also be beneficial to understanding their accuracy, frequency and usage.

Additionally, the curriculum for English in Swedish schools might have to focus more on teaching the structures of the language in addition to the other existing goals of produced language. For this, studies in efficient ways of teaching morphemes, possibly even without taking away too much time from other important aspects of the curriculum could be made. To include language structure with source criticism, argumentative essays and group discussions should be imperative for teachers if it is not already.

To conclude, this report was written in order to find out how Swedish students use the different *-‘s* morphemes. The findings show that the students use the plural *-s* frequently and accurately. After this the contracted verb form of *be* came second in accuracy, followed by third person singular present tense. The possessive *-‘s* both had a low accuracy and a low frequency. The study contributes to the field of SLA because it opens the question if multiple meanings of a morpheme can cause them to be difficult to learn as well as awareness for teachers that more teaching in the possessive *-‘s* is necessary for Swedish students. Further studies would be beneficial in areas that cover additional ways to form the different morphemes. There could also be further studies carried out in speech and allomorphs to learn more about the students’ oral
usage. Learning a new language is a struggle for most people and by assessing how students can learn some features of English easier or what features teachers can focus on is of value for the Swedish school system.
References

**Primary sources**  
Uppsala Learner English Corpus (ULEC)

**Secondary sources**  


Appendix

Appendix 1 – example of corrected student text (grade 6)

13.

Score:

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plur:</td>
<td>7</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>TPPT:</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Poss:</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Contract:</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Comments:

I don’t belive in gosts because I don’t have see eny one. when i was little did I belive in gosts because every one did say to me that gost are every were. But I have not see eny gosts so I think that gosts don’t exist. I like little gost Laban because he is not so skery and every children like that so they read it very often. I don’t think that little gost Laban exist because it say—that in the books. It also say that he have one little sister one dad and one mother. Every one say that he live in the causel. But I don’t belive in that. It’s because that i don’t belive in gosts.