How do typology and proficiency affect cross-linguistic influence in three unrelated languages? A study on L1 Turkish learners, with L2 English, in the acquisition of L3 Spanish as a foreign language.

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CLI: Cross-linguistic influence

FL: Foreign language

L1: First language

L2: Second language

L3: Third language

TL**:** Target language

TLA: Third language acquisition

Abstract

The present paper reports the findings on the effect of typology and proficiency in the realm of three unrelated languages; Turkish, English, and Spanish. The participants (N=34) were university students in Turkey, all having L1 Turkish, L2 English, and acquiring L3 Spanish. The participants were divided based on Spanish proficiency; levels 2, 3, and 4. Productions were elicited orally using a story-telling task consisting of six panels. Data were then analyzed for cross-linguistic influence in lexis, syntax, and morphology. Results suggest that L2 is often used lexically, while L1 is preferred in morpho-syntactic transfer. Trends varied as to the role of TL proficiency, depending on transfer type.

1 Introduction

This study examines native Turkish learners, English L2, and how typology and proficiency affect cross-linguistic influence in the acquisition of Spanish as a foreign language (FL). The aim is to bring more research into the applied linguistics field which involves three unrelated languages, here being Turkish, English, and Spanish. The first section (2.1) reviews the various research that has been previously done in TLA, followed in section 2.2 by an overview of some factors at play in CLI; L2 status, recency, context, and age. The two factors at hand, typology and proficiency, will then be described in greater detail in sections 2.3 and 2.4. Several cases will be presented in which these factors vary in influence. Following will be a comparison of the pertinent languages (section 2.5), in hopes to familiarize the reader with their basic concepts. The research questions are presented in section 2.6, followed by a description of the study in section 3. First at hand will be an overview of the 34 participants (section 3.1) and then a synopsis of "The dog story", the instrument with which data was collected (section3.2). In section 3.3 will be an explanation of the typology used in data analysis. In section 3.4 will be a description of the data collection, which took place in Ankara University (Turkey), The results are then presented (section 4) and discussed in relevance to previous research (5), concluding with limitations and possibilities for future research (6). Finally appendices will be presented in order to supplement the information provided.

2 Review of the literature

As the world is becoming more multilingual the study of Third Language Acquisition (TLA) is also gaining momentum. Going hand in hand with TLA is the study of cross-linguistic influence (CLI) or transfer, which is the influence resulting from similarities and differences between the target language (TL) and any other language which has previously been learned (Odlin, 1989: 27). In TLA a learner has access to two languages as a resource for transfer, the native language (L1) and a second language (L2). Therefore the learner of a third language (L3) has a unique and specific language configuration (DeAngelis and Selinker, 2001) and should not be viewed as the sum of various monolinguals (Cook, 1995). Much research has previously been done concerning CLI in second language acquisition and much research is now focusing on how this transfer occurs in the acquisition of an L3. As will be seen in many studies a learner may possess numerous languages, therefore an L3 may not actually be the third language learned. The current thesis will henceforth adopt Hammarberg's definition of an L3, "a non-native language which is currently being used or acquired in a situation where the person already has knowledge of one or more L2s in addition to one or more L1s" (2006: 97).

Previous research has focused on the amount and source of transfer, which is dependent on the language background of the learner. Recent investigations by Sanchez (2015), among others, led the author to conclude that the activation of the background L1 and L2 are higher than that of the TL due to the learners' reliance on the connections made between the languages. As Singleton (2012) had noted prior, if no factor strongly influences one language over another for transfer, L3-L2 interactivity is more evidenced than L3-L1 interactivity.

A combination of factors which affect transfer has been widely studied, with still inconclusive results as to which are the most relevant. Hammarberg states, "the combination of proficiency, L2 status, typology/psychotypology, and recency will account for the most amount of transfer" (2001: 36). Age and context also will be examined in the present study as previous research has shown their validity as factors for transfer (Dewaele, 1998; Grosjean, 2001; Viladot and Celaya, 2007). Much prior research, which will be reviewed in the current thesis, has shown that these variables interact in different ways and one cannot concretely be defined as the most important. The study at hand, which will focus on the interaction of typology and proficiency, will look at these two factors in depth.

2.1 A review of factors involved in CLI

L2 status is defined by Hammarberg (2001: 37) as "...a conscious strategy to suppress the L1 as non-foreign and to rely rather on an orientation towards a prior L2 as a strategy to approach the L3". This type of suppression is often assisted by the fact that the L1 is easier to deactivate than an L2 (Fuller, 1999). A clear case of this phenomenon was seen in the case study of an L1 English speaker, with advanced L2 German, who was learning L3 Swedish (Hammarberg, 2001). It should be noted that the subject also had knowledge of Italian and French. The subject, Sarah, used German not only in her non-intentional switches (92%), but she also used her German phonetically, to the extent that she was perceived to be German by native Swedish listeners. She herself stated that she did not want to sound English, which she discerned as more foreign than German. She therefore made a conscious decision to avoid English in her Swedish production attempts. As DeAngelis (2001) states, L2 transfer is brought about by the subject's perception of correctness and association of foreignness. The subject did use English, her L1, however for pragmatic purposes, in a conscious manner with her interlocutor. This choice could presumably be due to the fact that English was the operative language between herself and the interlocutor outside of the study. In Hammarberg's terminology English was her external instrumental language, whereas German was her external supplier language, and the provider in her lexis of which she lacked in Swedish. The subject's behavior coincides with previous research wherein the L2 effect primarily relates to

lexical items (Dewaele, 1998). In a study by Bono (2011), 63% of university students French L1 lexical inventions came from their L2 English in their L3 Spanish productions. Thus corroborating the effect of L2 status, as the TL of Spanish is much closer to the speaker's native language of French. In this case, much like the Hammarberg study, all pragmatic switches were in the students' L1.

L2 status also took precedence, likewise over typology, in a study of bilingual Spanish and Catalan speakers, L2 German, who were learning L3 English (Sanchez, 2011). The learners, who were aged 8-11, were part of a German immersion program in Catalunya which combined both formal and natural instruction. English, however, was taught in a strictly formal context. In the findings German was transferred more not only lexically, where it is typologically similar to English, but also in syntax, where the languages are quite different. German accounted for 95% of verb displacement, 94.9% of verb order clauses, and 85.4% of verb final placement. Sanchez attests this transfer was due to L2 status, stating, "non-native languages may be activated more straightforwardly than the mother tongue, irrespective of typology" (2011: 98). Morphological transfer was observed in a similar study done by the same author (Sanchez, 2015) of Spanish/Catalan bilinguals, L2 German, learning L3 English. Here again L2 German was used when the learners were not able to access data regarding agreement or tense marking from lemmas of the TL. Interestingly the subjects often produced hybrids, English stems with German prefixes and suffixes. No influence, however, from the L1 was observed in this manner. Sanchez contended, however, that German could have been chosen not due to L2 status, but to perceived similarity or perhaps because it was the last language learned.

This brings about the issue of recency, which has also been described as the *last language effect, w*herein the most recently acquired language is more readily available for transfer (Cenoz, 2001; Hammarberg, 2001; Williams and Hammarberg 1998) It has been shown that even if a language is the learner's weakest proficiently speaking, transfer may occur solely due to recency, especially in the form of lexical borrowings (Shannon, 1991). In a study of advanced learners of L3 French by native Swedish, L2 English, with varying other L2s it was found that the most proficient language was the most prevalent in transfer (Lindqvist, 2010). This being said, however, in this study the most proficient languages were also the most recent and this factor should not be overlooked as an influential source. Various studies, however, have questioned the influence of recency. For example in the Williams and Hammarberg study, which is a proponent of said factor, proficiency, typology, and/or L2 status all seem to play bigger roles. Recency was completely overshadowed in the study of a Swedish native learner of L3 Italian, in which Spanish was chosen as the supplier language over other possible source L2s, French and English (Bardel and Linqvist,

2007). Spanish was by far the least recent, 10 years prior, while the others were in daily use. Herein we can see both typology and/or L2 status overriding the effect of recency.

Context has also been found to be an important factor in transfer and TLA. This factor can be looked at from three perspectives; sociolinguistically, pragmatically, and empirically (Murphy, 2003). Firstly, depending if the setting is mono- or bilingual will affect the amount and type or transfer. The learner is more likely to produce instances of lexical transfer if the interlocutor is also familiar with the target and source languages (Dewaele 1998, 2001; Grosjean, 2001). This was verified in the case of Sarah (Hammarberg, 2001), who used English in her editing functions, quite possibly due to the fact she was aware that her interlocutor was proficient in English and that was the language in which they communicated. This phenomenon has also been seen in the more recent study by Bardel and Linqvist (2007). Herein a native Swedish speaker was found to transfer the most from Swedish as the interview process progressed and she gradually became more comfortable with the testing and with her interlocutor. Secondly, formality affects transfer in a pragmatic sense in that the speaker will apply a higher level of control and attention during language production in a formal setting (Dewaele, 1998, 2001; Grosjean, 2001). Kellerman (1995) cites a study by Poulisse (1990) in which there was a higher amount of transfer in an interview task than in a story-telling task. Kellerman proposes the transfer is brought about by the free form of the interview that leaves less room for linguistic monitoring. Dewaele (1998) also found that the more monitoring there was by the subjects the less likely it was that transfer would occur. This was exemplified in the study by White, Valenzuela, Kozlwska-Macgregor, and Leung (2004), which looked at Spanish gender acquisition by native French or English speaker. Herein the task was spontaneous and gender was often overlooked as it wasn't necessary for interpretation. The L3 learners are often concentrated on avoiding transfer, which as a result hinders their fluency and accuracy in the TL (Magiste, 1984). Here one can see the intertwining of formality and type of task. Empirically speaking results to the contrary were found, however, in a study of Spanish or Catalan L1 adult learners of L2 English (Viladot and Celaya, 2007). The participants, who were all learning in a formal language setting, were given three tasks; role-play, picture description, and an interview. The picture description is a controlled task in comparison to the interview and role-play, which are considered quite natural. The picture description produced the most transfer in the study. These findings negate the conclusions drawn by Dewaele and Magiste, who declared that the task should have elicited the least transfer due to its more formal nature.

A factor which is also influential in transfer and TLA is age. One relevant study is that of elementary and secondary students in the Basque country (Cenoz, 2001). They were native Basque or Spanish speakers, having the other as their L2, and learning English as an L3. The participants

were in grades 2, 6, and 9 and had all received comparable hours of L3 exposure. It was found that the older students actually transferred more than the younger students, 70 terms versus 62 terms. Also the number of participants who used this strategy was higher in the older children. The younger children, regardless of their L1, transferred more from Basque and the older children from Spanish. It was proposed that the older children have more metalinguistic awareness and realize that Spanish is much closer to English typologically speaking than is Basque. This does not account, however, as to why the older children transferred more in number than the younger children. A similar study of Catalan-Spanish bilinguals learning L3 English also looked at how age affects transfer (Naves, Mirapeix, and Celaya, 2005). This study, however, found results to the contrary of the previous study. Participants ranged from grade 5 to grade 12, with varying levels of exposure to English. Both lexical inventions and borrowings steadily decreased as the age increased. The difference between the two studies being that in the latter the older children were more proficient in their L3. As previous research has shown as proficiency increases, transfer decreases (Hammarberg, 2001). One could hypothesize the difference in proficiency levels led to opposing results in the two studies.

2.2 Typology

The ongoing debate as to which factors are most relevant in CLI brings us to the following analysis of the study at hand. There is accordance that typological closeness between the L1, the native language, and L2 facilitates transfer (DeAngelis and Selinker, 2001; Dewaele, 1998; Williams and Hammarberg, 1998). Typology plays a role, not only in the acquisition of a second language, but also in TLA (Bardel and Linqvist, 2004; Falk and Bardel, 2010). A question which has arisen in TLA research is then which language is the supplier for transfer. In the 2001 previously cited study by Cenoz, Basque L1/Spanish L2 speakers and Spanish L1/Basque L2 speakers transferred more from Spanish than from Basque, during their acquisition of L3 English. This tendency is inclusive of students with Basque as their L1. It was concluded by the author that linguistic similarity was the cause of transfer. Spanish, a Romance language, is more typologically akin to English, a Germanic language, than is Basque, a non-Indo European language. The role linguistic distance and typology played in the students' cross-linguistic influence was strengthened by the number of function words transferred from the L2 Spanish versus the L1 Basque (70; 11). In general, content words are transferred from a learner's L2, whereas function words are supplied by the L1 (Poulisse and Bongaerts, 1994). This weak correlation to Basque confirms the importance of typology in the students' transfer.

Another study exemplifying the importance of typology in TLA is that of Ringbom (1987).

He looked at a group of Finnish L1/Swedish L2 and Swedish L1/Finnish L2 who were living in Finland and studying English as an L3. The subjects were 16-17 year olds and had been studying English for a minimum of seven years. Here again, Swedish, a Germanic language, is more typologically related to English than is Finnish, a non-Indo European language, and the majority of learners were found to transfer from Swedish. Interestingly in this study, the transfer in Swedish, by all speakers, were language switches, hybrids and blends, and deceptive cognates. The Finns preferred Swedish to Finnish in a ratio of 111 to 16, while the Swedes chose their native tongue at 107 to 1. When the transfer occurred in the form of calques or semantic expressions nearly all were derived from the L1 of the learner (Finnish 89.9%, Swedish 96.5%) This supports the contention that semantic transfer is more L1-based and not ruled by linguistic similarity (Ringbom, 2007). In a study by Carvalho and Bacelar da Silva (2006) typology also outranks other factors. In this case native English (L2 Spanish) and Spanish (L2 English) students were learning L3 Portuguese in a university setting. All students considered themselves to be fluent in their respective L2s. The study looked at the percentage of errors which occurred in the formation of the Portuguese subjunctive. More instances of transfer coincided with Spanish structure in both Spanish L1 and English L1 groups (59%; 60%), due presumably to the linguistic closeness of the two languages. Further evidence to this point is shown in an investigation done by Rothman (2010) of participants with the same language background. The difference in this case being, that Brazilian Portuguese was the TL, in which syntactic aspects of word order are more akin to English than to Spanish. Here again the subjects transferred lexically and syntactically from Spanish, as opposed to English, regardless of their native language. The two aforementioned studies show evidence for typological influence over both L2 status and proficiency.

Typology, as above mentioned, appears not only in lexical transfer, but also in terms of syntax. Research has shown that when a grammatical category does not exist in a learner´s L1 they often overlook it in the TL. Whether this is a form of transfer or opposition to redundancy is unclear (Ringbom, 2011). This type of omission was the case in the aforementioned Ringbom study of Finnish learners of English. In Finnish, as in Turkish, prepositions are contained within words and were often omitted in the learners' English written productions. In an oral sample of the same language grouping, L1 Finnish, L2 English learners of L3 Swedish, omitted the article in 38% of the cases. Determiners can be similarly overlooked, as was evidenced in a more recent study by Snape, Pilar Garcia Mayo, and Gürel (2009) which examined advance and upper-intermediate L1 Spanish, Turkish, Chinese, and Japanese learners of L2 English and the acquisition of determiners. Spanish, much like English, has definite and indefinite articles; Turkish, however, has no definite articles, but uses the form, “bir”, which functions much like an indefinite article. Japanese and Chinese, in contrast to the others, have no articles. Results showed learners acquired the use of

determiners relatively to their respective L1 structures. The Spanish learners behaved much like the native English control group. The Turkish, however, often omitted the definite article, but successfully produced the indefinite. Japanese and Chinese learners in comparison had difficulties with both grammatical aspects. A common factor across all participants being advanced learners performed better than their upper-intermediate peers.

A strong influence of typology in both a lexical and morphological manner was shown by Rast (2010). She looked at French native speakers, with a common L2 of English, who were complete beginners in L3 Polish. Some participants, however, had knowledge of additional languages; German Spanish, Russian, Italian, and Portuguese. The study looked at negation, verbal morphology, and lexical comprehension. The students with a background in Russian, which is typologically akin to Polish, excelled in all three facets of the examination.

In addition to typology being a factor in CLI, psychotypology also plays a role, defined by Kellerman (1983) as the language that is perceived by the learner as typologically closer. When this perception of similarity occurs, transfer is likely to follow. As Odlin states (1989: 142), “transfer will most likely result from a learner’s judgment (made consciously or unconsciously) that particular structures in a previously learned language are quite like-if not the same- as structures in the target language”. This phenomenon has been seen in research involving native speakers of non-Indo-European languages, as was the case, in the aforementioned Cenoz (2001) study, a group of Basque L1 speakers and Spanish L1 speakers. In both groups of learners, Spanish was used as the transfer language, presumably due to the vast perceived difference of the Basque language. Younger learners, however, transferred more from Basque in comparison to the older learners (grade 2; 34%, grade 6; 38%, and grade 9; 13%). This is quite possibly due to the higher metalinguistic awareness of the older children, and the less developed younger children do not perceive Basque to as be different. Psychotypology was also a factor in the previously mentioned Hammarberg (1998) case study of a learner of L3 Swedish, with L1 English and L2 German, French, and Italian. The learner perceived German to be the closest to Swedish and therefore consciously or not chose it as her language in which she transferred. It is debatable whether German is in reality the closest linguistically to Swedish in this particular language set, but as Cenoz (2003: 104) states, “languages are relatively distant or close, not distant or close in absolute terms". This perception of similarity can also occur in languages that are quite distant. Finnish and Swahili, for example, have a number of lexical and morphological similarities, which learners may mistakenly perceive as an overall likeness. The languages are, however, in reality quite distant (Ringbom, 2003). Perceptions have likewise been seen in the relationship between German and Turkish, linguistically dissimilar languages, in which learners perceive closeness due to the similarity of the verb-final property (Falk

and Bardel, 2007). As Ringbom (2003) states, learners are always looking for linguistic similarities, which may or may not be target-like in form.

One area of research where there has been less focus is that of three typologically different languages. As it will be the focus of the current research it is imperative to examine the existing research. In one case study involving dissimilar languages, a native English speaker was influenced from her L2 Arabic in production of L3 Portuguese (Schmidt and Frota, 1987). Interestingly, the subject was not influenced from their L2 French or L2 Italian. These two languages are more typologically related to Portuguese, but were not as strong proficiently as her L2 Arabic. Also was the case in Selinker and Baumgartner-Cohen's study (1995) of L3 learners of German. Herein the subjects were native speakers of English and had influence not only lexically, but phonologically from their L2 French and L2 Hebrew. It seems that the learners were relying on perceived similarities between the languages, i.e., psychotypology (Ecke, 2015).

Looking at morphological transfer of differing languages we turn to the research done by Montrul (1999), who examined the languages of the current study, the varying morphology, and how transfer occurred. Turkish L1 and English L1 learners of L2 Spanish were the subjects of the study. To review, Spanish has complex reflexive morphology (I), English has no overt reflexive morphology (II), and Turkish differs depending on the verb (III). The following examples are mentioned by Montrul (1999: 194).

(I) La ventana **se** rompió.
(II) The window broke.
(III) Pencere kır**ıl**dı

In the above cases, Turkish behaves like Spanish using “il” much like the impersonal “se”. In some cases, however, Turkish uses overt causative morphology in the transitive form, whereas Spanish uses the simple. As is seen in the below example, where “tir” signifies cause.

(I) El barco **se** hundió.
El enemigo hundió el barco.
(II) The ship sank.
The enemy sank the ship.
(III) Gemi batmış.
Düşman gemi**yi** ba**tır**mış.

As had been hypothesized, the L1 English learners performed significantly worse than the L1 Turkish in respect to reflexive verbs. In the cases of unaccusative and unergative verbs, in which all languages behave the same, results were close to that of the native-like controls. The author proposed these results were likely from the participants' L1 influence.

A second study done by Montrul (2001) focuses on physical and psychological change of state verbs. This time Japanese, which acts much like Turkish, was also included in the study. The research expands her previous work by reviewing not only the acquisition of L3 Spanish, but also L2 English and L2 Turkish. Relevant to the current research is the L2 Spanish acquisition by Turkish (L2 English) and L1 English learners. It was predicted that in respect to psyche verbs L1 English learners would outperform L1 Turkish, due to the form of their respective native languages. While neither group performed well, Turkish learners performed worse in transitive verb forms whereas English learners, as in the previous study, found intransitive (se) verbs problematic. The English L1 subjects however, performed better with psyche verbs in this form, presumably due to the fact it is relatable to the English form of "get", as below exemplified by Montrul (2001: 151).

(I) The hunter **got** frightened.

(II) El cazador **se** asustó.

(III) Aucı korkmuş.

The transitive forms vary in Turkish (I) from Spanish (II) and English (III). Turkish uses an overt causative suffix, "ut", however Spanish and English use this causative agent when the action happens to the subject in the form "made/hizo". From the examples below it seems perceivable that L1 is influential.

(I) Arslan aucıyı kork**ut**muş.
Aucı korkmuş.

(II) El leon asustó al cazador.
El leon **hizo** asustar (se) al cazador.

(III) The lion frightened the hunter.
The lion **made** the hunter frightened.

The results here further corroborate the strength of L1 influence in regards to typologically unrelated languages. Proficiency was also a variable, wherein those with lower proficiency had more instances of transfer, which leads us into our next factor for discussion.

2.3 Proficiency

Typology, while a prominent factor, does not account for all transfer in TLA. Proficiency is often compared in relevance to typology as one of the principle causes of CLI. First at hand, is the proficiency of the learner in the TL, according to De Angelis (2007: 33) "CLI is more likely to occur at the early stages of acquisition when the target language is still weak and fragmentary, and the need to fill in knowledge gaps is more pressing". An L2 is also often the source of such transfer in the beginning stages of acquiring a third language (Bono, 2011; Hammarberg 2001; Ringbom

1987). The tendency in this type of transfer is often that of code-switches, foreignizings, and word construction attempts (Lindqvist, 2010). As proficiency in the TL increases, the transfer from the L2 generally decreases, often at a much faster rate than from the L1 (Dewaele, 1998). This was exemplified in the aforementioned case of Sarah a native English speaker acquiring L3 Swedish (Hammarberg, 2001). Her influence from L2 German faded at twice the rate of her L1 English, lasting only 4 months while English remained for 8 months. The same was made evident in a more recent study done by Sanchez (2015), which looked at the influence of L2 German on the acquisition of L3 English by bilingual Catalan/Spanish students. In her longitudinal research between the 66-99 hours of study marker L2 transfer fell from 67% to just 25%. Transfer often coincides in level with the L2 and the TL, as was the case in Bardel & Lindqvist 2007 study. Therein the learner, a Swedish native, at a lower proficiency level of L3 Italian used her also less proficient L2 Spanish. The subject, however, after increasing her proficiency in Italian switched to her much more stable L2 French. Interestingly in this case, the subject was not aware of her transfer from Spanish, but consciously used her more proficient languages in a strategic manner. In fact almost all of her French code-switches are followed by self-repair, demonstrating her awareness of the transfer. At her peak proficiency in Italian her L1 Swedish was often used as a metalinguistic tool with her interlocutor in a pragmatic manner. As to whether transfer will disappear completely at higher levels of proficiency in the TL is still in question. Evidence to the contrary is exemplified by Lindqvist (2010) in the study of advanced Swedish learners of French. The participants had an advanced level of L2 English and numerous other second languages of varying proficiency (German, Russian, Latin, Italian, and Spanish). Although the learners had an advanced level in the TL, French, transfer still occurred, with very little influence from languages other than Swedish, English, or French itself. The difference being that these learners' transfer was 54% meaning-based, the majority of which were semantic expressions. This follows the theory of DeAngelis (2007) that transfer in early stages is form-based and as proficiency increases will become eventually meaning-based. Whereas transfer in the early stages can have a negative effect, transfer can be positive in more highly proficient learners often promoting intra-lingual L3 influence, which uses not only the previous languages as suppliers, but also the language being learned. Herein the advanced learners showed much influence from the TL, French. They in fact produced intralingual transfer in 37 out of 51 instances.

Proficiency again proved influential in Bardel and Lindqvist (2007). They examined a Swedish learner of Italian, who was influenced by her knowledge of French, as opposed to English or Spanish, all of which she had knowledge. Spanish should have been the optimal choice typologically speaking, but was overridden by French. Spanish did play a strong role in code-switches (51%), but this was mostly in the first testing (79%). As the learner’s proficiency

increased her transfer from Spanish rapidly declined. French, however, was the most stable language in amount of transfer (30%), remaining consistent throughout the testing. Here, one can see that the closeness of Spanish to Italian was not as strong a factor as was proficiency. On this same note, typology was still influential in the learner's choice of French over English. The subject was equally proficient in both languages and used them both on a daily basis. That being said, however, French is closer typologically to Italian than is English. The likely the reason for this linguistic choice being that Romance languages are in general transferred more easily from an L2 to an L3 (Lindqvist, 2010).

Apart from the learner's proficiency in the target language, the proficiency in the L2 is also a critical factor in the amount and source of transfer. Many studies have shown that high proficiency in an L2 will increase the chance of it influencing the L3, exemplified in the previous study of Swedish learners of French. Participants transferred either from their L1 Swedish or their strongest L2, English, whereas very little influence was seen from the other L2s in which they were less proficient. Another interesting case of varying languages is the study of English L1, with L2 Spanish or L2 Japanese, learning L3 Latin (Sanz, Park, and Lado, 2015). The four languages differ structurally in terms of word order, noun case morphology, and subject-noun agreement. Learners were found to rely more heavily on their L1 despite similarity to Spanish lexically and morphologically to Japanese. In fact the learners acted as a homogenous group, with the L2 causing no distinction. These results, according to the authors are perhaps due to the fact that the students did not have a high enough proficiency in the L2 to affect the L3 acquisition in this manner. They were advanced learners of their respective L2s, but since they were not balanced bilinguals their proficiency was not sufficient according to the author. In order for the second language to provide material for transfer, the speaker must have a certain degree of L2 competence (Hammarberg, 2001; Murphy, 2003). This was exemplified in the aforementioned case study, in which the subject used her German L2 in transfer as opposed to L2 Italian or French in which she was less proficient. It has been hypothesized, however, that if the L2 proficiency has reached an almost native-like state the learner may not revert to this language in the typical manner (Bardel, 2006). This was observed in the study of Swedish L1 learners of L3 German who had English as an L2. English had become so automated that it was no longer activated like a foreign language. The learners, in fact, had no activation of their L2 English (Bardel and Falk, 2007).

Various studies, such as Bardel and Lindqvist (2007), have refuted the claim that the most proficient L2 will be chosen as the supplier language in CLI. In their above mentioned case study of Swedish L1 learner of L3 Italian transferred the most, especially in the early stages from her L2 Spanish. She reverted to Spanish over her L2 French or L2 English in which she was highly proficient. The less proficient L2 can be used the supplier language, as opposed to a more

proficient language. One could hypothesize that Spanish was activated due to its typological closeness to Italian. Comparable results were seen in the case of a native French speaker who relied most on her weakest background language, Spanish, in the acquisition of L3 Italian (DeAngelis and Selinker, 2001). Here again typology seems to outweigh proficiency.

Research which looks at proficiency and a particular aspect of syntactic transfer is learners of L2/L3 Spanish (White *et al*., 2004). The participants were L1 French or L1 English, some of whom had L2 French. This specific study focused on the acquisition of gender and number agreement in Spanish from French, which has the same structure, and English, which does not. The students were divided into three proficiency groups; low, intermediate, and advanced. It was found that number agreement was not problematic for any group. Gender errors, however, were made by the low proficiency group of both languages. The results were uniform in French and English learners, both having more difficulty with feminine nouns and when adjectives were present. It appears from this data that the L1 influence was not the cause of erroneous answers, ergo not influenced by language typology, as French is closer to Spanish. Gender conflict was also investigated in a study of Spanish-Basque bilinguals (Cuoto, Munarriz, Epelde, Deuchar, and Oyharçabal, 2015). This research focused on the participants of acceptance of incorrectly marked determiners and adjectives with Basque nouns. Basque, as opposed to Spanish, has no gender. It was found that feminine determiners were often accepted, in cases when the nouns were masculine in Spanish (e.g. la ilar, el guisante, the pea). According to the authors it would seem that in this language scenario the feminine determiner was the default choice. The question arises, however, if this could be due to the Basque "*a*" ending which is affixed as a determiner itself, making the form "ilara". The participants, being bilingual, perhaps regarded these nouns as feminine due to their ending. Interesting to the current research is that Turkish has a comparable system in which a vowel is affixed to signify an accusative (u/ü/ı/i). A similar study done by Martinez-Adrian, Gallardo del Puerto, & Gutierrez Mangado (2013), also looked at Basque/Spanish bilinguals, in their acquisition of L3 English. The participants were 14 year olds who had been learning English for 7 years in a formal setting. The subjects had a tendency to use null determiners, when they were required in English usage. Definite articles were omitted in 23.27% of the cases and indefinite articles 29.85%. One possible reason for this is the transfer from Basque as opposed to Spanish.

All the aforementioned factors play a role in language transfer. They will have greater importance in certain situations and less in others. There is no clear conclusion as to which factor(s) are the most influential in TLA. Hammarberg (2001) claims that the language chosen as the supplier language will be the one with the highest overall values of these factors as a whole. His proposed theory assumes that all factors are prevalent and that it is the sum of their parts that will in

the end be the deciding factor. As previously stated, individual differences cannot be overlooked and for this reason it is difficult to generalize exactly how the factors will interact and what effects they will produce.

2.4 A cross-linguistic comparison of Turkish, Spanish, and English

The three languages discussed in the current paper, Turkish, English, and Spanish are distant in terms of language typology. Turkish is a non-Indo European language belonging to the Altaic family which includes Mongolic, Koreanic, and Japonic. English is a Germanic language accompanied by German, Swedish, and Dutch, *et al*. Spanish, a Romance language having its roots in Latin, is grouped with languages such as French, Italian, and Portuguese, amongst others.

Few studies, known by the researcher, look specifically at the interaction of these three languages, especially in terms of lexical transfer. They are distinct from one another in many ways, yet there are similarities to be found as well. Word order is one aspect where Spanish and English are alike, being that they follow a SVO (subject verb object) pattern. Turkish, on the other hand, follows the form of SOV. That being said, Spanish and Turkish differ from English in that they allow a null subject. In both languages the subject is included in the conjugation of the verb and may therefore be omitted, whereas in English this is prohibited All three of these languages represent plural forms in a similar manner, with the addition of "*s*" (Spanish and English) and "*lar/ler*" (Turkish). As is exemplified here vowel harmony is an integral part of the Turkish language. The language's eight vowels are paired as; a/ı, e/i, o/u, and o/ü. Neither Spanish nor English has this regulatory practice. In a previous study of syntax and morphology, neither word order nor plurals have been problematic for Turkish language learners (White *et al*., 2004).

The lexis of the three languages although quite different, does have similarities. Most words which are cognates or similar in the three languages are from the Latin origin. Turkish takes nearly 5000 of its total 90000 word lexicon from French. English is also influenced by the Romance languages, taking one-third of its vocabulary from French. This similarity can be seen in the examples below, wherein some cases the languages are uniform and in other cases differ.

(I) La organización (Spanish), organizasyon (Turkish), organization (English)

(II) Simpático (Spanish), simpatik (Turkish), nice (English)

(III) La dirección (Spanish), adres (Turkish), address (English)

Turkish morphology is complex as it is agglutinative, adding many morphemes to the base word. All information can be included in just one word.

Evimdedim,

I was at my house.

Due to this structure “stand alone” prepositions do not exist, but are added to the word stem. This can be problematic for Turkish language learners who may then see prepositions as redundant, as was proposed by Ringbom (1987). Possessive pronouns are present in Turkish but are not often used, favoring the incorporation in the word. English and Spanish behave similarly in this aspect, in that they both use separation for possessives and prepositions.

Two additional aspects, which will be discussed further in the current paper, are gender and number agreement. The target language, Spanish, is the only of the three languages which has gender, nouns being either masculine or feminine (e.g. la manzana, el libro). In many cases gender is marked by a masculine “O” ending and a feminine “A” ending. Some nouns are exceptions to this rule or end differently (e.g. la mano, la razón). Adjectives and determiners must agree in gender with the noun (e.g. el chico alto, nuestra amiga francesa). English has natural gender, as in the pronouns of he/she but lacks gender in the form of nouns, adjectives, and determiners. Turkish has gender only in the form of actual words (Ex; erkek arkadaş, kiz arkadaş; boyfriend, girlfriend). It lacks, however, any pronouns which provide gender clues, “O” denotes both he and she. The number agreement in Spanish of adjectives and determiners is also absent in the other languages (Ex; las manzanas, tus amigos). These differences in the languages may be problematic for learners susceptible to transfer in the acquisition of Spanish.

2.5 Research questions

In light of the previous findings presented in the literature review the following research questions will be addressed:

1. In the investigation of three typologically unrelated languages (Turkish L1, English L2, and Spanish L3) do the learners present instances of cross-linguistic influence? If so, of what type?
2. If transfer in Spanish productions does occur, which will be the source language, English or Turkish?
3. Does proficiency in the target Language (Spanish) have an effect on the amount and type of transfer?

3 The study

3.1 The participants

İn the present study data was collected from 34 university students at Ankara University, a public institution in Turkey. Originally students were also pooled from Hacettepe University in Ankara. After classroom observation it was decided to focus on only one university, in pursuit of a more homogenous sample. A questionnaire was distributed to 63 potential participants prior to testing to assess the participants' language backgrounds and to obtain information on various sociolinguistic features (see appendix A). All subjects accepted were native speakers of Turkish and had an English level of minimum 3 on a 5 point scale, self-reported. This resulted in the discarding of eight participants, 3 for being non-native and 5 for having insufficient English. Using only the participants from Ankara University resulted in a sample of 34 participants. In this population 44.1% reported a level 3 of English, 52.9% level 4, and 2.9% level 5. All students were majoring in Spanish language and were either in their second, third, or fourth year of study. Thirteen students had studied abroad in Spain all except one of which were in their fourth year of study. Participants, who ranged in age from 20-25, were composed of 21 females and 13 males. Students were recruited voluntarily and were not compensated for their participation. The final breakdown of students can be seen in Table 1.

Table 1. Description of the participants

	SPANISH 2	SPANISH 3	SPANISH 4
SPANISH LEVEL	9 (26.5%)	8 (23.5%)	17 (50%)
ENGLISH LEVEL	LEVEL 3: N=6 LEVEL 4: N=3 LEVEL 5: N=0	LEVEL 3: N=1 LEVEL 4: N=4 LEVEL 5: N=1	LEVEL 3: N=9 LEVEL 4: N=8 LEVEL 5: N=0
STUDY ABROAD	0	1	12

3.2 Instruments

The instrument chosen for data collection was a story-telling task, "The Dog Story" (Heaton, 1966, see appendix B). Pilot testing was done on 6 students from Ankara University, who were later excluded from the final sample, using three different tasks; interview, role-play, and picture description. It was determined that the picture description, or story-telling, elicited the most elaborate speech productions. At the same time it envokes a language specific processing mode,

which makes it applicable for transfer research (Sanchez & Jarvis, 2008). This task has also proven successsful by researchers in the GRAL group and has been an integral part in the data collection of the Barcelona English Language Corpus (BELC, http://talkbank.org./data). The task contains six panels and has been summarized as "…two main protagonists, a boy and a girl, who are getting ready for a picnic; a secondary character, their mother; and a character that disappears and later reappears, a dog that gets in to the food basket and eats the children's sandwiches" (Muñoz, 2006: 21).

3.3 Procedure

In the current study the task was used in its oral modality. Testing took place over the period of one week in December 2015. Subjects were recorded individually, each being given instructions by the interlocutor, myself as the researcher, in the TL of Spanish. Participants were given 30-45 seconds to review the panels before beginning. There was no time limit and productions ranged from 40 seconds to 3 minutes 44 seconds. They were informed that they would not receive a grade for the project and to not worry about grammatical mistakes.

3.4. Data analysis

The data were divided into different categories of transfer, which include both syntactic and morphologic instance of transfer. Various studies were reviewed to determine the most adequate system to analyze our data. Instances of lexical transfer were adapted from such studies as; Bardel and Lindqvist (2007), Hammarberg (2001), and Viladot and Celaya (2007). In respect to analyses of morphological and syntactic transfer, studies referenced were Cuoto *et al*. (2015) and White *et al*. (2004). The data were then coded using the following classifications; borrowings, lexical inventions, gender and number agreement, null determiners, and verb formation. These terms will be henceforth defined in the current study as:

Borrowing: A word taken in its entirety from a language other than the TL

Lexical Invention: A word that originates from a source language, but does not actually exist

Gender and number agreement: The misusage of gender and/or number agreement in the TL

Null determiners: Lack of an article where it is necessary in the TL

Verb formation: Specifically the repetitive form found in Turkish, but not in either English or Spanish (*e.g. yemek yemek, to eat*)

4 Results

Before looking at our percentages of transfer, it is important to note the mean number of

words used by levels 2, 3, and 4, thus ensuring samples are comparable in length. The numbers were deemed sufficiently similar for a comparison across groups. In our data sample of 34 participants, 29 (85.3%) presented instances of transfer, relevant to our first research question and if in fact transfer did occur (See Table 2). The percentages of transfer were greater in level 2 and 3 Spanish students, which will be expanded upon in the discussion (Section 5).

Table 2. Percentage of participants who transferred

	SPANISH 2	SPANISH 3	SPANISH 4
PARTICIPANTS WHO TRANSFERRED	100%	87.5%	76.5%
NUMBER OF WORDS	66.5	74.7	70.1

Our data is presented concurrently in terms of typology (research question 2) and proficiency (research question 3). First to be analyzed is the use of borrowings from both the L1 Turkish and L2 English, pertinent to our second research question regarding the source language of CLI, in the students' attempted production of L3 Spanish. Instances of borrowings from the L1 were low, only 5 in total. Three of these borrowings came from the low proficiency students, with respect to our last research question and the effect of TL proficiency.

#16 Sp 3 Eng 3: Como veo, ellos llevaron a una ç*iftlik* (Turkish, farm).

[As I see, they came to a farm.]

#11 Sp 2 Eng 4: Hay dos chicos comiendo algo, *pasta* (Turkish, cake).

[There are two kids eating something, cake.]

Borrowings from L2 English, however, were more numerous, again more so in lower proficiency students. Interestingly, the mid-level Spanish students had no instances of borrowings from L2 English. The complete transfer distribution can be seen in Table 3.

#36 Sp 4 Eng 3: *Sorpresan* que ellos ven el *la basket.* (English, basket)

[They are surprised at what they see in the basket.]

#5 Sp 2 Eng 3: Estan contento y estan (no sé, no sé) *surprised.* (English, surprised)

[They are happy and they are (I don't know, I don't know) surprised.]

Lexical inventions, on the other hand, were most numerous in Spanish 3 students, 15 in number (See Table 3). It is not clear in some cases which language the inventions are derived. This is the case when the source words are similar in 2 or more of the languages. In the below examples we can see influence from Turkish, English, or both.

#16 Sp 3 Eng 3: Qué es eso, *recela?* (Turkish, reçel)

[What is this, jam?]

#17 Sp 3 Eng 5: Estan preparando *sus basquetas.* (English, basket)

[They are preparing their baskets.]

#9 Sp 2 Eng 4: Ellos van a *la marqueta.* (English, market)

[They are going to the market.]

#34 Sp 4 Eng 3: *hacen piknikas* también con perro.

(Turkish, piknik, English picnic, and Spanish picnic)

[They are having a picnic with the/a dog.]

Also of interest is that in certain cases the participants transferred meaning from a source language wherein the definition is not same in the TL. As Ringbom (2001) stated a learner often assumes a homonym in the L3 has a meaning correspondent to that of the L1 or L2. In the below examples, this can be seen from Turkish and English.

#17 Sp 3 Eng 5: Estan muy *curioso* lo que pasa.

(English, curious, Spanish, curioso=strange)

#16 Sp 3 Eng 3: Se dan cuenta que la bolsa era *libre.*

(Turkish, boş =empty and unoccupied, Spanish, libre=unoccupied)

Table 3. Instances of lexical transfer

	SPANISH 2	SPANISH 3	SPANISH 4
BORROWINGS FROM L1	3	3	1
BORROWINGS FROM L2	7	0	4
LEXICAL INVENTIONS	2	15	6

Moving on to morphological transfer, errors in gender and number agreement were produced by students at all levels (See Table 4). As previously stated, English and Turkish are both genderless and do not require number agreement. It was found that errors in gender agreement increased with proficiency, whereas errors in number agreement decreased.

Table 4. Transfer in gender and number agreement

	SPANISH 2	SPANISH 3	SPANISH 4
GENDER	4	3	10
NUMBER	5	4	1

The next focus of the data analysis looks at null determiners, lack of an article where needed in Spanish. English like Spanish requires an article, however Turkish does not. This trend decreased as proficiency increased, as can be seen in Table 5 below.

Table 5. Instances of null determiners

LEVEL	NULL DETERMINERS
SPANISH 2	8
SPANISH 3	6
SPANISH 4	4

The last aspect of the data to be looked at is the use of a double verb form which is sometimes used in Turkish. The examples below illustrate how students have used *yemek yemek* (to eat) and *oyun oynamak* (to play a game). There were five instances in total of this type of transfer, twice from level 2 Spanish and three times from level 4. Although this form is not incorrect in Spanish it is not perhaps commonly used.

#9 Sp 2 Eng 4: *Comen* todos los *comidas.*

[Bütün *yemekleri yiyorlar*.]

[They eat everything.]

#20 Sp 4 Eng 3: *Juegan* unos *juegos.*

[Biraz *oyun oynayorlar.*]

[They play some games.]

5 Discussion

The aim of the present paper is to contribute to research on CLI in unrelated languages (Turkish, English, and Spanish), focusing on the effects of typology and proficiency, and the transfer which occurs in the acquisition of a third language, Spanish. Turning to our first research question (In the investigation of three typologically unrelated languages (Turkish L1, English L2, and Spanish L3) do the learners present instances of cross-linguistic influence? If so of what type?) and whether CLI occurred during the students' Spanish productions to see if transfer was present both lexically and morphologically. Looking at the results, all forms of transfer in question were present, lexical inventions being the most prevalent. This is not surprising as much evidence has been presented in which CLI occurs lexically from both the L1 and the L2 (DeAngelis and Selinker,

2001¸ Bardel & Lindqvist, 2007). Instances of gender agreement transfer were evident in 15 cases, a total of 17 times. Number agreement was on a lesser scale present, in 7 cases with a total of 10 instances. Determiners were omitted by the students, when needed in Spanish, a total of 18 times, by 10 different participants. The last category, of verb formation, occurred only five times by four students. The fact that transfer did in fact occur was not surprising due to the numerous previously mentioned studies (Cenoz, 2001; Hammarberg, 2001; and Lindqvist, 2010).

Our results analysis then leads us to our second research question (If transfer in Spanish productions does occur, which will be the source language, English or Turkish?) and which is the source of the transfer. Looking first in terms of the lexis, English was more present than Turkish in borrowings by a ratio of 11 to 7. It should be noted, however, that the number of participants in which this occurred was much closer, 6 using English and 7 using Turkish. This figure can be looked at in reference to the factor of typology. As previously mentioned, the three languages are unrelated, but do have certain similarities lexically. It could be proposed that the students rely on both the L1 and L2 due to the fact that neither was perceived as similar. Perhaps here, as was seen in the case of Basque (Cenoz, 2001) psychotypology was a factor. In terms of lexical inventions, on the other hand, most cases of CLI seemed to be derived from English. There were various instances of the addition of a vowel ending to an English word, i.e. *basqueta*. It is interesting that when faced with two unrelated source languages participants often elected for English. This could be due to the possible closer typology of English to Spanish, than Turkish to Spanish. In the previous studies which dealt with dissimilarity in TLA, often the L2 was opted for over the L1, as in Schmidt and Frota (1987). One could also suggest this was a case of L2 status, and the recognition by the participants that the Turkish was incorrect. This is in accordance with such research as Cenoz (2001) in which the subjects realized that Basque, also non-Indo European, was not fitting.

Moving on to the morphological and syntactic aspect of CLI, the source language is more difficult to determine. As for gender and number agreement, neither of the two possible source languages have this practice in their grammar. The tendency for CLI could possibly have been taken from English or Turkish. As White *et al.* (2004) noted, gender can be seen as arbitrary as it does not affect interpretation. Perhaps the subjects overlooked gender, not only due to redundancy, but also to the context, which was free-form. As Dewaele (1998) stated, the less formal a task is the more likely that transfer will occur. Looking back to the Ringbom (1987) study, learners often transferred syntax from their L1 regardless of typology. In his study it was apparent whether transfer came from Swedish or Finnish, in both lexical and syntactic transfer. In our study, however, as both source languages act similarly in this aspect, ambiguity remains.

As for null determiners, this transfer is most likely taken from the learners' L1 Turkish. English, like Spanish, has definite and indefinite articles whereas Turkish does not. As mentioned,

Turkish does employ indefinite articles in a certain sense. The lack of articles, in our research however, wholly occurred in reference to definite articles. These finding are in line with the research by Snape *et al.* (2009). Herein Turkish learners more often omitted the definite article, while correctly using the indefinite. This can be compared to the aforementioned study by Martinez-Adrian *et al.* (2013), where both indefinite and definite articles were omitted by the participants. In this case, however, results like this could be expected due to the structure of the Basque language, wherein the determiner is affixed to the end of the word. The L1 seemingly provided clues for determiner usage in this study and the current one. Therefore, our research supports the hypothesis of transfer from the L1 in this aspect of morphology.

Another aspect of transfer which presumably came entirely from the students L1 was the double verb formation. As mentioned the form is not incorrect in Spanish, but is not as commonly used as in Turkish. The students were likely referencing their L1 in these instances. As Montrul (2001) had found, students were often constrained by the morphology of their L1. In the case, however, when our subjects had CLI from English verbs, they did so lexically and used Spanish morphology. This was exemplified in the use of "*realizaron*" (#9 Sp 2 Eng 4). The student wished to say "*realize*" in English, however, the Spanish form of "*realizar*" is not the lexical equivalent. Here again the question does not seem to be of typology, but of L2 status. Perhaps, as proposed by Hammarberg (2001), the students had not yet reached the threshold of proficiency in order to transfer from their L2 in this morphological manner.

This hypothesis leads us into our final research question (Does proficiency in the target Language (Spanish) have an effect on the amount and type of transfer?) and the role of proficiency in the TL, Spanish. As is shown in the results, borrowings from the L1 were equivalent in Spanish 2 and 3 students (three in each) and less numerous, just one occurrence, in Spanish 4 students. This follows the trends from such previous research as Bardel and Lindqvist (2007) and Hammarberg (2001) in which as proficiency increased, CLI decreased. Borrowing from the L2 English, however, did not follow a like pattern. Herein again, the lowest proficiency group had the most instances (7), which is in line with the aforementioned studies. The Spanish 3 group, however, had no occurrences, while the Spanish 4 students had 4 borrowings from English, albeit from two subjects. Interestingly in comparison is the number of lexical inventions produced by the mid-level Spanish 3 students (14). This by far outweighs those of the lower proficiency (3) and the higher (6). It is unusual that the lowest Spanish group would have the fewest lexical inventions. This is similar, however, to the U-shaped trend seen in Bardel and Lindqvist (2007). In her study, however, transfer from the L2(s) was most prevalent in the first and last stages of proficiency (1 and 4), thus the opposite of the current study. A possible explanation for this lack in Spanish 2 students is that they have not learned the syntax in the TL adequately enough to mix it with their source

languages. This is supported by the fact that the Spanish 2 students overall had the most borrowings, i.e. not incorporating Spanish syntax nor lexis. Spanish 3 students, for example, attempted word constructions like *basqueta*, whereas level 2 simply used the word *basket.* Notably the level 4 students often used compensatory strategies in this situation, referring to the object as *la bolsa (the bag)* or *la caja (the box).* This supports the idea not only that transfer not only decreases as proficiency increases, but also, as was evidenced by Lindqvist (2010) that it shows itself in a different manner.

Moving on to gender agreement, the Spanish 4 students had the highest number of transfer (10), in comparison to level 2 (4) and level 3 (3). These results are contradictory to those of White *et al*. (2004), who found that lower proficiency subjects often had more CLI in gender agreement than those in higher proficiency groups. The high proficiency students from the current research, however, produced more complex and descriptive compositions than the lower groups. The breadth of their CLI was in the in the form of adjective/noun agreement. Similar results occurred in the White *et al.* study, wherein accuracy was lower in gender agreement when an adjective was present. This could therefore explain as to why they yielded more transfer comparatively. Also in comparison to the White study, the possible spontaneity of the task and the advanced learners less monitored productions could have added to more instances of CLI in gender agreement

Number agreement produced trends to the contrary, transfer decreased as proficiency increased. In this aspect our data is line with the aforementioned White *et al.* (2004) study in which learners had little problem acquiring this morphological aspect. In that case, however, number agreement was slightly more problematic for low proficiency students when an adjective was incorporated. As mentioned above our more advanced students more often incorporated adjectives. Our data therefore supports the idea that as proficiency increases, number agreement is more easily acquired than gender agreement.

The same was true for null determiners steadily declining with rising proficiency. This can be again compared to the study by Snape *et al*. (2009). Therein the advanced learners outperformed the upper intermediate group. This was true for all L1 subjects, Turkish included, except for Japanese an article free language. Our data, thus, adds evidence to the idea that although Turkish does not contain articles, as proficiency in the TL increases CLI from the L1 will decrease.

Our last factor of transfer, in relevance to proficiency, is the form of verb repetition. There were two instances of this in level 2 Spanish, howbeit by one participant. No occurrences of this kind were found in level 3, whereas repetition appeared in three Spanish 4 productions. Similar to the findings by Sanz *et al*. (2015), in which the L1 was the source of CLI in verb morphology. Although the numbers are small, this supports the idea that higher proficiency students tend to transfer syntactically from the L1 more than the L2.

A final aspect to discuss is the participants' level of their L2 English. Across the groups the level was quite homogenous, with most students self-reporting a level of 3 or 4. Interesting to note, the one student (#17 Sp 3 Eng 5, see appendix C) who reported a level 5 of English had the most instances of transfer (10). This student, who had studied abroad in the UK, had attained a near native-like level of English. It is therefore surprising the amount of transfer, and is contradictory to the hypothesis put forward by Fark and Bardel (2007), in which the L2 is no longer seen as foreign by extremely proficient subjects. It seems in fact that English was the source language in all instances of CLI.

6 Conclusions and Limitations

The present study aims to further the investigation of CLI when dealing with TLA. Three unrelated languages (Turkish, English, and Spanish) were chosen in hopes of achieving a novel perspective. Upon analysing the data, it seems our study confirms other findings in many ways. Firstly, the source language in terms of the lexis was the learners' L2 English, analogous to previous research (Cenoz, 2001). Typology should not have been a factor in our study, as the languages are unrelated, therefore L2 status can be a possible explanation. As for CLI in morphology, especially in null determiners and verb formation, it seems the L1 played the supplier role, comparable to Ringbom (1987). Secondly, overall as proficiency in the TL increased, CLI decreased reciprocally (Hammarberg, 2001; Bardel and Lindqvist, 2007). This was true in reference to borrowings from the L1, number agreement, and use of null determiners. The use of the L2, however, was seemingly unrelated to proficiency in the TL. In lexical inventions, for example, where English was the main source language, the mid-level proficiency group had the most instances. This data could support the idea of a U-shaped learning curve, wherein students transform the manner in which they transfer as proficiency increases. In this way our findings also support the evidenced trend (Ringbom, 1987; Lindqvist (2010) of CLI moving from the lexis to syntax and morphology as proficiency in the TL increases.

Many factors need to be taken into consideration when analysing this data. The number of participants in the groups was skewed, having nearly twice as many participants in level 4 Spanish. Additionally in this category of Spanish 4, 12 of the 17 participants had studied abroad in Spain. There is a greater difference, therefore between the proficiency level in Spanish 3 and 4 students. Another factor which could have affected the data was the role of the interlocutor. All classroom contact with the students was in Spanish, however, they were aware that the interlocutor was a native English speaker and was not proficient in Turkish. This fact could have possibly had an effect on their language choices. Perhaps if a Turkish speaker had also been present, the results

would have been different (Dewaele, 1998). Also for future research it would be interesting to look at a more interactive task, such as interview or group discussion. This would incorporate the idea of English and Turkish both being available as source languages.

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Appendices

Appendix A

BACKGROUND QUESTIONNAIRE

(This information will be kept confidential)

Name: _____ Age: _____

E-mail:_____

I. Personal Data

Have you always lived in Turkey? YES NO

If not where have you lived?

How long? 0-6 months 6 months-1 year 1 year +

Are both of your parents native speakers of Turkish? YES NO

If not what are their first languages? English Spanish German Other

II. Your Linguistic History

At what age did you first begin to learn English? 0-5 years 5-8 years 8-10 years

10-15 years 15 years +

At what age did you first begin to learn Spanish? 0-5 years 5-8 years 8-10 years

10-15 years 15 years +

Are you currently studying English? YES NO

Have you studied English in another country? YES NO

If yes, where?

Date of start and finish?

Have you studied Spanish in another country? YES NO

If yes, where?

Dates f start and finish?

Do you speak any other languages, apart from Turkish; English, and Spanish?

German Italian Japanese Kurdish Other

If yes, what were the dates of study?

III. Your linguistic proficiency now

Rate your current overall language ability in ENGLISH

1 = understand but cannot speak

2 = understand and can speak with great difficulty

3 = understand and speak but with some difficulty

4 = understand and speak comfortably, with little difficulty

5 = understand and speak fluently like a native speaker

Rate your current overall language ability in SPANISH

1 = understand but cannot speak

2 = understand and can speak with great difficulty

3 = understand and speak but with some difficulty

4 = understand and speak comfortably, with little difficulty

5 = understand and speak fluently like a native speaker

Do you think it is important to maintain and improve English in your life? YES NO

How do you think you can use more English in your future? Work Social Travel

Do you think it is important to maintain and improve Spanish in your life? YES NO

How do you think you can use more Spanish in your future? Work Social Travel

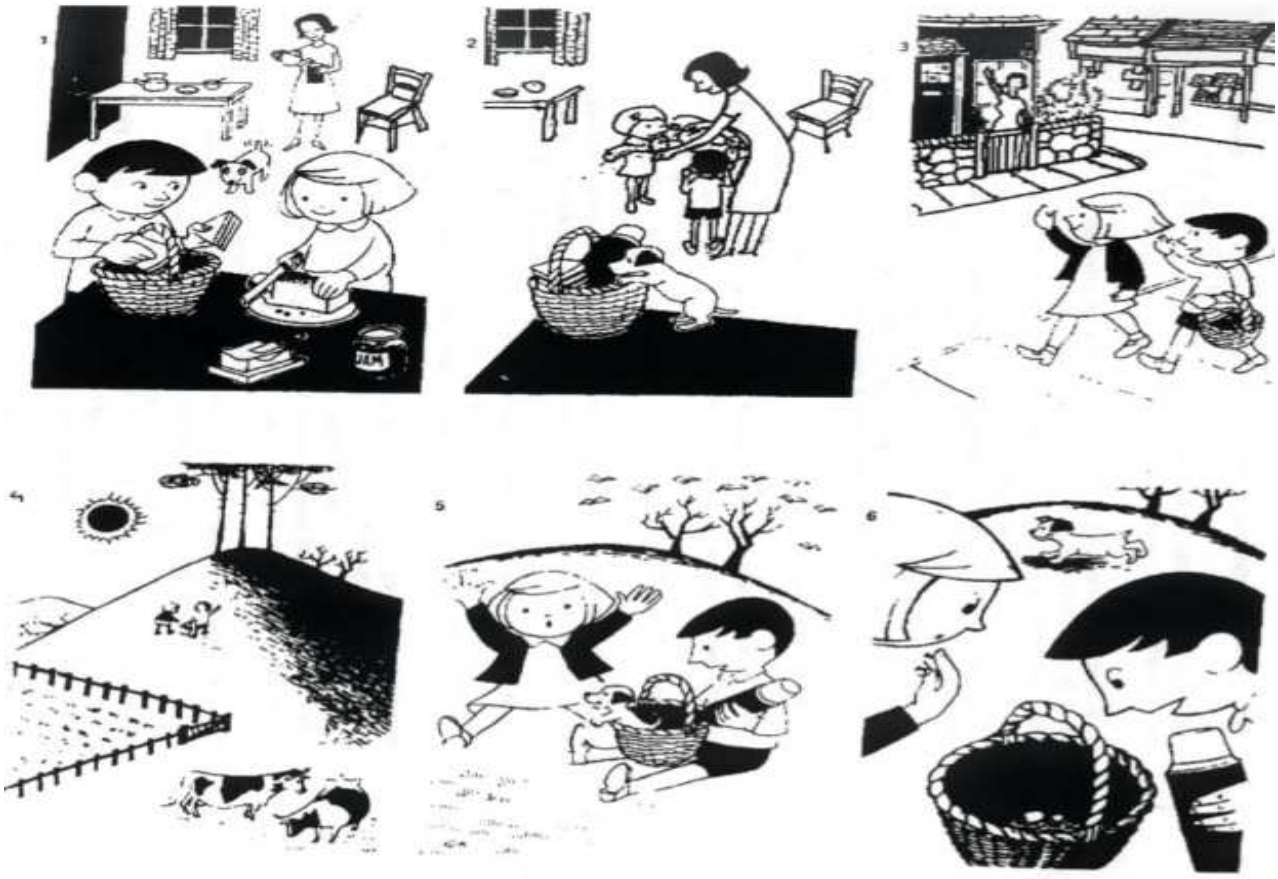
How often do you often use English in a social setting?

Never Rarely Sometimes Often Always

How often do you use Spanish in a social setting?

Never Rarely Sometimes Often Always

Appendix B



Appendix C

Transcripts

Sevgi: Level 2

Duration: 2:17 Tokens: 51

Un momento (hmmm)...hay unas chicas y hay una *pasta*. Van a cumpleaños, no lo sé. Hay un perro y quiere comer algunos. Chicos (qué es? No entien...) Chicos corriendo en la calle. Chicos van a una montaña y *there's el sol*. Estan, estan contento y estan (no sé, no sé) *surprised*.

Ezgi: Level 2

Duration: 1:36 Tokens: 99

En el primer dibujo hay dos chicos comiendo algo, *pasta*. La madre es con bebé y hay un perro. En el segundo la madre dan unas cosas a los chicos. Hay un perro viendo el *basket.* En el tercero los chicos saludaron a la madre. Pues, los, el chico tiene un *basket* en su brazo. En el cuatro hay un bosque, hay unos animales, y los chicos jugando en el bosque. Es un dia bueno...ummmm. Aqui dos chicos jugando con un perro, igual en bosque. En la ultima chicos viendo el *basket* porque no ven el perro.

Musa: Level 2

Duration: 2:27 Tokens: 91

Hola. Ehhh, hay dos chicos, ellos creo que preparando a comer. Es un *bread (Que significa bread?*) ah sí. Ellos se vistieron, visten y el perro buscando, está buscando una *comida a comer.* La madre ayudan a los niños. Eso es. En el tercer, tercero los niños se van a, en la calle u saludan a los a sus madres, madre. Cuatro ellos en un campo, el campo. Ellos estan jugando con perro y creo que mucha diverta. Y en el ultimo el perro comió sus comidas.

Mert: Level 3

Duration: 2:04 Tokens: 120

Habia una familia sin padre, como veo. Y tenian un perro que no es amable. Y como me parece los chicos estaban preparando para el piknik. (*Como se dice?*) Y por eso se prepara una bolsa y además los alimentos (*Qué es eso, recela?*) Puede ser. Entonces después de la preparación, como veo, ellos llevaron a una ç*iftlik*. Y ahora *una monte* verde con las animales que parece muy natural. Y pero no puedo ver su madre no sé por qué. Estaban divertiendose solo, jugaban con perro. Y despues,

despues jugar con el perro ellos se dan cuenta de que la bolsa era *libre*, su causa quizá su perro comia, comiera todo, no sé...muy fatal.

Atakan: Level 3

Duration: 2:03 Tokens: 123

En primero los niños estan preparando *sus basquetas* creo que para ir al piknik. Su madre está cuidando a su bebe. Y en segundo tambien los, su madre termino sus preparaciones para ir al *piknika*. Y sus perros tambien estan muy curioso que lo que pasa en sus *basquetas*. Y en el tercera estan dispidiendo a su madre. Y el cuarto *estan el los hierbas* al lada de vacas. Creo que es un pueblo y hay sol también estan sentado. En el quinto y estan muy contento, jugando con sus perros y preparando sus comidas. En el seis, ahhhhh, *le dan noticia* que *basqueta* es vacio, no es los comidas y sus, todos lo que pusen, pusieron no estan alli. Y estan muy sorprendidos.

Hazal: Level 4

Duration: 1:27 Tokens: 100

Vale. Pintura primer hay un chico y chica ellos comer algo y ella corte el pan. Y un madre también y un perro. Pintura dos creo que la madre ayuda a sus chicos y un perro también. Pintura tres hay dos chicos creo que van a la escuela y “hasta luega” a su madre. Y pintura cuatro hay dos animales, un sol, y creo que dos chicos en la jardín. Y pintura cinco hay dos chicos jugan a la perro y *un basket*, Y pintura cinco creo que los chicos sorpresan que ellos ven el *la basket*.

Irmak: Level 4

Duration: 1:28 Tokens: 74

En es primara cuadro *(...)* hay dos chicos preparan las comidas y hay un madre *conte* preparando también. En la segunda un perro que, que huele las comidas, puede. Y tambien, la tercera, dos chicos van a, van a lugar. Y la cuatro *hacer piknika, hacen piknikas* también con perro. En la quinta los chicos diverten también. En el seis perro *comen todos los comidas* y los chico…*sorpresen, son sospechos*.