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# Cross-Linguistic Influence in the Acquisition of English as a Third Language

The State of the Art

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## Abstract

This is a review of the literature from the past ten years about cross-linguistic influence (CLI), focusing on grammar, in the acquisition of English as a third language of secondary school learners. Currently, EFL classrooms around the world are experiencing increased linguistic diversity. Understanding CLI, a central part of interlanguage, in multilingual learners of English has therefore become more imperative than ever before. This review demonstrates that the relationship between the background languages and the target language extensively affects the quality and quantity of CLI in the acquisition of English as a third language, and identifies typology and proficiency as key factors shaping interlanguage outcomes. As pedagogical implications, the review concludes on the importance of explicit multi-contrastive teaching of grammar to develop learners' meta-linguistic and cross-linguistic awareness in order to enhance their competence in English. Now, research testing the correlations among teacher approaches, learner perceptions, and transfer effects is necessary, as are more studies accounting and controlling for more relevant factors involved in CLI when learning English as a third language.

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# 1 Introduction

Cross-linguistic influence (CLI) is an integral part of interlanguage, i.e. the learners' individual, systematic and dynamic adaptation of the target language, including components of previously learned languages and the target language, as well as developmental characteristics (Lightbrown & Spada, 2013). CLI is defined by Odlin (2003) as “influence resulting from the similarities and differences between the target language and any other language that has been previously acquired” (p. 436), and is interchangeable with the term *transfer* (with *interference* as a synonym of negative transfer). CLI has for long been an interest of language acquisition research, initially with the aim of understanding how learners' first language (L1) negatively affects their performance in the second language (L2). As researchers gained a more descriptive understanding of CLI, its positive effects have become equally recognized.

Now, academic interest in how CLI functions when more than two languages are involved is emerging within research on third language acquisition (TLA). This is an effect of the continuously growing interest in multilingualism research that followed the recognition of multilingualism as the reality for most language learners, due to the discarding of the monolingual assumption (that most language learners are monolinguals and that multilingual users are simply several monolinguals in one (Aronin & Hufeisen, 2009)). Cook's concept of multi-competence, i.e. “the overall system of a mind or a community that uses more than one language” (2016), has become a central one within this research field. Since these developments, TLA has become a field in its own right, separate from that of second language acquisition (SLA). In SLA, it is widely accepted that the relationship between the background language and the target language is a determinant for how CLI occurs (e.g. Smith & Swan, 2001), and in TLA the complexity of these relationships is increased considerably.

As language classrooms across the world are becoming increasingly linguistically diverse, there has been an equally expanding interest in the implications these developments have for foreign language learning and teaching. This is particularly true for classrooms of English as a foreign language (EFL), as English holds a special role as a global language, as illustrated in international policy as well national steering documents (see 2.2). There is agreement that teaching and learning is facilitated through building connections between the target language and the linguistic backgrounds present in the classroom (e.g. Jessner, 2008). In practice, this means teachers should utilize existing language resources for the

advancement of target language competence, and provide their students with access to valuable awareness and strategies (e.g. Jessner, 2008). This is achievable through an explicit multi-contrastive approach (Ringbom, 1987), which revolves around awareness of the differences and similarities between the target language and the background languages (Ohlander, 2001).

Despite of all of this, it has been found that the teaching of multilingual students is flawed, and quality controls have uncovered a particular disadvantage in the language development of multilingual students compared to their peers (The Swedish Schools Inspectorate, 2010a). This is highly problematic as estimations have demonstrated that one fifth of elementary school students have a first language other than Swedish, and that there is a presence of approximately 150 different first languages in elementary schools (The Swedish National Agency for Education, 2012). Due to rising globalization, this is by no means restricted to Sweden. In fact, in 2015, out of all 15-year old students across the EU, about 9 % (amounting to over 45 million students (Eurostat, 2018)), two thirds of whom were immigrants, reported to mainly speak a language different than the language of schooling at home (Eurydice, 2017).

As a result, EFL teachers now need to have access to relevant knowledge and approaches to meet the demands of the classrooms of today. Thus, research on CLI in the acquisition of English as a third language is now more imperative than ever before. Therefore, this review aims to provide an overview of research from the past 10 years about CLI in secondary school students' acquisition of English as a third language, with a focus on grammar. Potentially, this will help bridge the seemingly large gap between research and policy on the one hand and practice on the other. That would in turn facilitate the development of EFL classrooms better suited for all our students.

Following a background on theoretical frameworks, previous research and context, is a description of the method used to collect the literature for the review. The literature review chapter then begins with an overview of recent empirical research on CLI in the acquisition of English as a third language, with a focus on the grammar of secondary school learners. Finally, the review concludes with a discussion of the findings and their pedagogical implications, which closes by offering suggestions for future research.

## 2 Historical and Contextual Framework

This literature review focuses on the last 10 years of research, while research has been conducted on cross-linguistic influence since the 50s, and third language acquisition has thereto proven to be complicated. This background chapter therefore provides the historical and contextual framework needed for understanding the empirical research reviewed. The first part accounts for the main approaches and contributions of previous research and theories, while the second part details the most relevant parts of the policies and steering documents in effect within the Swedish context of English teaching.

### 2.1 Previous Research and Theory

Cross-linguistic influence (CLI) is understood as learners' usage of previously acquired language knowledge to build new knowledge of the target language (e.g. Littlewood, 2008). Throughout this review, CLI is defined as by Odlin (2003) as "influence resulting from the similarities and differences between the target language and any other language that has been previously acquired" (p. 436), and is used interchangeably with the term *transfer*. Initially, research on CLI was concerned with inquiries into how the first language (L1) affects the second language (L2). Much research was devoted to gain such insights, and although there are discoveries yet to be made, today linguists agree on the fact that the L1 affects the L2 in certain ways. For instance, learners struggle when the L1 lacks equivalents for L2 features, and conversely, learning is facilitated where L1 features are equivalent to L2 features, and thereto, similar but not entirely equivalent features cause substantial confusion for learners (Smith & Swan, 2001). Additionally, the nature of L1 influence on the L2 can be understood based on typology (Smith & Swan, 2001) and its amount seems dependent on learner proficiency (Lightbrown & Spada, 2013). Furthermore, CLI occurs in production as well as comprehension (Odlin, 2013; Ringbom, 1987), in all language levels, and affects entire structures as well as individual items (Odlin, 2003). With such insights available, EFL teachers have been able to anticipate their learners' development and teach accordingly.

The point of departure for research into L1 influence on the L2 was, in the early days, contrastive analysis (which compares the L1 and L2 to reveal probable learner difficulties), which operated on the assumption that the L1 was the cause of L2 learner errors (Lightbrown & Spada, 2013). However, it was later discovered that the L1 is not the sole source of

learners' errors, as there are unrelated erroneous features prevalent in interlanguage, i.e. intralingual errors (Lightbrown & Spada, 2013). Consequently, research transitioned into error analysis (which treats errors as indications of learners' knowledge) during the 70s (Lightbrown & Spada, 2013), which was more descriptive in its approach, but nevertheless remained error focused and thus mainly dealt with negative L1 influence. In contrast, current understandings hold that the L1 is as much of a resource of facilitative information for learners, and as such EFL teachers have been able to draw on such insights as well.

Research into third language acquisition (TLA) takes place at the intersection between research on multilingualism and research on second language acquisition (SLA) (Jessner, 2008). It stems from the conviction that TLA is inherently different from SLA, and needs to be explored as such to be properly understood. Just as bilingualism is no longer understood as just "the sum of two monolingualisms" (p. 2), within TLA, researchers deem there to be more to multilingualism than bilingualism with an additional language (Aronin & Hufeisen, 2009). L3 learners possess not only their acquired mother tongue, but also a previously learned L2. As such, they already have language learning experience, and the L3 thus becomes the first language learned with such experience at hand. The concept of multi-competence, i.e. "the overall system of a mind or a community that uses more than one language" (Cook, 2016), was highly influential in shaping this understanding of TLA. According to this perspective, the multilingual learner is a distinctive kind of language learner, who possesses qualities other language learners do not. In fact, differences have been found between multilingual learners and others regarding linguistic awareness, cognitive processes, learning strategies, networks of the languages in the mind, and more (e.g. Jessner, 2008). In SLA research, these differences are generally assumed to be insignificant, while in TLA research, a main objective is to understand how these differences impact language learning. Consequently, several models of third language learning have been proposed (e.g. Grosjean's language mode hypothesis, or Herdina and Jessner's dynamic systems theory (Jessner, 2008)).

Several models have additionally been put forth in explaining CLI during TLA. The following is a brief account of the most essential ones for this review. The Typological Primacy Model (TPM) is used to describe initial states of acquisition, and claims that learners transfer entire grammatical systems from a background language, their selection depending on psycho-typology (Rothman, 2011). As opposed to the TPM, The Linguistic Proximity Model holds that learners transfer specific structures, one by one, based on similarity with one or more background languages during the entirety of the process of acquisition (Westergaard, Mitrofanova, Mykhaylyk & Rodina, 2017). The Scalpel Model is in agreement with the latter,

but adds that other factors may intervene with this process, such as misleading input or frequency of use (Slabakova, 2017). The cumulative enhancement model (CEM) insists that any background language can influence a subsequently acquired language, either neutrally or positively, as language learning is an accumulative development (Flynn, Foley & Vinnitskaya, 2004). In addition, the L1 account and the L2 status factor both assign the source of CLI to the language in a particular position in the order of acquisition. In early research, the L1 was, for natural reasons, assumed to have the most influence on the L3. Later, however, a multitude of studies emerged showing a preference for L2 usage in L3 interlanguage (Falk & Bardel, 2010). In sum, although these models differ in several aspects, each has some support through the results of various empirical studies, and there is therefore some disagreement within the field, yet to be understood.

Contemporary research on CLI in TLA is conducted with a multi-contrastive approach, meaning with respect to the similarities and differences among all languages involved. In their review on TLA, Falk and Bardel (2010) identified three deciding factors for the source of CLI in these cases: typology, proficiency, and the L2 status. Other factors often mentioned include a privileged role of the L1, recency of usage, and frequency of usage. Ringbom's (1987) seminal project confirms typology as a crucial determinant. He compared the use of English articles and prepositions in essays written by speakers of Finnish and bilingual speakers of Finnish and Swedish, and found that the bilingual speakers' usage was more native-like, while the monolingual speakers committed more errors. Thus, Ringbom concluded that the Swedish speakers had benefited from larger amounts of positive transfer, as Swedish is typologically closer to English than is Finnish. Furthermore, Ringbom's study highlights the role of proficiency, as he found decreasing differences in the performances of the two groups as learner English proficiency increased. The facilitating role of proficiency in a proximate language is further confirmed by a similar study examining CLI in written narratives of L3 English learners with either Finnish or Swedish as the L1, with varying proficiency levels of L2 Finnish or Swedish (Odlin & Jarvis, 2004). In their pioneering study, Williams and Hammarberg (1998) suggested that the language with the highest value for all the interacting factors combined can be expected to be the main source of CLI. However, although we now have ample knowledge about CLI, it remains difficult to draw precise and general conclusions about the nature of it in TLA, given the substantial diversity in the research and the individual differences among learners (e.g. motivation or exposure to target language) affecting interlanguage outcomes (Odlin, 2003).



## 2.2 Policies and Steering Documents

In the Swedish context, several steering documents and policies regarding linguistic diversity and multilingualism in EFL classrooms are in effect. At the EU level, numerous measures are taken in order to foster multilingualism within member states, as a way of promoting multilingualism as part of the European identity, epitomized by the EU motto “United in Diversity”. The principal policy is the goal commonly expressed as “L1 + 2”, meaning the right to one’s first language along with the learning of two additional languages, English most likely being one of them (European Commission, 2008). In “The Common European Framework of Reference for Languages”, plurilingual competence, meaning the development of “a linguistic repertory, in which all linguistic abilities have a place”, is stated as an aim of language education (Council of Europe, 2001, p. 5). While widely established, these remain policies, with little enforcement of their implementation.

In Swedish national steering documents, formulations to a similar effect are found. In the Swedish curriculum for upper secondary school (The Swedish National Agency for Education, 2011a), as part of “The Fundamental Values and Tasks of the School”, it is declared that:

The internationalization of Swedish society and increasing cross-border mobility place high demands on the ability of people to live with and appreciate the values inherent in cultural diversity. The school is a social and cultural meeting place with both the opportunity and the responsibility to strengthen this ability among all who work there. (p. 4)

This echoes the EU motto, and creates accountability for Swedish schools to operate within a perspective which recognizes and is positively inclined towards (cultural) diversity. They go on to state:

A secure identity and awareness of one’s own cultural origins and sharing a common cultural heritage strengthens the ability to understand and empathise with the values and conditions of others. Schools must help students to develop an identity that can be related to and encompass not only what is specifically Swedish, but also that which is Nordic, European, and ultimately global. (p.4)

Again, much like the EU policy, this statement emphasizes a balance between individual culture and identity, and that which is shared.

More specific phrasings to similar effects are found in the syllabi for each subject. While The Swedish syllabus for upper secondary school English maintains a focus on the target language by stating that “teaching should as far as possible be conducted in English”, it also declares that “[t]eaching should encourage students’ curiosity in language [...], and give them the opportunity to develop plurilingualism where skills in different languages interact and support each other” (The Swedish National Agency for Education, 2011b, p. 1).

Taken together, the directions in national steering documents and international policy align with contemporary descriptive and positive attitudes towards multilingualism and make the usage of a multilingual pedagogy in diverse EFL classrooms throughout Sweden highly suitable. Yet, there are issues signaling a need for more explicit statements in steering documents as well as enforcement of the implementation of EU policy, in order for the improvement of foreign language education to be prioritized. Among the deficiencies disclosed in the quality control mentioned in Chapter 1 are a lack of knowledge about multilingual students’ linguistic backgrounds and knowledge levels, a failure to use such information, when obtained, to adjust classrooms accordingly, language teachers lacking sufficient knowledge and training to teach linguistically diverse classrooms, despite high interest, as well as several shortcomings in mother tongue education (The Swedish Schools Inspectorate, 2010a). In addition, many students fail to follow through with modern language education (The Swedish Schools Inspectorate, 2010b). These issues now need to be addressed in language education. The improvement of policies and steering documents is only a prerequisite for such progress.

## 2.3 Terminology

The following is a brief account of common terminology used throughout this review:

- *Simultaneous vs. consecutive* acquisition is about the order of acquisition. Languages can be acquired simultaneously or one after the other (Jessner, 2008).
- *Balanced vs. dominant* multilingualism is about frequency of usage. Balance means equal usage of the background languages, while dominance means one of them is used more frequently (e.g. Fallah, Jabbari & Fazilatfar, 2016).
- *Additive vs. subtractive* multilingualism is about the context affecting users’ ability to use, maintain or learn a minority or heritage language. An additive context allows for or encourages this, while a subtractive one hinders it (Martínez Adrián, Gallardo del Puerto & Gutiérrez Mangado, 2013).

### 3 Method

In this chapter, an account is given for the decisions made and their rationale during the collection of the empirical research surveyed in the core of this literature review (in Chapter 4). To begin with, the search for the empirical studies was executed using the following databases: SwePub, Educational Resources Information Center, Education Research Complete, Modern Language Association International Bibliography, and Linguistics and Language Behaviour Abstracts. To enable replicability, a presentation of the search terms used is given in Table 1 in the appendix. It is also noteworthy that some of the studies reviewed were found through the referencing in others. To maintain standards of quality in research, all studies have been peer reviewed and published in academic journals.

An obvious criterion for inclusion in this review was empirical research on cross-linguistic influence (CLI) in language learning when at least three languages are involved. This is because CLI has been found to have substantial effects on learners' interlanguage and researchers have ample reasons to believe that the addition of a third language significantly adds to the complexity of the linguistic networks. In SLA there are only two possible directions for CLI to occur, whereas in third language acquisition (TLA) the number of possibilities triples. Therefore, all empirical studies used in the review meet this criterion. However, in this review the focus is on the effects of previously acquired languages, and thus those of languages acquired after the target language, although decidedly interesting, will not be addressed here, due to a lack of such research.

A less obvious criterion for inclusion was empirical research in which English is the target language and at least the third language in the order of acquisition. It may be argued that the target language is irrelevant, as CLI is rather comprised of the relations of the languages involved. However, every language is different. The English language has a special history in its world-wide spread and a special role in the world today, both globally and locally. As a subject, English has a special status in the Swedish school system, which is reflected in national steering documents, as well as teachers' and learners' attitudes. In most parts of the world, learners encounter English not only in the classroom but also to a large extent extramurally. These statements cannot be made about any other language. English language learning is therefore not comparable to other language learning. For this reason, the decision was made to exclude studies using any other language as the target language. For a more general review on third language acquisition, using studies regardless of target

language, “The Study of the Role of the Background Languages in Third Language Acquisition - The State of the Art” (Falk & Bardel, 2010) is recommended.

An additional criterion for exclusion in the review was studies dating more than 10 years back. The reason for this is TLA being a relatively new research field, for which interest has intensified recently. Thus, much has happened within the last 10 years, and a new review is therefore needed. The purpose of this literature review is to provide an overview on the current state of the field, so naturally there is a focus on more recent research. However, for a reliable overview to be conducted, one cannot completely exclude earlier seminal studies within the field, which is why such research was accounted for in 2.1.

As will be evident for the reader, all studies reviewed investigate grammar. This is simply the currently most researched part of language on this topic. The studies all focus on form, and studies about both production and comprehension are included. It is noteworthy that grammar is a part of language previously thought unaffected by CLI (Odlin, 2003). Moreover, following the negative connotations with the Grammar-Translation Method, there has been an aversion to the explicit teaching of grammar in EFL classrooms. However, this is now being re-addressed in contemporary perspectives. This is relevant as, on the basis of overwhelming evidence, throughout this review it is assumed and will be shown that such explicit multi-contrastive teaching is beneficial for students of English as a third language.

Finally, two criteria have been prioritized in order to yield high degrees of comparability and relevance in the findings, namely research set within a Swedish context using participants of secondary school age (approximately 13 to 19 years old). All in all, 12 studies within the scope of the review were found, out of which only one was set in a Swedish context (Ohlander, 2009). The lack of research within the desired context may be due to TLA being such a new field of research, and Sweden having historically been a relatively homogenous society linguistically.

## 4 Relationship Between Background Languages and Target Language

Here, the 12 studies found within the scope of this review will be surveyed in regard to three issues, namely typology, proficiency and the status of the background languages in the order of acquisition. According to previous research as well as the research surveyed, these issues are the most significant factors affecting how cross-linguistic influence (CLI) plays out in third language acquisition (TLA). The relationships between the background languages and the target language regarding these factors highly affect L3 learner interlanguage. For instance, low proficiency in the L2 might yield more influence from the L1, typologically more proximate languages may influence the L3 more than distant ones, and the L2 might be privileged over the L1 as a source of CLI. This chapter aims to answer the questions of the source(s) of CLI, the quantity of CLI, the quality of CLI as regards facilitative or non-facilitative influences (used interchangeably with *positive* and *negative* transfer), and how the factors mentioned affect each other and determine the outcome of CLI in learner language. In short, how is CLI in TLA explained in the literature?

### 4.1 Typology

Although there seem to be various factors affecting cross-linguistic influence (CLI) in third language acquisition (TLA), in most of the studies analyzed there is a focus on typology. This refers to similarity between languages, and these relations are used as a basis for contrastive comparisons. Throughout the literature, various more specific definitions of typological closeness or distance are used. Bardel & Falk (2010) provide a distinction between similarity based on genetic relations, specific structures, or learners' perception, i.e. psycho-typology. The fact that typology affects CLI seems to be indisputable; the questions are rather about the source of CLI, what kind of typology is at play, and how typology relates to facilitation and proficiency. Here, an account is given for the role of typology as manifested throughout the studies reviewed.

Within a Swedish context, Ohlander (2009) executed a qualitative analysis of the use of articles in the English of 88 grade 9 students with various first languages. The samples consisted of an exercise in a cloze test with four sentences with gaps and multiple-choice answers. CLI from both background languages was found throughout the samples, the nature

of it dependent on both genetic relation and structural similarities. At the outset, the performance of speakers of Spanish, Bosnian/Croatian/Serbian and Farsi, all Indo-European languages, was on par with that of the “all Swedish” group, while the results of the more distant language groups were lower, indicating possible effects due to genetic relation. In addition, transfer effects depending on structural contrasts were found. For instance, whereas the Arabic group had difficulties with the indefinite article, which does not exist in Arabic, they seemed to grasp the definite article, which operates in a similar way in both languages. However, the Turkish article system contrasts with the English one in the opposite way (i.e. there is no definite article, but a similar indefinite article). Yet, the Turkish group had similar difficulties as the Arabic one, meaning structural contrasts are not automatically predicative of transfer effects. In this case, the partial similarity is assumed to cause confusion, and thus effects based on psycho-typology are suggested by the author. In contrast to these two groups with distant first languages, is the Spanish group, in which the proximate first language provided the students with more positive transfer.

Interestingly, in the same study it was also found that students who were born in Sweden and had an L1 other than Swedish outperformed those of their peers who had the same L1 but were born elsewhere, some of these sub-groups even outperforming the “all-Swedish” group. Ohlander (2009) argues that several factors outside the scope of the study may have contributed to this effect (e.g. amount of exposure to English). Nevertheless, he concludes that Swedish, being more proximate to English than any of the other languages involved, may have acted as a “language bridge”, and thus provided students who had a higher L2 proficiency with more positive CLI on the L3. Considerations about the possibility of a multilingual advantage due to heightened meta-linguistic awareness are offered, and Ohlander concludes by emphasizing the importance of multi-contrastive awareness for teachers of multilingual classrooms.

Focusing on genetic relation, three of the studies included here found the most proximate language, in all cases German, to be the only (Sánchez, 2015) or main (Lorenz, Bonnie, Feindt, Rahbari & Siemund, 2018; Pfenninger & Singleton, 2016) source of transfer in learner English. The former was a longitudinal study on simultaneous bilinguals of Spanish and Catalan who were learners of L2 German, focusing on verbal forms in L3 English. Data from a timed written narrative task based on visual stimuli was collected from 40 students on four different occasions over the course of four years, from the age of 10 to 13. The results showed negative CLI from L2 German only. Similarly, Lorenz et al. (2018) investigated the transfer effects in 84 12-15-year-old beginners in English, who had either Russian or Turkish

as the L1, and German as the L2 and dominant background language. Their placement of pronominal objects with distransive verbs was examined through a word order test, and compared to those of control groups of native speakers of all languages involved. Both facilitative and non-facilitative CLI from both background languages was exhibited in the data, with L2 German as the main source. In a similar vein, a longitudinal study also found more German influence overall, except in the participants' writing, where there were equal amounts of L1 German and L2 French influences (Pfenninger & Singleton, 2016, see 4.2).

On the contrary, Hermas (2014) found the most distant language, genetically and structurally, to be the transfer source through a smaller investigation of the use of restrictive relative clauses. This was executed through two acceptability judgment tasks and a preference task with eight 16-year-old consecutive multilingual speakers of L1 Arabic, who were advanced in L2 French and beginners in L3 English. In the results, Arabic became the only transfer source, yielding both facilitative and non-facilitative transfer.

Like Hermas (2014), Pfenninger (2014) found that a non-native genetically more distant background language can be a source of facilitative CLI, if background language proficiency is sufficient. She had 200 13-14-year-olds carry out timed written grammaticality judgment tasks and narrative and argumentative essays, to examine their use of do-support. The participants were speakers of L1 Swiss German and L2 Standard German. Half of them had French as an L3 and English as an L4 with less than a year of target language instruction, while the other half had French as an L4 and English as an L3 with over five years of target language instruction. They had all had two and a half years of French instruction. A main transfer source is not reported, but although the findings do show facilitative influence from Swiss German in the interlanguage of both groups, it is also shown that when the L1 structure differs from the English one, they resort to French instead of German, which the group of L2 English speakers with less than a year of L3 French instruction did not.

Focusing on structural similarities, CLI in early bilinguals of two distant languages, Persian and Mazandarani, was investigated (Fallah et al., 2016). The authors had 31 13-14-year-old students (all male due to gender segregated schooling in Iran) take an untimed grammaticality judgment task, an element rearrangement task, and an elicited oral imitation task, to test their use of possessives, which converges in Mazandarani and English, but diverges from Persian. Accordingly, they found positive Mazandarani transfer and negative Persian transfer. Additionally, the dominant language was found to influence their L3 English the most, regardless of typology or order of acquisition. Thus, the group with Mazandarani

(L1) as the dominant language outperformed the two with Persian (L1 and L2, respectively) as the dominant language.

Correspondingly, Westergaard et al. (2017) also found a connection between structural similarity and facilitation of transfer. They had 22 11-14-year-old bilinguals of Norwegian and Russian carry out timed grammaticality judgment tasks to test verb movement, where each of the background languages patterned with English in each of the conditions tested: subject-auxiliary inversion with Norwegian and adverb-verb word order with Russian. The participants outperformed the Norwegian monolingual control group, as did the Russian monolingual control group. Their results were only significant for the latter condition, in which CLI from both languages was found, but without a main source. Positive Russian influence and negative Norwegian influence is reported, despite Norwegian being both genetically more proximate and the majority language in the context of the participants.

Such a connection was also found in two studies previously described. Hermas (2014) found that when the participants' accuracy scores were compared to those of the English native control group, there was no significant difference in the conditions in which English converges more with the transfer source, Arabic. Similarly, Lorenz et al. (2018) found that when the participants' degree of target-like usage was examined and compared to those of control groups of native speakers of all languages involved, the learners seemed to transfer patterns from both background languages, yielding both positive and negative influence, depending on similarity with the English pattern.

Although Martínez Adrián et al. (2013) also focused on structural contrasts in their study of 10 14-year-old balanced bilinguals of Spanish and Basque, they homed in on interference and errors. The authors examined their use of null subjects, null objects, and null determiners in oral narrations with visual support. The first structure patterns match in the two background languages, for null objects each language patterns differently, and the third structure is similar in all three languages. Thus, the authors predicted a greater degree of errors for null objects compared to null determiners, but remarkably found the opposite in their results. They offer an explanation in that Basque is a head final language, taking post-nominal bound article morphemes, which may have negatively influenced the participants' use of determiners. Additionally, the authors note a low rate of erroneous subject omission, which is attributed to EFL teachers in the context being aware of this contrast and bringing attention to it in classrooms. The authors thus close by arguing for the employment of explicit grammatical instruction in order to increase learners' linguistic awareness.



Focusing on psycho- typology, Pfenninger and Singleton (2016) administered a language experience essay to 200 secondary school speakers of L1 German and L2 French on two separate occasions during a longitudinal study. In the first dataset, 65% of the participants reported to be aware of occasional transfer in their own interlanguage. Overall, a perception of more similarities between English and French, compared to German, was reported, and 32% of the participants reported to observe substantial differences between French and English grammar. In addition, the learners reported extensive explicit grammar instruction in their French classroom. Interestingly, this part of the study was compared to the part previously mentioned, in which although more German influence overall was found, there were equal amounts of French and German influences in the participants' writing. The authors propose that the learners' cross-linguistic perceptions and language classroom experiences might have caused the French influences found. These findings imply there may in fact be a connection between teaching approach and students' perceptions about language and consequently transfer effects in their interlanguage. However, such a connection was not found in a similar smaller study (Hermas, 2014), in which eight participants were interviewed about the psycho-typological relationships between Arabic, French, and English. Their reported perceptions were compared to the transfer effects in their performance in the tasks previously described. Although the participants correctly reported English to have more in common with French than Arabic, only Arabic influence was found in their performance.

## 4.2 Proficiency

Much like typology, proficiency affecting cross-linguistic influence (CLI) in third language acquisition (TLA) is a non-controversial idea. Based on what we know about language learning, researchers have ample reasons to hypothesize that (a) higher proficiency levels in the target language yield less transfer from background languages, and (b) that for any given background language, proficiency is a prerequisite for it to be made available as a language resource for the learner. Related to this is the issue of language dominance (see 2.3). Also related to proficiency is the issue of age, which will not be addressed here, as the question of age and language learning is an issue in its own right, beyond the scope of this review. In this section, the roles of proficiency and dominance, both of which were only briefly touched on in 4.1, as exhibited throughout the studies are described, with the purpose to answer the questions about the amount and source of CLI, and the relationship between proficiency and typology.

To gain insights into the effects of target language proficiency, authors may measure it over time or across groups and analyze its correlation with the amount of negative CLI. Sánchez conducted one of each such studies (2014; 2015), investigating the English proficiency of simultaneous bilinguals of Spanish and Catalan who were learners of German. In addition to the longitudinal study described in 4.1 (2015) which measured performance over time, Sánchez also conducted a study focusing solely on L2 German influence on English interlanguage (2014). In the latter, 80 12-13-year-old students' verb placement was tested through a timed written narrative task based on visual stimuli. Proficiency levels were determined through a cloze test, based on which the participants were divided into groups, whose performances were compared. The results of both studies showed significantly decreasing amounts of negative L2 German influence.

Similarly, a narrative task prompted by pictures on 55 bilinguals of Spanish and Basque was used during interviews to examine the use of sentential negation in target language English (Perales, García Mayo & Liceras, 2009). The cohort was divided into two groups and the interviews were conducted at two separate occasions, two years apart. Negative transfer from the background languages is reported. The usage of the 12-14-year-olds became significantly more target-like over time, while that of the 14-17-year-olds was more target-like at the onset of the study. Thus, the authors discuss the role of meta-linguistic teaching. They point out how older learners are more receptive to and more often exposed to such explicit instruction, which would explain the difference between the groups as well as the development of the younger group in the results of their study.

Likewise, Pfenninger and Singleton (2016) observed a decrease in negative CLI from L1 German when following 200 students throughout secondary school. In addition to the investigation of psycho-typology mentioned in 4.1, the authors also examined inflections and morpho-syntax throughout the participants' production. The participants were speakers of L1 Swiss German, which due to similarities in the structures examined is regarded as a variety of their L2, Standard German. They had also been learning French for two and a half years. Five years apart, a series of two oral tasks: a re-telling and a spot-the-difference task, and two essays: one narrative and one argumentative, were administered twice. Negative influence was found from both background languages, German and French, the former being the main source, but also a significant decrease in some of the German influences; namely spoken inflectional, and spoken and written syntactic influences.

Contrarily to the four studies previously described, in one study finding negative transfer from the background languages Catalan and Spanish, no significant differences over

time were found (Llinas-Grau, Pladevall & Capdevila, 2013). The use of *that*-omission in complement clauses throughout timed written compositions of 184 14-17-year-old pre-intermediate to upper-intermediate English students was investigated. Here, the question of progress over time was approached by comparing the production of the younger part of the cohort with that of the older. Thus, it is not the progress of individuals over time that is measured, but rather the expected differences across the year groups. This may seem to indicate a lack of development, hence the authors point out the significant increase of the mean word count in the essays across the year groups, meaning other improvements have indeed taken place. In turn, the authors point out, this might imply insufficiencies in the input provided for the students. However, in a similar comparison, in which the older participants had had two more years of English instruction compared to their younger peers, improvements across year groups were in fact observable through an increase of target-like usage (Lorenz et al., 2018, see 4.1).

To gain insights into the effects of background language proficiency, Fallah et al. (2016) and Lorenz et al. (2018) conducted studies on dominant bilinguals. Recall how Fallah et al. (2016), as described in 4.1, conducted a study on the transfer effects in unbalanced bilinguals of Persian and Mazandarani, who were all advanced speakers of their L2. The results exhibited “the language of communication”, defined as the most frequently used and dominant one, as the source of CLI, regardless of order of acquisition or typology. Similarly, Lorenz et al. (2018), also described in 4.1, investigated the transfer effects in bilinguals with either Russian or Turkish as the L1 and German as the L2. As they were living in a German context, they were L2 dominant, defined in terms of frequency of usage. CLI from both background languages was exhibited in the data, but L2 German was found to be the main source. The authors attribute this to the role of dominance, however, as previously mentioned; the dominant language in this case is simultaneously the one most proximate to English typologically. Also, contradicting the findings in these two studies is that of Sánchez (2015), showing L2 German as the only transfer source, despite L1 Spanish/Catalan dominance.

Concerning the relationship between proficiency and typology, bear in mind how Ohlander (2009) found that higher proficiency in a genetically proximate L2 may be correlated with higher degrees of facilitation in CLI (see 4.1). Nonetheless, Pfenninger (2014) found that if background language proficiency is sufficient, a non-native genetically more distant background language can also be a source of facilitative CLI. In addition to the findings described in 4.1, the L3 English results were compared to those of L1 German speakers with less than a year of L3 French instruction, in whose L2 English no influence

from French was detected, meaning there may be a background language proficiency threshold required for CLI to be available. Additionally, it is noted that the interlanguage of the two Swiss groups was equally influenced by French, despite their difference in length of English instruction, meaning increased target language proficiency does not necessarily decrease CLI.

A possible explanation of such cases is proposed, but not investigated, by Westergaard et al. (2017), who make a case for a sufficient level of target language proficiency as a prerequisite for CLI based on structural similarity, as opposed to superficial resemblance, e.g. lexical or phonological similarity. They suggest that as learners better learn to parse target language input, their use of background languages becomes more refined, which may increase the facilitation of CLI. In short, they suggest that target language proficiency might affect psycho-typology and consequently strategy use.

### 4.3 Status of Background Language in Order of Acquisition

The status factor is perhaps the most elusive one prevalent in the research. Initially, the L1 was assumed to be the natural source of cross-linguistic influence (CLI) into the target language, even in third language acquisition (TLA). Contrarily, a plethora of studies seemed to uncover the L2 as the main source of transfer into the L3. As a result, researchers have put forth explanations along the lines of how the L1 may become blocked for L3 learners, and how L3 learners may associate the foreignness of the L3 with that of the L2, and thus opt to activate the L2 over the L1. An additional explanation may be the similarity in the processes of learning the L2 and the L3, as compared to the natural acquisition of the L1. For this reason, it is important to make a distinction between simultaneous and consecutive learners (see 2.3). For instance, the L2 status factor may not be as prevalent if the L3 is the first learned language, and not a so called true L2. Here, the issue of status in the order of acquisition within the studies will be explained. However, in some studies the two background languages were so similar in the investigated structure that it would have been impossible to discern a transfer source (e.g. Perales et al., 2009), and one study specifically only looked at L2 influence (Sánchez, 2014). These will be excluded from this section, as they do not tell us much about a possible privilege. All studies mentioned here have been addressed more thoroughly previously in this chapter.

In most of the studies, influences from all background languages were found, and no privilege was reported. In some studies (e.g. Ohlander, 2009; Pfenninger, 2014), although no

L2 preference was found, when used, the L2 appeared to be a source for increased facilitation. Out of all the studies reviewed, only two (Hermas, 2014; Pfenninger & Singleton, 2016) found an L1 privilege, both conducted on consecutive learners. The former included advanced L2 French learners and target language beginners, in whose interlanguage only L1 Arabic influence was found. The latter included speakers of L1 Swiss German, regarded as a variety of their L2, Standard German, due to similarities in the structures examined. In this study, more L1 German than L2 French influence was found. Conversely, in two of the studies, a preference for the L2 was found, one finding L2 influence only (Sánchez, 2015), and the other finding more L2 influence than L1 influence (Lorenz et al., 2018). The former was conducted on simultaneous bilinguals of two similar first languages, who were consecutive L2 German and L3 English learners with three years of English instruction. The latter was conducted on consecutive learners with a true but dominant L2, who were beginners to intermediate in L3 English. However, it is practically impossible to determine whether a privilege based on status in the order of acquisition or on typology is at play, as in these cases the L2 is also the typologically most proximate language. It must also be noted that given the results of the rest of the studies in this review, it seems remarkable how Sánchez (2015) and Hermas (2014) found influence from only one of the background languages. In any case, these findings are all in all few, conflicting, and inconclusive, and thus there is little support here for either of the accounts.

## 5 Discussion

In this chapter, the findings of the review will be discussed in the light of the questions raised. The discussion begins with a summary of the main findings of the review, followed by conclusions of their pedagogical implications. Finally, the limitations of the research reviewed will be discussed, which brings the review to a close with directions for future research.

### 5.1 Summary

This literature review has surveyed some of the research from the past 10 years on cross-linguistic influence (CLI), focusing on grammar, in the acquisition of English as a third language of secondary school learners. In all studies reviewed, CLI from at least one of the background languages was found in learners' interlanguage. In a majority of the studies, CLI was found from both background languages, supporting claims of interlingual connections in the mind and the possibility of co-activation of background languages. Throughout the results of the studies taken together, a mixture of facilitative as well as non-facilitative transfer was reported, supporting claims of the prevalence of both. Overall, this literature review has demonstrated that the relationship between the background languages and the target language extensively affects the outcome of CLI in L3 English. The findings of the review confirm typology and proficiency as determining factors for the quantity and quality of CLI in the interlanguage. With typology it seems as though genetic relations and structural contrasts are integral, and structural similarity seems connected to a facilitation of transfer. Although psycho-typology may also affect transfer, this review cannot confirm it, as few of the studies included such an investigation. With proficiency, target language proficiency affects the amount of CLI, while background language proficiency may affect the availability of the background language as a source of transfer, and background language dominance affects the amount of transfer from the background languages relative to each other. Furthermore, queries about the relationship between typology and proficiency affecting CLI in L3 English have been raised. The possibility of a privilege for the language of a certain status in the order of acquisition (i.e. an L1 or L2 status factor) is deemed inconclusive by this review, as the relevant findings are few and conflicting. Lastly, several of the authors of the studies reviewed mention explicit grammar instruction and multi-contrastive teaching as ways for

teachers to enhance learners' language awareness in order to improve their competence in English.

## 5.2 Pedagogical Implications

In light of the results of the review, pedagogical implications for EFL teachers and classrooms are worthy of consideration. Since negative as well as positive cross-linguistic influence (CLI) is undeniably prevalent in the interlanguage of L3 English learners, teachers of such students need awareness of it, so as to better be able to plan, execute and evaluate their teaching. As the relationship between the background languages and the target language affects the source, quality and quantity of CLI, teachers need to get to know the linguistic profiles of the students in their classrooms. In this pursuit, it would be beneficial to focus on the most fundamental issues, namely typology and proficiency. As for typology, teachers should gain insight into the genetic relations and structural similarities and differences between the background languages in question and the target language. Also, it might be of interest to explore the students' perceptions of these relationships (i.e. psycho-typology). As for proficiency, it would be valuable to be familiar with the students' background language proficiency as well as background language dominance. For EFL teachers, knowledge about the students' target language proficiency is always important.

In accordance with such knowledge gained, EFL teachers will be able to adjust their classrooms so that they suit all their students. By getting to know their multilingual students and their backgrounds, teachers can better expect transfer effects in their English grammar. Then, when evaluating student performances, instead of noticing various seemingly indistinct errors, teachers would know their cause as negative CLI. For instance, Swedish EFL teachers need to be able to recognize and comprehend non-Swedish errors as well as Swedish ones (Ohlander, 2001). Thus, EFL classrooms would become more inclusive and provide a language education for all students equally. Fundamental for all of this is EFL teachers obtaining knowledge about how L3 English is learned, alongside their knowledge about learning English as a second language.

In order for EFL teachers to aid the target language development of their multilingual students, it would be beneficial to explicitly teach multi-contrastive grammar in multilingual classrooms. The role of the teacher in building language awareness is to enhance learners' declarative language skills, which would in turn enhance their procedural skills. Thus, learners would gain increased meta-linguistic and cross-linguistic awareness, and

consequently better access to appropriate strategy use. Potentially, such an approach will result in less negative and more positive CLI, and ultimately, an enhancement in, not only target language competence, but also multi-competence.

### 5.3 Limitations

In keeping with the importance of quality in research, it is of value to evaluate the methodological limitations of the research reviewed, thus such issues will be accounted for here. First of all, it must be stated that although there is currently a rise of research on the topic of multilingualism and L3 English, the field remains all together underresearched.

Throughout the research, there is diversity, as the studies differ from each other in several aspects. Throughout the studies, there are differences in the kind of L3 learners included as participants; some are simultaneous multilingual learners and others consecutive ones, some are living in a subtractive multilingual context and others in an additive one, and their proficiency levels also differ. In addition, there are differences in language combinations and methods used. Even though diversity is integral for the reliability and validity in a research field, it causes difficulties in comparability, particularly when it comes to topics such as this one, in which several variables affect the outcome. This leads us to the third limitation of the studies reviewed; they fail to take all relevant variables into account and to control for each variable, making it difficult to gain insight into how they affect each other. This will always be an obstacle in research on language users. Consequently, it becomes difficult to generalize, at least until a multitude of research covering all aspects of the issues has been conducted.

All studies, however, have in common an examination of specific grammatical structures. As such, they are highly narrow, detailed and form-focused analyses. Although this enables deeply insightful conclusions about the use of particular items, it impedes conclusions about the participants' English competence, as language competence is holistic and comprehensive in its nature. These studies are about attainment, which is nonetheless interesting. Yet, more research is needed on the questions raised by this review in all aspects of language to gain a more complete understanding of this topic.

Additionally, the existing research fails to provide sufficient answers to two of the questions raised in this review; namely the role of psycho-typology, and the L1 vs. L2 status factor. The former was only investigated in two of the studies, and although both provided interesting insights, their results were conflicting. The findings on the latter question were not



only few and conflicting, but also inconclusive, as some of the language combinations selected did allow for a distinction between effects of the L2 status factor and typology to be made.

Lastly, while several authors mention explicit multi-contrastive teaching of English grammar as a way for teachers to aid language awareness and L3 English development, none of them provide empirical investigations of the assumed correlation. The closest to such an investigation here is a study examining psycho-typology, in which a connection between teaching approach and meta-linguistic and cross-linguistic awareness was touched on (Pfenninger & Singleton, 2016). Although one would reasonably expect that an increased declarative knowledge in multilingual learners would facilitate an increase in procedural knowledge in the target language, a confirmation by third language acquisition research is necessary. Even though in third language acquisition research, this assumption is seemingly rather undisputed, in second language acquisition research, there is still a disagreement about the extent to which learning declarative knowledge is possible, as well as the degree to which such knowledge facilitates procedural knowledge (Ellis, 2006, p. 96).

## 5.4 Future Research

Looking ahead, at the outset, it is evident that there are immense possibilities for future research within this field, being relatively new and highly current. More specifically, in the future, firstly, more thoroughly planned studies are required, in which more relevant variables are accounted for as well as controlled for, enabling researchers to better identify the effects of the factors involved in the complex relationships among the languages of the user. Secondly, more research about the role of psycho-typology and the L2 vs. L1 status factor is needed. Thirdly, we now need research to test the correlations among the approach of explicit multi-contrastive teaching, student meta-linguistic and cross-linguistic awareness, and cross-linguistic influence in third language acquisition of English. Lastly, there is a sizable gap of research on this topic within a Swedish context, which is problematic given its relevance in this context. In conclusion, such developments in the research would potentially pave way to not only an enhanced understanding of the learning process of multilingual students of English, but also enhanced understanding about how L3 English could more successfully be taught.

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## Appendix: Table of Search Terms

Table 1. Search terms used to obtain the studies reviewed in Chapter 4.

Cross-linguistic influence	Third language acquisition	English
Cross-linguistic/crosslinguistic influence, CLI	TLA, Third language*, L3, Tertiary language*	English
Transfer	Multilingual*, Plurilingual*	EFL, English as a foreign language
Interference	Additional language*	ETL, English as a third language
Multi-contrastive/multicontrastive	ETL, English as a third language	Engelska
	Background language*	
	Flerspråk*, Tredjespråk*, Tredje språk, Bakgrundsspråk	