Mersin Üniversitesi Dil ve Edebiyat Dergisi, MEUDED, 2016; 13 (1), 1-37.

RELATIVE CLAUSES IN L2 TURKISH

Yabancı Dil Olarak Türkçe Konuşanların İlgi Tümcecikleri Kullanımı

Aslı Altan[1]

Okan International University

Abstract: Relative clauses in Turkish and their acquisition in first language (L1) Turkish has been the topic of many studies. The aim of this study is to analyze the relative clause (RC) constructions used by participants who speak Turkish as a foreign language. The results of this study reveal that L2 Turkish speakers use fewer RC structures compared to L1 speakers. An analysis of written and spoken data collected from L2 speakers show that they used more subject RCs, whereas native speakers use more object RCs. These findings support the Structural Distance Hypothesis, which predicts that subject RCs are easier to process than object RCs since fewer boundaries intervene between the gap and the head.

Key words: *Subject/Object Relative Clauses, L2 Turkish, Structural Distance Hypothesis*

[1] Okan International University, Dil Öğretim Merkezi, aslialtantr@gmail.com
Makale gönderim tarihi: 2 Aralık 2015; Kabul tarihi: 25 Şubat 2016

Öz: Türkçe'deki ilgi tümcecikleri yapıları ve bu yapıların anadil olarak Türkçe edinen çocuklar tarafından edinimleri birçok çalışmanın konusu olmuştur. Bu çalışmanın amacı ilgi tümceciği yapılarının Türkçe'yi ileri düzeyde yabancı dil olarak konuşan katılımcılar tarafından kullanımlarını araştırmaktır. Çalışmanın bulguları yabancı dil konuşucularının anadil olarak Türkçe konuşan yetişkinlere göre daha az sayıda ilgi tümcecikleri kullandığı doğrultusundadır. Yabancı dil olarak Türkçe konuşan katılımcılardan toplanmış olan sözlü ve yazılı veriler, katılımcıların özne ilgi tümceciklerini daha sık kullandıklarını destekler niteliktedir. Buna karşılık, Türkçeyi anadil olarak konuşan katılımcıların nesne ilgi tümceciklerini daha sık kullandıkları ortaya çıkmıştır. Bu bulgular özne ilgi tümcecikleri yapılarında boşluk ve baş sözcük arasında daha az sayıda sınırlama budağı olduğundan bilişsel olarak daha kolay olduğunu öne süren Yapısal Uzaklık Kuramı'nı destekler niteliktedir.

Anahtar sözcükler: *Özne/Nesne İlgi Tümcecikleri, Yabancı Dil Olarak Türkçe'nin Öğretimi, Yapısal Uzaklık Kuramı*

1. INTRODUCTION

The aim of this paper is to investigate the use of relative clauses in second language (L2) Turkish. The relative clauses are the first complex structures L2 speakers of Turkish learn. The structure of relative clauses in Turkish (Özsoy, 1994; Haig, 1997; Hankamer & Knect, 1976; Ulutaş, 2006) and their acquisition in Turkish (Slobin, 1986; Ekmekçi, 1990; Özcan, 1997; Özge et al., 2010) have been the topic of many previous studies. The aim of this study is to analyze the relative clause (RC) constructions used by participants who speak Turkish as a foreign language.

This paper is organized as follows: Section 2 & 3 provide the definition of relative clauses and a survey of previous studies. In section 4, the method and the analysis are outlined. Section 5 presents the results and some examples from the data. The paper concludes with discussion and conclusion.

1.1. RELATIVE CLAUSES

A relative clause (hereafter, RC) is a type of subordinate clause. All subordinate clauses are semantically bound to a main clause without being grammatically autonomous (Aydın, 2004). As stated by Kornfilt (2000, p. 123) since Turkish is a head final language, this property is

also observed in relative clauses where the predicate is clause final and the inflection follows the predicate. The modifier clause of RCs is nominalized. There is no overt complementizer nor an overt wh-element, only a gap in the position of the head (Aydın, 2007).

There are two RC forms in Turkish which in broad terms exhibit a subject/non-subject asymmetry (Underhill 1972; Kornfilt, 2000; Ulutaş, 2006; Hankamer & Knecht, 1976; Haig, 1997; Slobin, 1986). The choice of the RC suffix, either object (–DIK[2], -(y)AcAK) or subject particle (-(y)An, -Ir/-Ar, -mAz, -mIş) suffixes, is determined by whether the clause internal gap site is the syntactic subject of the relative, as in (1) or a non-subject, as in (2). The two relativizing strategies also differ from each other with respect to their internal morphology (Özsoy, 1994, p. 363). The –(y)An verbal form (subject relative, SR) is much simpler as it bears no agreement morphology. However, the -DIK construction (object relative, OR) is followed by possessive morphology in agreement with the subject, which (when overt) bears genitive case morphology (Çağrı, 2005).

(1) *t¡* *adam-ı* *sev-en* *kız¡*
t¡ man-ACC love- SR girl
'The girl that loves the man'

(2) *adam-ın* *t¡* *sev-diğ-i* *kız¡*
man-GEN love-SR-3SG.POSS girl
'The girl that the man loves'

As has been outlined in Haig (1997) and Kornfilt (2000) the choice of the relative clause suffix is not always as clear as above. Haig considers the subject RCs as the default participle in RCs. He states that treating the subject RCs as the default case explains why it is used in a variety of seemingly disconnected functions (Haig, 1997, p. 204). This issue indeed has been the topic of many researches (Özsoy, 1994; Özil, 1994; Cerslake, 1998). Types of RCs in Turkish are categorized according to

[2] The capital letters in the suffixes indicate that the vowels/consonants that are in capitals undergo changes according to vowel/consonant harmony rules in Turkish, -DIK stands for all the variations of the vowel and consonants of the suffix: -dık, -dik, -duk,-dük; -tık, tik-, -tuk, -tük; -tığ, -tiğ, -tuğ, -tüğ or –dığ, -diğ, -duğ, -düğ.

their role in the sentence (S or O- first letter) and their relation to the head noun (S or O-second letter), examples from Özcan (1997):

(3) a. Subject RC with the subject matrix role (SS):

Gazete	*oku-yan*	*adam*	*telefon-a*	*cevap*
newspaper	read-SR	man	phone-DAT	answer

ver-di.
give-PAST-3sg
'The man who was reading the newspaper answered the phone.'

b. Subject RC with the object matrix role (OS):

Kedi-yi	*kovala-yan*	*köpeğ-i*	*sev-di-m.*
cat-ACC	chase-SR	dog-ACC	love-PAST-1sg

'I stroked the dog which was chasing the cat.'

c. Object RC with the object matrix role (OO):

Köpeğ-in	*kovala-dığ-ı*	*kedi-yi*
dog-GEN	chase-OR-POSS3sg	cat-ACC

kucağ-ım-a	*al-dı-m.*
lap-POSS1sg-DAT	take-PAST-1sg

'I held the cat which the dog was chasing.'

d. Object RC with the subject matrix role (SO):

Ara-dığ-ı	*oyuncak*	*masa-nın*
search-OR-POSS3sg	toy	table-GEN

alt-ı-nda	*dur-uyor-du.*
under-POSS3sg-LOC	stand-PROG-PAST-3sg

'The toy he was looking for was under the table.'

In this study OS and SS structures are shortly referred to as subject relative clauses and OO and SO structures are referred as object relative clauses. The suffixes used to form a subject relative clause are termed as subject relative participle (SR) although the same suffix is used for non-specific adjuncts as well (*hırsız gir-en ev*). Those suffixes used to

form an object relative clause are referred to as object relative participle (OR).

1.2. PREVIOUS STUDIES IN L1 RELATIVE CLAUSE ACQUISITION

Research on the production of relative clauses (RCs) in English has shown that children start using intransitive RCs at an early age, but more complex object RCs appear later (Hamburger and Crain, 1982; Diessel and Tomasello, 2005). Children tend to use avoidance strategies, such as conjoined clauses and resumptive pronouns (Crain, McKee & Emiliani, 1990; McKee, McDaniel & Snedeker, 1998; McKee and McDaniel, 2001).

The first study on the acquisition of relative clauses in Turkish was by Slobin (1986) who analyzed the speech of 3-4-year-old children in a Turkish and American language corpus. An analysis of the RCs used by Turkish speakers revealed that 88% of these were subject and 12% was object RCs. He concluded that Turkish acquisition of relative clauses is much slower for Turkish children compared to English speaking children.

Ekmekçi (1990) investigated the acquisition of RCs by 3 to 6-year-old Turkish children and concluded that object RCs were imitated more correctly by younger children. However, the production task revealed an opposite pattern, where children were better at producing subject RCs. Ekmekçi argued that better performance in object RCs in the imitation task could be due to the similarity in articulation between the object relativizing particle and the past tense morpheme.

Özcan (1997) analysed the effect of RC type in combination with the grammatical role of the relativized noun in the main clause, that is subject RCs with subject (SS) and object role (OS) and object RCs with subject (SO) and object role (OO) in the main clause. Her comparison of the comprehension patterns of RCs in younger children (mean age: 3.5 and 5.5.) with older children (mean age: 7.6) showed a significant effect of age on comprehension. The children's performance increased with age, but there was no significant effect of RC type or RC role. The hierarchy the older children followed was SS>SO>OS>OO, whereas for younger children it was OO>SO>SS>OS. Özcan concluded that the

awareness of RC structure appears as early as 3 and the parallelism in the grammatical roles do not facilitate comprehension.

Özge, Marinis & Zeyrek (2010) demonstrated that Turkish children show higher accuracy in the comprehension of subject RCs than object RCs. Both children and adults used more subject than object RCs and children were less accurate in the production of object compared to subject RCs. Children also used more avoidance strategies in object RCs as compared to subject RCs and preferred structurally less complex constructions to replace the object RCs. They account for the asymmetry between subject and object RCs in Turkish as such (Özge, Marinis, and Zeyrek, 2010, p. 8): 1. Subject RCs involve a subject relativizing particle –(y)An, which is a suffix used only in these structures. In contrast, object RCs involve the object relativizing particle –DIK which also appears in other structures. Structures involving one-to-one mappings of form and function are acquired earlier than structures with one-to-many mapping (Grimshaw, 1981). 2. OVS order in subject RCs is similar to the canonical SOV order of Turkish, since in both structures the object precedes the verb. 3. Object RCs involve genitive case and possessive agreement morphology on the relativized verb, whereas there is no agreement relation in subject RCs. Lower accuracy in object RCs may be attributed to difficulties with the genitive-possessive agreement morphology (Kükürt, 2004).

Kahraman et at. (2010) conducted a sentence-fragment completion experiment with adult Turkish speakers to compare the processing of subject versus object relative clauses. Their experiment demonstrated that Turkish speakers predict the coming RC-head at embedded verb position. They suggest that (Kahraman et al., 2010, p. 168) in order to construct gap-filler dependency, Turkish native speakers do not wait until the RC-head, and as soon as the gap is determined, they immediately postulate a filler, and starts to construct a gap-filler dependency even before the filler appears. They also reported that subject RCs are easier to process than object RCs.

To sum up, previous studies in Turkish L1 acquisition (Slobin, 1986; Ekmekçi, 1990; Özcan, 1997; Özge, Marinis & Zeyrek, 2010) demonstrated that subject relative clauses are acquired and processed earlier than object relative clauses. Adult data also seems support that

subject relative clauses are easier to process than object RCs (Kahraman et al., 2010)

1.3. PREVIOUS STUDIES IN L2 RELATIVE CLAUSES

There are many studies focusing on the comprehension and production of relative clauses in second language acquisition (Eckman, Bell & Nelson, 1988; Izumi, 2003; O'Grady, Lee & Choo, 2003). Most of these studies claim that subject relative clauses are easier to produce and comprehend compared to object relative clauses. Previous studies on L2 also claim that these findings support the typology of RCs by Keenan & Comrie (1977), in which they claim that if a language permits relativization of NPs, then those NPs that are higher in the hierarchy also undergo relativization: subject > direct object > indirect object > oblique > genitive. Keenan & Comrie's hierarchy suggests that the easiest position to relativize is the subject.

In line with this hierarchy some researchers (Tarollo & Myhill, 1983; Hawkins, 1989) also claimed that the relative difficulty of some RCs may be due to the status of the NP extraction site. The linear distance between the head noun and the gap might be the reason for the difficulty of some RCs over others. O'Grady et al. (2003) named this the linear distance hypothesis (LDH) and defined it as such: the difficulty of an RC is determined by the number of elements (words or words with discourse referents) that intervene between the gap and the head. On the other hand, there are other accounts which favor structural distance (SDH) (Collins, 1994; O'Grady, 1997; Hawkins, 1999) over linear distance, which states that the processing difficulty of RCs is determined by the structural distance (number of phrasal boundaries between the gap and the head). Let's compare subject and object RCs in Turkish in terms of LDH and SDH:

a. Linear Distance Hypothesis claims that object RCs in Turkish are easier:
Subject RC: e_i *kadını seven adam*$_i$ (distance between head noun and the gap: two words)
Object RC: *kadının* e_i *sevdiği adam*$_i$ (distance between head noun and the gap: one word)

b. Structural Distance Hypothesis claims that subject RCs in Turkish are easier (Aydın, 2007):

Subject RC: [e_i *kadını seven*] *adam*$_i$ (distance between head noun and the gap: two phrasal boundaries)

Object RC: [*kadının* [e_i *sevdiği*]] *adam*$_i$ (distance between head noun and the gap: three phrasal boundaries)

Studies examining non-native processsing of relative clauses in Turkish are limited. Aydın (2007) conducted an experimental study to test whether the processing of subject relative clauses is easier than object RCs. They tested both L2 speakers and a few agrammatics. It was revealed that the comprehension of subject relative clauses in L2 Turkish precedes the comprehension of object RCs for intermediate level L2 learners. Aydın (2007) related this finding to structural distance hypothesis (SDH), which states that, the number of syntactic nodes between the filler and the gap determines the processing difficulty of the RCs (O'Grady, 1997). Aydın (2007) claims that this finding, which is indeed similar to the results of Turkish L1 acquisition studies (Slobin, 1986; Ekmekçi, 1990) can be used as evidence against a fundamental L1-L2 difference hypothesis.

Özçelik (2006) worked with intermediate L2 learners of Turkish and reported contradictory results, stating that subject RCs were more difficult to comprehend than object RCs in L2 Turkish, contrary to the results in the literature for the same construction in other languages. He suggested that the Linear Distance Hypothesis (LDH) is the principal determinant of difficulty in relative clause constructions for second language learners.

All previous studies about RCs conducted with L2 Turkish learners included intermediate learners. Given the syntactic and the morphological difficulty of these constructions, this study employed advanced L2 speakers of Turkish. One of the previous studies in L2 Turkish suggest that the comprehension of subject RCs precede object RCs (Aydın, 2007); the other one suggests just the opposite (Özçelik, 2006). The current study will try to solve this puzzle and see whether the L2 production data supports the account that favors subjects RCs or object RCs. Whether the data supports SDH or LDH will also be discussed.

1.4. RESEARCH QUESTIONS

1. Are relative clauses a structure that's used by L2 speakers of Turkish?
2. If so, is there a difference between subject and object relative clauses in terms of frequency?
3. If the participants make errors, which type of RCs are more prone to errors?
4. Does L2 Turkish data support Structural Distance Hypothesis? In other words, does linear distance between the head noun and the gap have an effect in the difficulty of RCs in L2 Turkish?
5. How does L2 data compare to native Turkish speakers data?

2. METHOD

2.1. PARTICIPANTS

To investigate the use of relative clauses by adults learning Turkish as a foreign language short essays and oral production data were analysed. There were 20 participants (12 female), all advanced learners of Turkish (C1/C2 according to the Common European Framework of Reference for Languages). All of the participants have been studying Turkish for at least 4 years, with a few days/weeks spent in Turkey each year. The participants had different native languages: Spanish (4 participants), Italian (3 participants), Greek (3 participants), English (2 participants), French (3 participants), German (2 participants), Dutch (2 participants), Catalan (1 participant). It should be noted here that the native language of all L2 participants were non head-final. All participants were university graduates, between the ages 24-45. They were all residing outside Turkey.

There was also a control group which consisted of 20 native speakers (10 female) of Turkish who participated in both tasks. The procedure was exactly the same, one written and one spoken task for each participant. All Turkish participants were also university graduates, between ages 25-56.

2.2. DATA COLLECTION AND ANALYSIS

All participants were first asked to write a short essay about their summer vacation. The reason this method was chosen is that by

analyzing the written production, usage can be analyzed without the speakers' possible bias about the aim of the study.

The participants were given a few questions to encourage them to write more, as to how they spent their vacation, where they spent it, what they did, whether they plan to go there again and why ('*Tatilinizi nerede geçirdiniz, nasıl geçti, neler yaptınız, oraya tekrar gitmeyi düşünür müsünüz? Neden?'*). This topic was chosen since vacations are usually fun to talk about. Both the questions and instructions were in Turkish and were sent to each participant by email. Email was chosen over a writing exercise in class, to ensure participants are not under time pressure. The participants also replied by email, sending their short essay in the word document attached.

Spoken data was also collected. The reason for employing spontaneous speech data is to see the usage of complex structures and RCs, to see errors and the reasons for those errors. Spoken data consisted of 8 to 10 minutes of speech of 12 participants, in which the participants were asked to discuss their work and the city they live in. Each participant was interviewed separately, in a silent room sitting around a table with the researcher. Again, a few questions were asked to encourage the participants to speak more. The researcher recorded the speech of the participants, then transcribed the spoken data. Below, a sample dialogue between the participant and the researcher can be observed. All participants were asked 8-12 questions from a set of 12 questions, previously written down by the researcher. The questions were asked when the researcher felt that the participant needed encouragement to speak.

Here is a sample dialogue between a participant and the researcher:

(4) A: *Biraz işinden bahseder misin?*
'Can you please talk about your work a little?'
B: *İşim, işim… ben artık 12 yıldan beri AB'de çalışıyorum.*
A: *Hangi bölümde çalışıyorsun? Neler yapıyorsun?*
'Which department do you work at? What do you do?'
B: *Ben tercümanım. İlk başta yazılı çeviri yaptım, 3 yıl sonra tekrar*

konkura girdim ve tercüman oldum. Haftada dört gün çalışıyorum. Bazı aylar Strasbourg'a gidiyorum. Yılda ya iki ya da üç defa Avrupa'da başka şehirlerdeki toplantılarda çalışıyorum.
'I'm an interpreter. At first, I did written translations, 3 years later I took the exam again and became an interpreter. I work four days a week. Some months I travel to Strasbourg. Two or three times a year I work at other meetings in Europe.'

The analysis of all data was conducted by counting and classifying each sentence according to the choice of the relative clause suffix and the role of the relative clause in the main sentence. Then grammaticality of the sentences was judged. The decision on grammaticality were based upon meaning and the correct use of the relative clause suffix and the correct case suffix. Any phonological errors were discarded. All errors were analyzed, and the reasons for errors were investigated in detail. It should be noted here that the analysis was also qualitative, thus some examples from data will be provided and discussed.

2.2.1. DATA

L2 written data (essays of participants) consisted of average 109 words, 13 sentences. The average words per sentence was 8.4 words. L1 written data consisted of average 80 words, 12 sentences. The average words per sentence was 6.6 words. This reveals that L2 speakers used longer sentences compared to native speakers.

The spoken data consisted of an average of 172 words, 23 sentences. The data was longer but included some incomplete sentences or phrases. The sentences were also shorter. The average words per sentence was 5.8 words. The average word count for L1 spoken data was 280. The average words per sentence was 8.4. The L1 participants formed much longer sentences compared to L2 participants.

3.FINDINGS

3.1. L2 WRITTEN AND SPOKEN DATA RESULTS

In this section, the total number of relative clauses and the number of different types of relative clauses used by participants will be provided. The analysis revealed that there were no individual differences between L2 subjects, that is the average number of errors per participant were within the same range. Since there wasn't one L2 participant making more errors than others or any participants who hardly used RCs, or hardly made errors the data could be pooled. Native language of the L2 participants also did not have an effect as grouping according to native languages did not predict the error number or error type across participants.

After providing the total number of errors, a few ungrammatical and grammatical uses of each type from actual data will be given and discussed. It should be reminded that the vowel harmony or other phonological errors or spelling errors were not considered as ungrammaticality. All other errors that would lead to the ungrammaticality of the construction such as the lack of genitive on the subject of the object RC, the lack of possessive suffix following the –DIK relativizer suffix or choice of the wrong relativizing suffix were noted. The original spelling was kept and such phonological errors were not corrected when presenting the data.

The order of examples will be as follows: SS, OS, OO, SO, where the first letter stands for the role of the RC in the sentence (subject or object) and the second letter to the relation of the RC to the head noun.

3.1.1. L2 WRITTEN DATA

The written data reveals that the use of RCs is not frequent in L2 Turkish with a high rate of error. The distribution of RC clauses reveal that L2 speakers used more subject RC structures (total number of correct subject RCs is 55) in the written data. They also made fewer errors in subject RCs (total errors in subject RCs is 14, compared to 24 errors in object RCs).

In order to see whether there is any correlation between the errors and the native language of the speakers, the data was first categorized and analyzed according to the native language of the participants. However,

this analysis did not yield any common patterns. The native language of the participants did not seem to have a correlation with the errors they made or the types of relative clauses they used.

Table 1. The distribution of RC the frequency of structures used by L2 speakers in written data

Type of RC	*Suffix*	*Errors*	*Correct use*
SS	-(y)An, -mAz	10	16
OS	-(y)AcAk, -mIş, -(y)An	4	39
OO	-(y)AcAk, -DIK	17	20
SO	-DIK	6	6
Total	6	37	81

As can be observed from Table (1) above, most errors with RCs are with those structures where the relative clause is formed with –DIK/-(y)AcAk suffix and is the object of the sentence (OO). There was a total of 18 errors of this type. These errors included attaching case to -DIK (12), using –(y)An instead of –DIK (4), passives (2). When the passive is used, since the argument structure changes the choice of the suffix should also differ. However, some participants failed to make this change.

Examples from L2 written data

The examples from the data will be given in order of SS (subject RC with the subject matrix role), OS (object RC with the subject matrix role), OO (object RC with the object matrix role) followed by SO (subject RC with the object matrix role) structures, where the first letter refers to the role of the RC in the matrix clause and the second letter its relation to the head noun. In other words, the first letter stands for the role of the noun the RC modifies in the main sentence, whereas the second letter stands for the grammatical role that it has been extracted. First, the a few examples from ungrammatical constructions will be presented followed by the grammatical ones.

There was a total of 10 errors with SS, where the suffix –(y)An is employed and the relative clause is the subject of the main sentence. These errors included using -mIş instead of –(y)An (4), using -(y)AcAK (2) and using -DIK (4) instead.

(5) *SS: *ilk* *kitab-ım-ı* *yayımla-dığ-ı-nı*
first book-POSS1sg-ACC publish-OR-POSS3sg-ACC

kitapçı *bir* *kitap* *yayımla-mak*
bookstore a book publish-INF

ist-iyor.
want-PROG3sg

'The bookstore that published my first book wants to publish a book'

In example (5) above, the structure is ungrammatical since the wrong relativizing suffix is chosen. Here the word 'bookstore' (*kitapçı*) is the subject of the verb 'to publish' (*yayımlamak*), however the subject participle–(y)An is not used. Instead, the object RC suffix –DIK, third person possessive case and accusative case is used, which caused the ungrammaticality. The verb form *yayımladığını* is in the form of a complement clause rather than a relative clause.

(6) *SS: *Istanbul'lu-laş-tır-an* *ben*
İstanbul-from-become-CAUS- SR I
'I who became like someone from İstanbul'.

The reason for the ungrammaticality of this clause is the wrong use of the causative suffix –DIr. The choice of the relative clause suffix –(y)An as the subject participle is correct. The way this clause is formed with the causative sounds like the participant is making someone act as if they are from İstanbul, however, from the context it is clear that the participant is actually talking about herself who behaves like a person from İstanbul.

(7)*SS: *Her* *zaman* *geç* *kal-dığ-ı* *ben*
All time late stay-OR-POSS3sg I

şimdi *yaz-ıyor-um*
now write-PROG-1sg

'I, who is always late, is writing now'

The reason of ungrammaticality here in example (7) is the use of the object RC suffix –DIK instead of the subject RC suffix –(y)An. Here, the first person pronoun I (*ben*) is the subject of the verb in the RC, thus the subject relative clause marker should have been used.

(8) *SS:*

Hollanda'da	*doğ-muş*	*ve*	*ora-da*	*eğitim*
Holland-LOC	born-MIŞ	and	there-LOC	education

gör-en	*genç*	*ve*	*çok*	*yetenekli*
see- SR	young	and	very	Talented

kız-lar.
girl-PL

'The young and very talented girls who were born in Holland.'

This example above (8) is grammatical. The relativizing suffix –mIş employed in the first relative clause denotes that the participant has not witnessed the event and that has been completed in the past. The second verb is relativized by the subject particle –(y)An since the tense is different as the education might be ongoing.

(9) **OS:*

Program	*kendi*	*epeyce*	*sıkıcı-ydı*	*ama*
program	self	rather	boring-PAST	but

Helsinki'de	*iki*	*yıl*	*boyunca*	*ben-im-le*
Helsinki-LOC	two	year	through	I-GEN-COM

otur-duğ-u	*arkadaş-lar-ım-la*	*yeni-den*
sit-OR-3sg	friend-PL-POSS1SG-COM	new-ABL

ol-ma-m-ı	*çok*	*sevin-di-m.*
be-MA-POSS1sg-ACC	*very*	happy-PAST-1sg

'The program itself was rather boring but I was happy to be with my friends who lived with me in Helsinki again'

The ungrammaticality of the sentence in (9) is due to the wrong choice of the relative clause suffix. Although the NP 'friends' (*arkadaşlarım*) is the subject of the verb 'live' (*oturmak*) the object RC suffix –DIK is used rather than the subject RC suffix –(y)An.

(10) *OS:*

Parti-miz	*özel*	*hava*
party-POSS1pl	special	ambiance
yarat-an	*meyhane-de*	*ol-du.*
create-SR	tavern-LOC	be-PAST3sg

'Our party was in a tavern that created special ambiance'

This example above demonstrates a creative use of the relative clause suffix. The participant used the relative clause to modify the noun *meyhane*. In the following section are some examples from object relative clauses.

(11) *OO:

Tatil-de	*yap-abil-eceğ-in-i*
Vacation- LOC	make-ABIL-OR-POSS-ACC
şey-i	*bul-du-n?*
thing-ACC	find-PAST-2sg

'Did you find something you can do in vacation?'

The example (11) above, taken from written data of an L2 participant, is again ungrammatical. The reason for ungrammaticality here is that there is an extra accusative suffix on the relativizing verb. The structure of the relativizing verb thus looks like a complement phrase, where the accusative also needs to be attached. However, this accusative makes the RC structure ungrammatical. Also, the question suffix –mI is missing.

(12) OO:

O	*gid-el-ecek*	*yer-i*	*bil-iyor*	*mu?*
He	go-PASS-OR	place-ACC	know-PROG	QUES

'Does he know the place you'll go?'

In this example, the participant shows that he is aware of the change of argument structure and thus the RC suffix change in passives. There is

only a small mistake, where he used '*-el'* applying the general vowel harmony rule, instead of the passivization suffix '*-il'*. However, it should be noted that both the choice of RC suffix, the lack of case due to the use of passive voice are all correct. The error is not syntactic but purely phonological.

(13) *OO: *Hem* *ver-diğ-in* *oku-ma*
Both give-OR-POSS read-GER

ödev-ler-i, *hem* *de* *kendi-m-in*
homework-PL-ACC both Also self-GEN1sg-GEN

oku-duğ-um *makale-ler-le* *ilgi-li*
read-OR-POSS1sg article-PL-COM relation-COM

bir-kaç *soru-m* *var*
a-few question-POSS1sg there is.

'I have a few questions both about the reading assignments you gave and the articles I read myself'

The example (13) above is ungrammatical due to the fact that there is a genitive suffix attached to the word self (*kendi*). Although pronouns should be inflected by the genitive suffix when they are the subject to the relative clause, the word self (*kendi*) should never be inflected by the genitive.

(14)**OS&OS&OO:* *Böl-ün-müş* *küçük* *bir* *ada-da,*
Divide-PASS-MIŞ small an island-LOC

böl-ün-müş *bir* *şehir-de*
divide-PASS-MIŞ A city-LOC

nasıl *insan* *otur-abil-diğ-i-ni*
How person sit-ABIL-DIK-POSS3sg-ACC

gör-mek *<u>düşün-düğ-üm-den</u>*
see-INF think-DIK-POSS1sg-ABL

daha *ilginçti.*
more interesting
'It was more interesting than I thought to see how people can live in a city that has been divided, in an island that has been divided.'

The ungrammaticality of the sentence (14) above is not due to any mistakes in the choice of the relativizing suffix. Indeed, both relative clauses are correct. The verb divide (*bölmek*) is used in passive voice, thus the choice of –mIş as the subject RC suffix is correct. However, the sentence is very complex, including more than one embedding. There is also the headless OO clause, *düşündüğümden*. The reason for the marginal ungrammaticality of this sentence is due to the lack of genitive suffix on the NP person (*insan*) and the word order, if *insan* and *nasıl* were inverted the sentence is saved.

This structure is actually a very good example to demonstrate the level of Turkish the participants are able to use. It should be noted that participants who are really advanced and are capable of using such complex phrases can still make errors.

The total number of SO structures was comparatively low. There were a total number of 12 SO structures and the error rate in these structures was also high. There were 6 errors of this kind. 2 of these included using the past tense suffix –DI instead of the relativizing particle -DIK; and 4 included passives. Again, the problem with passives was that the participant changed the argument structure but failed to change the suffix. Whereas examples (15) and (16) are ungrammatical, Examples (16) and (17) below demonstrate the correct use of object relative clauses as the subject of the main verb.

(15) *SO: *Sen* *<u>yap-acağ-ın</u>* *tatil* *çok*
you make-OR-POSS vacation very
ilginç *gibi* *ban-a* *gel-iyor.*
interesting like I-DAT come-PROG3sg
'I think the vacation you'll have will be very interesting'

The reason for the ungrammaticality of (15) is the lack of genitive suffix on the subject of the object RC. The choice of the relative clause suffix and the possessive case on the RC is all correct.

(16) SO: *Anlat-tığ-ın* *tatil* *olay-ı*
Describe-OR-POSS2sg holiday incident-ACC

harika *bir* *haber*
greta a news
'The vacation incident you talked about is great news'

(17) SO: *Onlar* *bil-diğ-im* *en* *karmakarışık*
They know-OR-1sg most mixed

ve *düzen-siz* *halk*
and organized-not people
'They are the most mixed and unorganized people that I know'

(18) *SO: *konuş-ma-lar* *için* *yap-tır-dı-nız*
talk-INF-PL for do-CAUS-PAST-POSS2pl

ayrıntı-lı *düzey-de* *çok* *uygun* *ol-ur*
detailed level-DAT very suitable be-AOR
'The detailed level you did would be very suitable for the talks'

In the example (18) above the reason for ungrammaticality is due to the use of the past tense suffix -DI instead of the object particle –DIK. Although they are similar in form they have completely different functions and the use of –DI instead of –DIK causes ungrammaticality as the clause sounds like a main verb rather than the relative clause.

To sum up, subject RCs were more commonly used and yielded fewer errors. On the other hand, there were more errors with object RCs. Also, object RCs were less frequent in use. The reason for more errors in object RCs may be the morphological complexity of these structures. It should again be reminded that not all ungrammaticalities are due an

error in the relative clause. A great number of ungrammaticalities rise because of an incorrect word order or wrong case suffixes.

3.1.2. L2 SPOKEN DATA

The use of RCs in spoken data by L2 participants was very low, again with a high rate of errors. The distribution of RCs was actually similar to written data where again subject relative clauses were more common. This finding may be due to the processing difficulty of object RCs which makes their online production rare. Highest number of errors were with SO, followed by OS structures (error rates will be discussed in detail later).

Table 2. The distribution of the frequency of RC structures used by L2 speakers in spoken data

Type of RC	*Suffix*	*Errors*	*Correct use*
SS	-(y)An, mAz	3	14
OS	-(y)AcAk, -mIş, -(y)An	4	9
OO	-(y)AcAk, -DIK	4	8
SO	- DIK	7	4
Total	6	18	35

It should also be noted that there were a few instances of 'ki constructions' (example 28 below), which is a type of relative clause but much more similar to the relative clause constructions in Indo-European languages. It seems that speakers were more prone to use native-like constructions in speech.

Examples from L2 spoken data

(19) SS: *Gel-en* *misafir-ler* *çok* *nazik-ler-di.*
come-SR guest-PL very polite-PAST3pl
'The guests that came were very polite'

(20) *SS: *O* *yer* *ki* *öyle* *kalabalıktı!*
that place that so crowded
'that place was so crowded'

(21) *OS: *Uzungöl* *yeşil* *tipik* *ve* *pontikçe*
Uzungöl green typical and Pontic

konuş-an *insan-lar* *ol-an* *bir* *bölge*
speak-SR people-PL be-SR a region
'Uzungöl is a typical green region with people who speak Pontic'

The example (21) above illustrates a double use of the same subject particle to form the RC in one sentence. There is an ungrammaticality due to the word order and the misplacement of the adverb 'typical' in the sentence, however there are no problems with the relative clauses.

In the following section, a few examples from object relative clauses will be provided.

(22) *OO: *Siz-in* *tayin* *ed-il-eceğ-iniz*
You(pl)-GEN post be-PASS-OR-POSS2pl

yer-i *belli* *ol-ma-sı-ndan*
place-ACC certain be-MA-POSS3sg-ABL

çok *mutlu-yum!*
very happy-1sg
'I am very happy that the place you will be posted is certain'

The reason for the ungrammaticality of (22) is not due to an error in the relativizing suffix. Rather, the ungrammaticality is a result of the lack of genitive suffix on the subject of the complement clause. The passive suffix and the relative clause suffix are all correct. It should be noted here that this kind of relative clauses as also classified as non-subject relative clauses, a term introduced by Hankamer and Knecht (1976) and Haig (1997).

(23) OO: *Türkiye'ye* *gelip* *bu* *yıl*
Turkey-DAT come this year

katıl-dığ-ım *yaz*
participate-OR-POSS1sg summer

program-ı-na *tekrar*
program-POSS3sg-DAT again

katıl-mak *iste-r- di-m.*
participate-INF want-AOR-PAST-1sg
'I want to come Turkey and participate again in the summer program I participated this year'

(24) OO: *Kirala-dığ-ım* *ev-de* *her* *şey*
rent-OR-POSS1sg house-LOC all things

düzenle-yebil-ir-im.
organize-ABIL-AOR-1sg
'I can arrange everything in the house that I rented'

Here in example (24), the reason for ungrammaticality is due to the lack of the accusative case on the object of the main verb. The object relative clause is correct, thus was not categorized as an ungrammatical use of RC. Here, again the RC is the locative adjunct of the head noun.

(25) OO: *Hiç* *sev-me-diğ-im* *Giresun'da* *ve*
Not like-NEG-OR-POSS1sg Giresun-LOC and

karanlık *Trabzon'da* *dolaş-tı-k.*
dark Trabzon-LOC visit-PAST-1pl
'We visited dark Trabzon and Giresun which I didn't like at all'

In the example above in (25) the participant used the object particle in combination with the negative suffix. The possessive suffix following the relative clause suffix is also correct.

(26) SO: *Seç-tiğ-im* *plaj* *çok* *geniş* *ve*
choose-OR-POSS1sg beach very large and

kumludur	*ve*	*her*	*İtalyan*	*plaj-da*	*gibi*
sandy	and	each	Italian	beach-LOC	as

her	*şey*	*var,*	*küçük*	*bir*	*balık*
all	thing	there is,	small	a	fish

lokanta-sı	*bile.*
restaurant-POSS3sg	even

'The beach I chose is very large and sandy, and as other Italian beached there is everything, even a small fish restaurant'

The reason of the ungrammaticality of sentence (26) is the locative case on the object of the postposition '*gibi*', the beach (*plaj*). It needs to be nominative since postposition 'gibi' requires its object in nominative, again no errors in RC so was not considered ungrammatical.

(27) *SO:

Eylül	*ay-ı-nda*	*Türkçe*
September	month-POSS3sg-LOC	Turkish

ol-an	*yap-tığ-ım*	*toplantı*	*ben-i*
be-SR	do-OR	meeting	I-ACC

o	*kadar*	*umut-suz*	*bırak-tı*	*ki!*
that	much	hope-less	leave-PAST	That

'The meeting in September that I did left me so hopeless'

The sentence (27) above is ungrammatical. The fact that the subject particle –(y)An and the object particle –DIK are used consecutively without the mention of the subject of the object RC results in ungrammaticality. If the subject of the object RC was inserted in between the two verbs the structure would be grammatical.

3.2. ERROR RATE-WRITTEN AND ORAL L2 DATA

The analysis of errors the L2 participants made were very crucial in the analysis, as errors are a great mirror for acquisition data. L2 speakers made almost twice as many errors with objects RCs in written data compared to subject RCs: a total of 14 errors with subject RCs but 23 errors with object RCs. In the spoken data, this rate was 8 to 10 errors, respectively. So, although there were much fewer examples of RCs in spoken data, object RCs yielded slightly more errors. Object relative

clauses in the subject role of the matrix clause (SO) were the least common and the most difficult for L2 participants.

As can be observed from the Figure (1) below, the highest number of errors L2 participants made were in object relative clauses. Most of these errors were case errors such as not using the genitive suffix or not using the accusative case. Overall, the morphological difficulty of object RCs seem to be the underlying reason for more errors.

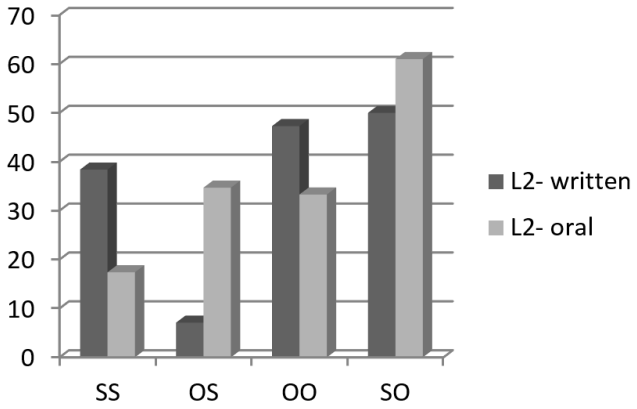

Figure 1. The percentages of error rates in L2 written and spoken data

Another interesting finding that came from analyzing the ungrammatical sentences was that the subjects tend to treat –DIK suffix as the relative clause suffix, they used –DIK instead of –(y)An a few times. This seemingly contradictory finding may also be due to the fact that –DIK suffix is also used in complement clauses, so the participants might have treated it as the embedding suffix. To sum up, it seems that L2 speakers struggle more with object RCs but when they need to choose an RC suffix they still choose –DIK.

3.3. L1 WRITTEN AND SPOKEN DATA RESULTS

3.3.1. L1 WRITTEN DATA

The data collected from L1 Turkish speakers revealed that object RCs were used more often than subject RCs in written data. The reason for conducting data from L1 speakers was to see how often L1 speakers will use RC structures in the same context to form a baseline for

comparison. Also, the type of RC structures and the frequency of each structure are interesting for analysis and comparison. Since native spakers do not make any grammatical errors, error rates are not given in the analysis.

Table 3. The distribution of the frequency of RC structures used by L1 speakers in written data

Type of RC	*Suffix*	*Number*
SS	-(y)An	22
OS	-(y)An	38
OO	-(y)AcAk, -DIK	46
SO	- DIK	29
Total	5	135

Examples from L1 written data

(28) SS: *O-nun* *güzel* *enerji-si,* *gülümse-yen*
She-GEN pretty energy-POSS3sg smile-SR

yüz-ü *hayat-ım-a* *neşe* *kat-ar.*
face-POSS3sg life-POSS1sg-DAT joy add-AOR
'Her good energy and smiling face add joy to my life'

(29) OS & OO & OS:

Bu *rutin* *gün-ler* *dış-ın-da* *arada* *bir*
This routine day-PL out-POSS3SG-LOC once one

çık-ıl-an *ve* *çevre* *koy-lar-da-ki* *güzel-lik-ler-i*
go-PASS-SR and around bay-PL-LOC-Kİ beautiful-GER-PL-ACC

gör-me *fırsat-ı* *bul-duğ-umuz* *gezi-ler-le,*
see-GER opportunity-ACC find-OR-POSS1pl trip-PL-COM

günübirlik *yaklaşık* *1 ay* *sür-en* *tatil-imiz-i*
daily about 1 month last-SR vacation-POSS1pl-ACC

dolu dolu, *eğlen-erek,* *gül-erek,* *gez-erek* *ve*
full full have fun-GER laugh-GER visit-GER and

hayat	*dol-arak*	*geç-ir-di-k.*
life	fill-GER	pass-AOR-PAST-1pl

'Except these routine days, we spent our almost 1-month long vacation with fun, with laughter and vitality with some daily trips we took now and then which gave us the chance to see the beauties of other neighbouring bays'

(30) OO:

Iki	*buçuk*	*hafta*	*kal-dığ-ımız*
Two	half	week	stay-OR-POSS1pl

bu	*devasa*	*ülke-den*	*hoş*
this	huge	country-ABL	nice

anı-lar-la	*dön-dü-k.*
memory-PL-COM	return-PAST-1pl

'We returned with pleasant memories from the huge country where we stayed for two and a half weeks,'

(31) SO:

Etraf-ta	*yürü-dü-k,*	*yöresel*	
Around-LOC	walk-PAST-1PL	regional	
eşya-lar	*ve*	*yiyecek-ler*	*sat-an*
thing-PL	and	food-PL	sell-SR

dükkan-lar-ı	*gez-di-k.*
store-PL-ACC	visit-PAST-1pl

'We walked around, visited shops where they sell local things and food'

A high number of locative –ki structures in L1 data was encountered:

(32)

Otel-e	*yürü-yüş*	*mesafe-si-nde-ki*	
Hotel-DAT	walk-GER	distance-poss3SG-loc-Kİ	
bir	*restoran-ı*	*öner-di*	*ve*
a	restaurant	recomment-PAST	and

hemen	*ara-yıp*	*rezervasyon*	*yap-tı.*
immediately	call-GER	reservation	make-PAST

'He/she recommended a restaurant that is walking distance to the hotel and called immediately and made a reservation.'

To sum up, all the examples (28)-(32) above demonstrate that L1 speakers use both object and subject RCs, sometimes together in one sentence in their written work. The data also includes a high number of copulative –ki clauses (*masadaki kalem*) and headless relative clauses.

3.3.2. L1 SPOKEN DATA

The spoken data collected from L1 speakers of Turkish is similar to the findings of written data in that object relative clauses were used more than subject RCs. Turkish native speakers performed at ceiling.

Table 4. The distribution of the frequency of RC structures used by L1 speakers in spoken data

Type of RC	*Suffix*	*Number*
SS	-(y)An	12
OS	-(y)An	24
OO	-(y)AcAk, -DIK	41
SO	- DIK	38
Total	5	115

Examples from L1 spoken data

(33) SS:

Daha	*önce*	*bu*	*kaptan-la*
More	before	this	captain-COM

seyahat	*ed-en-ler*	*kuzen-ler-im-di.*
travel	–SR-PL	cousin-PL-POSS1sg-PAST

'The ones who travelled with this captain before were my cousins.'

(34) OS:

Rezervasyon-un-da	*sorun*
Reservation-POSS3sg-LOC	problem

ol-an-lar-a	*haber*	*ver-iyor-lar-mış.*
be-SR-PL-DAT	news	give-PROG-PL-MIS

'They notify those whose reservation is problematic'

(35) OO:

Yemek	*ye-diğ-imiz*	*yer-de*
Food	eat-OR-POSS1pl	place-LOC

otel-i	*sor-duğ-umuz-da*	*hemen*
hotel-ACC	ask-COMP-POSS1pl-LOC	immediately

biz-e	*yardım-cı*	*ol-du-lar.*
we-DAT	help-OCC	be-PAST-3pl

'When we asked about the hotel in the place we were eating they immediately helped us'.

(36) SO:

Söyle-diğ-in	*bu*	*mu-ydu?*
Say-OR-POSS2sg	this	QUE-PAST

'Was this what you said?'

These examples demonstrate that Turkish native speakers use many headless RCs and –ki clauses. Here, only a few examples are given but the data was full of headless relative clauses. The use of –ki clauses both as copulative clauses (*masadaki kalem*) and as conjunctions (*dedi ki*) demonstrate that L1 speakers preferred to use these morphologically less complex structures over relative clauses.

3.4. COMPARISON OF L1 AND L2 DATA

In Figure (2) below, a comparison of L1 and L2 data in terms of the preference of use of different RC structures can be observed. In the comparison, only the grammatical sentences in L2 data were considered.

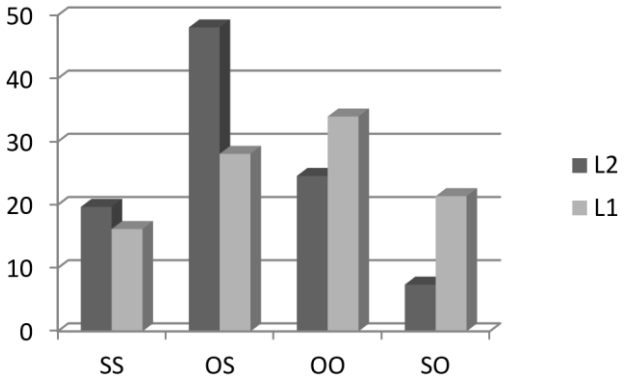

Figure 2. Frequency of different RC structures in L1 and L2 written data (correct usage percentages)

As can be observed from the Figure 2 above, L2 speakers used subject relative clauses as the most common structures whereas for L1 participants object relative clauses were the most common. For both groups OS was more commonly used than SS in subject relative clauses. As for the object relative clauses, OO was more common than SO, for both groups. Here is the hierarchy for the correctly used RCs in written data of L2 speakers: OS > OO > SS > SO.

It should be noted that context may also play a role here in the choice of RCs, since all subjects were asked to talk about their summer vacations in their written data. So, although OO structures were used as the second most common structure, it might be the context not the ease of grammar that led to this result. Since the participants were talking about the places there have been, the hotels they have stayed, the context might have required such a structure. Here, we should remind the reader that OO clauses had a high error rate. The reason why L1 speakers of Turkish use more –DIK relative clauses than –(y)An relative clauses might also be due to contextual and pragmatic factors. Subject and object relative clauses carry different the range of functions. –(y)An is used only for subject modification while –DIK is used for the rest of functions such as direct object, indirect object, oblique object, all types of adjuncts, etc. Thus, the frequency of –DIK is related to the range of functions it carries.

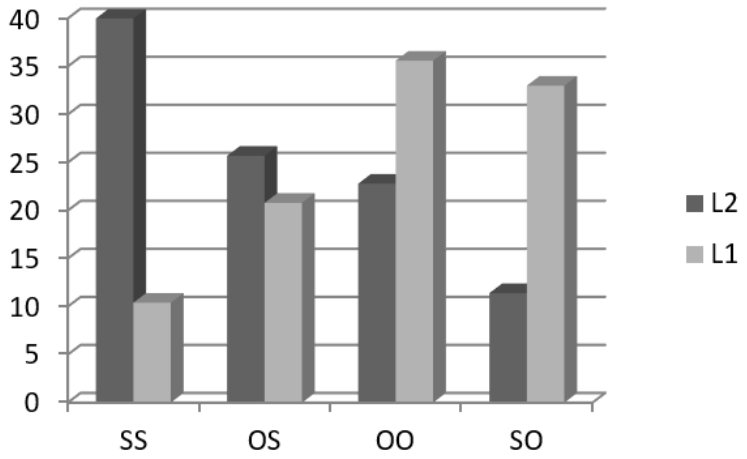

Figure 3. Frequency of different RC structures in L1 and L2 (correct usage) spoken data percentages

The distribution of RCs in L2 and L1 speech data show some asymmetries. As can be clearly observed from Figure 3 above, the most common structure for L2 users was SS, whereas for L1 users the most common structure was OO. In general, L2 speakers used more subject relative clauses whereas L1 speakers used more object relative clauses. The reason for these differences may be linked to the processing difficulty of object relative clauses. SR structures are much simpler as it bears no agreement morphology (Özsoy, 1994, p. 363). The object relative clauses in Turkish are both morphologically and syntactically more complex, the extraction site is the object (Çağrı, 2005). Since these OO & SO structures involve possessive conjugation in addition to the object relative clause suffix, again the morphology involved is much more complex. This might be the reason L2 speakers avoided using such structures, especially in oral production. Here is the hierarchy for the correctly used RCs in spoken data of L2 speakers: SS -> OS > OO > SO. SO structures were the least common both in written and spoken data of L2 participants.

As the examples from the data illustrate, there were very few headless relative clauses in L2 data. As can be seen from the examples, most of the participants chose to use words like ‘place’ (*yer*) and ‘thing’ (*şey),* which could have been easily deleted. When the data was further analysed to see whether L2 speakers chose to use subject relative

clauses only with intransitive verbs, to avoid possible ambiguities with transitive verbs, it was found that most of the verbs used in subject RCs were indeed intransitive verbs.

While interpreting the results of this data, we should always keep in mind the discourse properties. Discourse Function Hypothesis (Fox and Thompson, 1990; Roland et al., 2012) suggests that subject and object relative clauses have different functions in discourse. Roland et al. (2012) argued that ORs are used for grounding modified nouns to the ongoing discourse, and embedded NP within ORs is generally the topic of the discourse. Thus, the embedded NP within ORs is an old discourse referent. On the other hand, SRs are used for supplying additional information about the modified noun, and the embedded NP within SRs is generally a new discourse referent. These findings suggest that ORs are used in more specific situations as compared to SRs. In other words, ORs are more likely to be context-dependent than are SRs. Sato et al. (2010) conducted a study where they checked the sentences preceding SRs and ORs. Their results showed that the 70% of the embedded NPs within SRs are new discourse referents, whereas 80% of the embedded NPs within ORs are old discourse referents. However, Sato et al. reported that ORs are still harder to process than SRs, even after the topic context. Kahraman (2012) tested whether the difficulty of object RCs disappear if there is a context provided to the speakers. However, the study revealed that the processing difficulty of object RCs did not change according to context type. The results of reading time analysis suggest that ORs were harder to process than SRs, even after the Topic context.

The finding that in both oral and written data, the structure that is used most correctly by L2 speakers is subject relative clauses supports the predictions of Structural Distance Hypothesis (SDH) for L2 learning. As was summarized in detail in the previous sections, the SDH claims that subject RCs are easier since there are fewer number of phrasal boundaries between the trace and the head in subject RCs.

4.DISCUSSION AND RESULTS

This study shows that subject RCs are used more frequently and with fewer errors by L2 speakers, whose native language was not head final. These results coming from written and spoken production data show a parallelism to the research on comprehension of RCs by L2 speakers.

Aydın (2007) has reported that L2 Turkish speakers were better at comprehending subject RCs. Similar results have also been reported for Turkish adults by Kahraman et al. (2010), in a sentence-fragment completion experiment reporting that subject RCs are easier to process than object RCs.

The L2 data seems to support the Structural Distance Hypothesis (SDH), which predicts that subject RCs would be easier than object RCs since fewer boundaries intervene between the gap and the head. Object relative clauses exhibit more processing difficulty for L2 speakers. These results are parallel to studies on English speakers learning Korean as L2. As O'Grady, Lee & Choo (2003) demonstrated that in L2 Korean there is a strong preference for subject relative clauses, again favoring the structural account. As also been reported by Kükürt (2004) for aphasiac patients, the difficulty in genitive-possessive agreement morphology might also be the reason for the lower accuracy of object RCs.

The data also demonstrates the avoidance strategy used by L2 participants, the high error rate seems to state clearly why they avoid using these complex structures. There were too many examples in the data where the participants used two simple sentences, which could have been easily embedded within each other by a relative clause. This study reveals that even the advanced L2 speakers of Turkish are still struggling with the complex morphology and syntactic movement involved in RCs. The morphological and syntactic errors demonstrate that L2 speakers still have difficulty especially in the online production of RCs. Similar findings have been reported for L2 studies in other languages as well, where the speakers avoid to use relative clauses. The use of –ki clauses both as copulative clauses (*masadaki kalem*) and as conjunctions (*dedi ki*) demonstrate the avoidance strategy at work. Not only the L2 speakers but also L1 speakers preferred to use these morphologically less complex structures over relative clauses. Similar findings have been reported for L1 acquisition in Turkish, where the children also employed avoidance strategy especially for object RCs (Özge, Marinis & Zeyrek, 2009). Özge, Marinis & Zeyrek (2009) reported that children prefer using structurally less complex structures to replace object RCs. The avoidance strategy has also been reported in L1 studies for other languages (Crain et al., 1990; McKee et al., 1998; McKee & McDaniel, 2001). Previous studies which investigated the

comprehension of RCs (Aydın, 2007) reported better performance since they evaluated comprehension of these structures. However, the complex morphological properties of Turkish RCs seem to create a problem for even advanced speakers of Turkish, as has been illustrated by this study.

These findings point to a parallelism to the L1 acquisition studies in Turkish. Adults learning Turkish as L2 performed similar to children acquiring Turkish. Slobin (1986) was the first study which found that both Turkish children and adults used more subject RCs than object RCs. Ekmekçi (1990) claimed that Turkish children performed better in producing subject RCs. Özcan (1997) also reported that older Turkish children had lowest accuracy in OO relative clauses. Özge, Marinis & Zeyrek (2010) also affirmed higher accuracy in the comprehension of subject RCs and a lower success in the production of object RCs. In sum, all L1 production data also points that subject RCs predece object RCs in acquisition.

According to the canonical word order theory put forward by MacDonald & Christiansen (2002), a relative clause will be harder to process if the word order of the embedded clause is not the same as the canonical word order of the target language. This account implies that subject relative clauses in Turkish should be easier, since the word order is OVS and it's closer to the canonical word order of Turkish (SOV), where the object is followed by the verb. However, in object relative clauses, object follows the verb and the order is SVO. As also suggested by Özge, Marinis & Zeyrek (2010), the fact that the order of subject RCs in Turkish is similar to the main SOV order of Turkish, might also be a factor explaining the preference for subject RCs. Turkish L2 data seem to support the canonical word order hypothesis as subject relative clauses are more common in both spoken and written L2 data. The subject RC structures where the object is followed by the verb, which is parallel to the canonical word order of Turkish were simpler to produce for L2 speakers.

The findings of this study support Keenan & Comrie's Noun Phrase Accessibility Hierarchy which suggests that the easiest position to relativize is the subject position. They claim that if a language permits relativization of NPs, then those NPs that are higher in the hierarchy also undergo relativization: subject > direct object > indirect object >

oblique > genitive. Keenan & Comrie's hierarchy suggests that the easiest position to relativize is the subject. In line with this hierarchy some researchers (Tarollo & Myhill, 1983; Hawkins, 1989) also claimed that the relative difficulty of some RCs may be due to the status of the NP extraction site. This also seems valid for L2 Turkish data.

This study investigated the usage of relative clauses by advanced L2 speakers of Turkish and a control L1 group. The results showed that L2 speakers used fewer relative clauses than L1 participants in the same context. The distribution of RC structures was also different in that, L2 speakers used more subject relative clauses in both oral and written tasks. The control group, on the other hand used object relative clauses more. L2 data supports Structural Distance Hypothesis (SDH) which also predicts that subject RCs are easier since there are fewer boundaries between the head noun and the gap.

These results are parallel to L2 acquisition studies in other languages (O'Grady et al., 2003) and studies in the acquisition of L1 Turkish (Ekmekçi, 1990; Özcan, 1997; Özge, Marinis & Zeyrek, 2010), which demonstrate that, in L2, there is a strong preference for subject RCs. In this study this finding has also been confirmed for both L2 written and spoken data, where participants showed a preference to use subject RCs.

Further research on this subject and its pedagogical implications could combine online and offline tasks, analyzing both usage, the processing and comprehension of these structures. Also studies with participants whose native language is head-final could also shed more light on the subject.

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List of abbreviations

ACC- accusative suffix , -(y)I
DAT- dative suffix , -(y)A
ABIL- ability
ABL- ablative suffix , -(y)DAn
COM- commitative suffix, -(y)lA
INF- infinitive suffix , -mAK
PROG- progressive tense suffix, -Iyor
POSS- possessive suffix, -(s)I

PASS- passive formation suffix, -Il
GEN- genitive suffix, -In
GER-gerund (-erek)
PL- plural suffix, -lAr
PAST- past tense suffix, -DI
SR- subject particle, subject relative clause suffix, -(y)An, -(y)AcAk
OCC- occupational suffix, -cI
OR- object relative clause suffix, -DIK
QUE- question suffix, mI
MIŞ- evidential suffix, -mIş
ACAK- subject relative clause suffix,
AN- subject relative clause suffix, -(y)An
DIK- object relative clause suffix, -DIK