

## **To Err is Human: An error analysis approach to Turkish as an L2**

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### **Abstract**

In this study we investigate which aspects of Turkish pose particular challenges for English-speaking learners. The data are from a large pool of university LCTL learners who responded to five pre-recorded speaking prompts. They audio-recorded their speech twice a semester for up to three consecutive semesters using a virtual interview assessment tool called VOICES. Each interview lasted about 10 minutes. We identified and analyzed the various types and frequencies of grammatical and lexical errors that emerged in the Turkish speech from twelve English-speaking learners of Turkish. The results indicate that English-speaking learners of Turkish had problems with the Turkish case-marking system, subject-verb agreement, singularity/plurality, near synonyms and lexical shifts. Consistent with previous L2 Turkish studies, we found that some of the errors can be attributed to the fact that Turkish is an agglutinative language while English is isolating. We discuss how analyses of this type can improve LCTL instruction.

*Keywords:* error analysis, Turkish as a second language, virtual interview.

## 1. Introduction

Errors are a natural and inevitable part of the language-learning process. Errors are regularly committed not only in second language acquisition (SLA) (e.g., Tarone & Swierzbin, 2009), but also in first language acquisition (e.g., Pinker, 1996). That is, learners, children, and adult native speakers make errors of different kinds (e.g., unwanted forms, transitional forms and slips of the tongue) both in comprehension and production (Ellis, 1994). In his seminal article titled “The significance of learner’s errors,” Corder (1967) accentuated that errors are of significance to the process of language learning because they can provide windows into a learner’s interlanguage system—which is neither the first language nor the second language filled with random errors, but something in between with its own structure (Gass & Selinker, 2008). The careful investigation of learner’s interlanguage with a particular focus on errors is referred to as error analysis (James, 2013). The underlying assumption of error analysis is that the frequency and types of errors are proportional to the degree of difficulty language learners encounter when acquiring a second or foreign language.

Although many recent studies have been conducted (but mostly on English as the target language) using an error analysis approach (e.g., Gonulal, 2012; Llach, 2011; Mahmoud, 2000; Myles, 2002), few studies (e.g., Kang & Chang, 2014) have adopted this approach to less commonly taught languages (LCTLs). This is unfortunate, because an error analysis approach can be highly useful in examining the acquisition of agglutinating languages such as Turkish in which morphology has been shown to be a source of great difficulty. Therefore, in this study we implement an error analysis of Turkish as a second language in order to provide a basic description of the types of errors English-speaking learners of Turkish make. We hope our analysis will consequently serve as a reference for Turkish teaching practitioners and textbook designers. Further, this study may inspire researchers to adopt an error analysis approach more widely, in particular to Turkish and other LCTLs, which often lack this kind of basic groundwork. The end goal is that eventually pedagogues can use the error-analysis information to design more appropriate and efficient course materials.

## 2. Error analysis

As the famous saying goes, to err is human and thus, making errors is a natural part of the language-learning process. The fact that learners do make errors, and that these errors can be analyzed, gave birth to a literature investigating learners' errors, called *error analysis*, about 40 years ago (James, 2013). Why should applied linguists focus on what is wrong instead of what is right? A systematic study of learner errors is of significance in several different ways (Corder, 1967, 1974; Dulay & Burt, 1974). First, error analysis can provide teachers with information about how much a learner has learned and what remains for the learner to learn. Second, it can help researchers and linguists understand how learners interact with the target language and what strategies they use when acquiring the structures of the target language. Finally, errors can serve as pedagogical tools through which learners can learn from their own errors.

A typical error analysis consists of several stages: (a) collection of a sample of learner language, (b) identification of errors, (c) description of errors, (d) explanation of errors, and (e) evaluation of the errors (Corder, 1974). Thus, the first step is to decide what samples of learner language to analyze (e.g., spontaneous or elicited language use, oral or written language production, classroom or naturalistic language). Once a representative sample of learner language is collected, the next step is to identify the errors in the sample.

Unfortunately, identification of errors can be a challenging process for researchers and teachers. Corder (1971) defined an *error* as a deviant utterance which does not follow the norms of the target language. On the other hand, a *mistake* is a deviation similar to a slip of the tongue. From this perspective, an error represents a lack of competence, whereas a mistake occurs due to performance failures (Ellis, 1994). Because mistakes (performance errors) occur unsystematically, they are of no importance to the language-learning process, and thus, should be excluded from the analysis (James, 2013). However, distinguishing mistakes from errors can take effort

and experience.

The description of learner errors includes assigning each error to a category. Although there are several error categories in error analysis literature, the most common general categories are morphology (word forms), syntax (the way words are put together in sentences), and lexicon (vocabulary). Once the errors are identified and described, the next step is to explain the source of errors. The two main sources of errors proposed in the literature are interference errors (the transfer of structures or rules from the first language, or L1, into the second language, or L2), and intralingual errors (errors arising from the organization of the second language itself). As Ellis (1994) notes, however, it can be difficult to distinguish between these two types. Therefore, to increase the rigor of the analysis, the potential sources of errors should be identified and described with sufficient detail.

## **2.1. The place of error analysis in LCTLs**

Most LCTLs have not received much scholarly attention. One possible reason is that there are not many second language acquisition researchers and applied linguists who speak and are comfortable investigating LCTLs. Consequently, most of the LCTLs lack well-designed textbooks, materials, and other resources. Although error analysis does not seek to provide a complete picture of learner language, it can make substantial contribution to LCTL instruction. Importantly, an error analysis approach to LCTLs can shed light on the difficult or problematic areas of such languages. Note that applied linguists are quite familiar with these facts regarding commonly taught languages such as English or Spanish, but this knowledge may not directly apply to LCTLs because some acquisition patterns of more commonly taught languages such as English and Spanish may not apply to the acquisition of LCTLs (Spinner, 2011).

In this study, we exemplify the use of error analysis in a LCTL, specifically Turkish. In particular, we investigate which aspects of Turkish pose particular challenges for English-speaking

learners by identifying and categorizing the errors that English-speaking learners of Turkish produce.

## 2.2 Turkish language background

Several studies have reported that certain aspects of English (e.g., prepositions, articles, and singular/plural nouns) pose challenges to Turkish learners of English (e.g., Erkaya, 2012; Gonulal, 2012; Kırkgöz, 2010; Ozaydinli, 1994; Özcan, 2012; Unal, 1989). However, only a few studies have investigated the difficulties English-speaking learners of Turkish encounter (e.g., Altunkol & Balci, 2013; Antonova-Ünlü, 2015; Gürel, 2000; Haznedar, 2006). The one clear finding in this research is that English-speaking learners of Turkish have persistent problems with Turkish case morphology. We therefore reserve the next section to review this issue thoroughly.

Turkish is an agglutinative language, meaning that morphemes (or units of meaning) are strung together in a transparent way. Cases are overtly marked with suffixes that appear at the end of nouns. Turkish has six cases: nominative, accusative, genitive, dative, ablative, and locative. Studies on the L1 acquisition of Turkish case morphology have showed that monolingual Turkish children are able to produce all nominal morphemes by the age of two (Aksu-Koç & Slobin, 1985; Ketrez, 2006; Topbaş, Maviş & Başal, 1996). On the other hand, research on the acquisition of case morphology in L2 Turkish has shown that learners of Turkish exhibit variability in the use of case marking in speech (Altunkol & Balci, 2013; Gürel, 2000; Haznedar, 2006; Papadopoulou et al., 2011). Importantly, omission errors have been found to be more prevalent than substitution errors both in L1 and L2 Turkish (Haznedar, 2006; Ketrez & Aksu-Koç, 2009). Because case has been demonstrated to be particularly difficult, we provide examples of each type of case below (based on Göksel & Kerslake, 2005; Papadopoulou et al., 2011):

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- (1) *nominative*: subject  
 - Ø  
 Ali- Ø uyan-dı.  
 Ali-Nom wake up-Past.  
 ‘Ali woke up’
- (2) *accusative*: direct object  
 -(y)I -(y)i, -(y)u, -(y)ı, -(y)ü1  
 Ali Ahmet-I gör-dü.  
 Ali Ahmet-Acc see-Past  
 ‘Ali saw Ahmet’
- (3) *dative*: indirect object, direction  
 -(y)A -(y)a, -(y)e,  
 Ali kalem-i Ahmet-e ver-di.  
 Ali pencil-Acc Ahmet-Dat give-Past  
 ‘Ali gave the pencil to Hasan’
- (4) *genitive*: possession  
 -(n)In -(n)in, -(n)un, -(n)ın, -(n)ün  
 Ali-nin kalem-i  
 Ali-Gen pencil-3sg  
 ‘Ali’s pencil’
- (5) *locative*: location  
 -DA -da, -de, -ta, -te  
 Kalem masa-da  
 Pencil table-Loc  
 ‘The pencil is on the table’
- (6) *ablative*: origin, source  
 -DAn→-dan, -den, -tan, -ten  
 Ali East Lansing-den gel-di.  
 Ali East Lansing-Abl come-Past  
 ‘Ali came from East Lansing’

In addition to case morphology, English-speaking learners of Turkish tend to have issues with question formation, subject-verb agreement, and pluralization (Loewen & Gonulal, 2014).

Given that there is limited research on the acquisition of Turkish by English speakers, we posed the following research questions for this study:

1. What aspects of Turkish pose challenges for English-speaking learners of Turkish?
2. What are the most frequent error types that English speakers of Turkish produce in speaking tests?

### **3. Method**

#### **3.1 Participants**

The data for this study are from a pool of university LCTL learners at a large Midwestern University in the United States. Participants were selected on a voluntary basis. All of the participants were native speakers of English. A total of 12 learners of Turkish participated; five students were in their first year, two were in their second year, and five were in their third year of Turkish classes at the beginning of the study. The first-year met three days a week for 80 minutes, whereas the second-year and third-year courses met two days a week for 120 minutes. The data were collected in three consecutive semesters—Fall 2010, Spring 2011, and Fall 2011. Because the study lasted three semesters, a few of the participants were listed in more than one class; specifically, four first-year students also took part in the study when they were in the second-year Turkish class. Table 1 presents information about the speech recordings from the participants.

*Table 1:* Number of recordings per class

	1 <sup>st</sup> year Turkish	2 <sup>nd</sup> year Turkish	3 <sup>rd</sup> year Turkish
Number of participants	5	6	5
Number of virtual interviews	15	11	8

### 3.2 Materials and Procedure

We collected the data for this study through an online virtual language learning and assessment platform for less-commonly-taught language programs called VOICES, which stands for “Virtual Oral Interview Classroom-based Exam System.” This platform was created with funding from the U.S. Department of Education for LCTL programs, and is hosted by the Center for Language Education and Research (CLEAR) at Michigan State University. (For more information about the VOICES assessment suite, see <http://clear.msu.edu/lctl-voices>). The assessments are integrated into the LCTL programs at the university where we conducted the study. In this larger virtual learning and assessment program, LCTL learners take a virtual interview-based test (with five open-ended questions) online twice a semester. The participants, as part of this larger study and testing program, audio-recorded their speech through VOICES in the 8<sup>th</sup> and 14<sup>th</sup> weeks of each semester for up to three consecutive semesters during 2010-2011. As can be seen in Table 1, the study consisted of thirty-four virtual interviews. Each virtual interview lasted about 10 minutes and elicited level-appropriate speech regarding topics such as the weather, common objects, favorite hobbies, weekend activities, future plans, and so on.



### 3.3 Data Analysis

The first author of this study, who is a native speaker of Turkish, transcribed the speech samples from the 12 English-speaking learners of Turkish. We then coded the transcribed speech using the qualitative analysis software package QSR NVivo 10. We followed the error analysis steps described in the literature review. As noted, the first and probably most important step in error analysis is the question of what should be considered an error. In this study, any utterances that were deviant from standard Turkish and were not acceptable to native speakers of Turkish were coded as errors. Once all the erroneous forms and expressions were identified, we categorized them into two main types—grammatical and lexical errors. The errors that affected overall sentence organization and did not fit into the other two categories were coded as global errors. Then, we tabulated the types and frequencies of the errors. In the process of counting the errors, the same errors that were repeatedly committed by the same participant in each virtual interview were counted only once. However, sentences or phrases that included more than one error type were counted two or more times, once for each type of error. After all the errors were identified and categorized, simple error percentages were calculated. (It was not appropriate to conduct any statistical analyses on the data due to the small sample size.) As a final step, we discussed the potential sources of errors in relation to the examples of learner errors.

## 4. Results

Overall findings show that the total number of errors the 12 English learners of Turkish committed in their speech was 395. As can be seen in Table 2, the most frequent error category was grammatical errors at about 77%, followed by lexical errors (19%), and global errors (4%).

*Table 2:* Frequencies and percentages of errors

Error category	N	%
Grammatical errors	303	76.7
Lexical errors	77	19.5
Global errors	15	3.8
Total	395	100

Figure 1 shows the percentages of errors produced by three proficiency groups. As expected, grammatical errors accounted for the largest portion in each level. In addition, the figure indicates a decrease in the number of grammatical errors made by learners, whereas the lexical errors become more frequent as the proficiency level of learners increases.

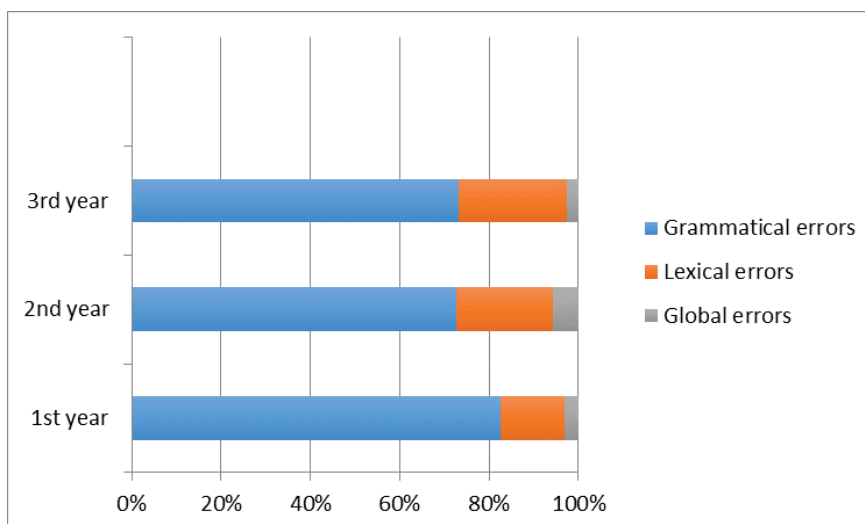
*Figure 1:* Distributions of errors by class level

Table 3 presents the overall descriptive results of the learner errors by class level. In the grammatical category, first-year Turkish students committed the largest number of errors ( $M = 23.30$ ,  $SD = 12.57$ ), followed by third-year students ( $M = 17.16$ ,  $SD = 8.07$ ) and second-year students ( $M = 14.60$ ,  $SD = 5.21$ ). In the lexical category, third-year students had the highest error rates ( $M = 5.80$ ,  $SD = 3.34$ ), closely followed by second-year students ( $M = 4.30$ ,  $SD = 2.48$ ), and then first-year students ( $M = 4.00$ ,  $SD = 1.20$ ).

*Table 3:* Overall descriptive statistics for the error frequency by class level

Error category	1 <sup>st</sup> year			2 <sup>nd</sup> year			3 <sup>rd</sup> year		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Grammatical errors	128	23.20	12.57	88	14.60	5.21	87	17.16	8.07
Lexical errors	22	4.00	1.20	26	4.30	2.48	29	5.80	3.34
Global errors	5	1.00	1.00	7	1.40	1.14	3	.67	.81
Total	155			121			119		

We further analyzed the most frequent error categories—grammatical and lexical errors. Table 4 presents the types, frequencies, and percentages of grammatical and lexical errors found in the three learner groups' spoken production. Of the nine types of grammatical errors identified, case errors were the most frequent. The second and third most frequent grammatical errors were related to subject-verb agreement and singularity/plurality, respectively. Errors in question formation and possessive pronouns also occurred frequently. Other types of errors included fragments, verb formation/conjugation, tense, and negation errors. In the lexical error category, we detected a variety of lexical errors. Three most common lexical errors found in English-speaking learners of Turkish are near-synonym errors, borrowing errors, and literal translation. Other types of lexical errors

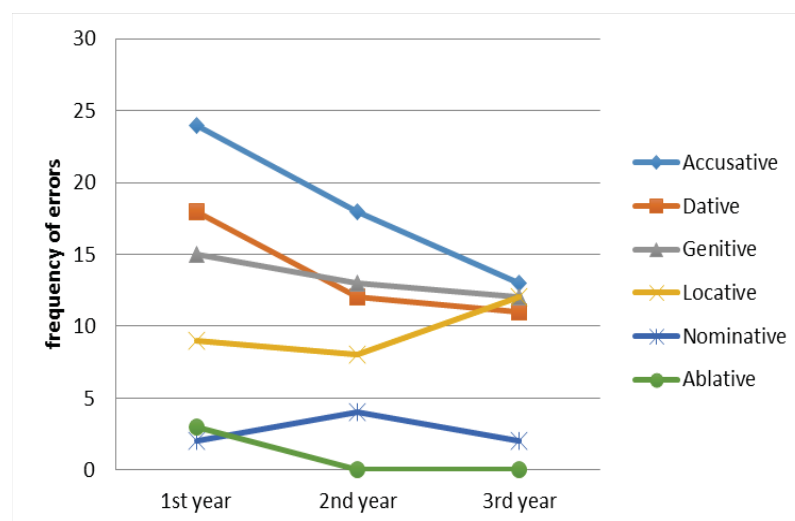
include mis-selection, and verbosity (that is, circumlocution rather than using the correct word).

*Table 4:* Types, Frequencies and percentages of syntactic and lexical errors by class level

Error category	1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year		Total
	N	%	N	%	N	%	N
Grammatical errors							
1. Case errors	71	39	55	31.8	52	29.2	178
2. Subject-verb agreement	23	62.2	8	21.6	6	16.2	37
3. Singular/Plural errors	6	18.7	11	34.4	15	46.9	32
4. Question formation	7	50	2	14.3	5	35.7	14
5. Possessive Pronouns	7	63.6	3	27.3	1	9.1	11
6. Fragments	7	70	3	30	0	0	10
7. Verb formation	4	40	3	30	4	40	10
8. Tense	2	33.3	2	33.3	2	33.3	6
9. Negation	1	25	1	25	2	50	4
Lexical errors							
1. Near-synonym	11	28.9	10	26.3	17	44.7	38
2. Borrowing	4	22.2	9	50	5	27.7	18
3. Literal translation	5	50	2	20	3	30	10

Because of the frequency of case errors, we analyzed them further. Figure 2 presents the frequency of case errors committed by the three levels of learner. As can be seen, the number of errors decreases as the level of the learners increases. That is, third-year students make fewer case errors than first-year students. However, there is not a steady decrease in the number of errors in all case categories. For instance, third-year students make slightly more errors when using locative case in their speech.

Figure 2: Frequency of case errors by class level



## 5. Discussion

In this exploratory small-scale study, we attempted to identify the difficulties English speakers encounter when they learn Turkish, an agglutinative language, by identifying and categorizing the learners' speech errors. As it is expected, learners had more problems with the grammatical aspects of Turkish than lexical aspects.

The case system is probably the toughest aspect of Turkish morphology for English-speaking learners to master. Consistent with previous studies on Turkish as a foreign or second language (Altunkol & Balci, 2013; Gürel, 2000; Haznedar, 2006; Loewen & Gonulal, 2014; Papadopoulou et al., 2011), case errors were the most common error among English-speaking learners of Turkish. This type of error was found among not only first-year learners, but also second- and third-year learners. On a positive note, however, the

third-year learners performed much better than the first- and second-year learners, which suggests a developmental pattern.

In this study, except for nominative and ablative case markings, the error rate for all types of case marking was high. In line with the findings of Altunkol and Balci (2013), and Antonova-Ünlü (2015), learners of Turkish had the most issues with accusative case and dative case, closely followed by genitive case. For instance, in example 1, the accusative case marking (*-I*) is missing.

- (1) \*Çocuklar-**X** sev-mi-yor-um.  
 Children-**missing accusative** love-Neg-Present  
 Progressive-1sg  
 'I don't like children'  
 (Cansu<sup>2</sup>, 1st-year Turkish, Spring/2011-Wk7)

There were also some instances where other case endings were substituted. In example 2, the locative case marking (*-de* or *-da*) was used for the accusative case.

- (2) \*Kitab-ın-**da** oku.  
 Book-Poss-**faulty case** (*Locative for Accusative*) read-Pres  
 'Read your book'  
 (Davud, 4th-year Turkish, Fall/2011-Wk8)

Dative errors also constituted a large portion of case errors. Similar to the accusative case errors, the participants tended to omit case marking when dative case was needed. In example 3, the participant omitted the dative case suffix *-a*:

- (3) \*Kroger-**X** gid-iyor-um ve dolmuş-**X** bin-iyor-um.  
 Kroger-**missing dative** go-Pres Prog-1sg and cab-  
**missing dative** -Pres Prog-1sg  
 'I am going (to) Kroger and taking (a) cab'  
 (Ayşe, 1<sup>st</sup>-year Turkish, Fall/2010-Wk14)

The same pattern of omission appears when genitive case is required. As shown in example 4, no case marking (which is identical to nominative case) was used for genitive case marking.

- (4) \*Okul-da kız hasta ol-du. O-**X** ateş-i var.  
 School-Locative case girl sick get-Past she-**missing**  
**genitive** fever-Poss. have  
 ‘The girl got sick at school. She has fever’  
 (Kevser, 2<sup>nd</sup>-year Turkish, Fall/2011-Wk14)

Case marking was also omitted when locative case was needed, as in example 5.

- (5) \*(Baba-m) Michigan-**X** yaş-ıyor.  
 (Father-Poss-1sg) Michigan-**missing locative** live-  
 Pres Prog-3sg.  
 ‘(My father) lives in Michigan’  
 (Ayşe, 1<sup>st</sup>-year Turkish, Spring/2011-Wk7)

Given the high number of omission errors, presumably nominative case marking is generally accurate because it is used as an unmarked default. It is less clear as to why ablative was relatively error-free in the learners’ production, but it may have to do with the fact that there is a clear English counterpart in the form of prepositions. Further research could clarify these issues.

Overall, these findings align with previous Turkish L2 studies (e.g., Altunkol and Balci, 2013; Gürel, 2000; Haznedar, 2006; Papadopoulou et al., 2011) in that English learners showed optionality or variability in the use of case markings. That is, in many cases, case morphology was either not present or incorrectly used. One possible explanation concerning the case errors is that Turkish overtly marks case whereas English does not. In other words, the absence of an overt case system in English might have made English-speaking learners less sensitive to the case system in Turkish. Interestingly, however, while this explanation is likely to partially explain the errors, it may not provide a full account. Note that some other case systems may be easier for learners to master; Smith (2016) found that English speakers were highly successful at marking case in L2 Japanese (another agglutinating language). Thus it may be the particular ways that case is manifested in Turkish that cause learners difficulty. For instance, the fact that nominative case is unmarked may provide a kind of default that learners have difficulty moving

away from. While case marking remains somewhat understudied, future research will hopefully help clarify these issues. Fortunately, although case errors were quite frequent among the three learner levels (i.e., first year, second year, and third year), the number of case errors seems to decrease as the proficiency levels increase, as expected. In fact, this shows that there is likely to be a developmental pattern in the acquisition of case morphology. More research to validate this is necessary.

The second most common grammatical error type was subject-verb-agreement (SVA) errors. Participants frequently failed to use the correct person/number marking in their sentences.

- (6) \*Siz ve aile-niz nerede yaş-ıyor-**X**.  
 You and family-Poss where live-Pres Prog-**missing 2<sup>nd</sup> pl.**  
 ‘Where are you and your family living?’  
 (Celil, 3<sup>rd</sup>-year Turkish, Spring/2010-Wk7)

In example 6, the learner used the third-person singular pronoun (unmarked) instead of the second-person-plural suffix (*-sunuz*). It is likely that the third person is a default in Turkish because third person is not marked on the verbs. Another potential reason might be that in many Turkish courses, third-person pronouns are commonly used when a grammatical structure is introduced or explained. However, further research with more participants at more instructional settings is needed.

Another common grammatical error type was the use of singular and plural nouns. Turkish nouns can be pluralized with the plural suffix *-lar* (or *-ler* depending on the vowel harmony). However, *-lar* is not used when plurality is already indicated by the presence of a modifier or a numeral. Most participants in this study had difficulty with this rule. In the examples 7 and 8, the participants added plural suffixes to words although suffixes were not required.

- (7) \*Şu an çok kadın-**lar** çalış-ıyor.  
 Now many woman-**Pl.** work-Pres Prog-3sg  
 ‘Now, many women are working’  
 (Elif, 3<sup>rd</sup>-year Turkish, Fall/2010-Wk14)



(8) \* 45 veya 55 bin öğrenci-ler var.

45 or 55 thousand student-**Pl.** be.

‘There are 45 or 55 thousand students’

(Erkan, 3<sup>rd</sup>-year Turkish, Fall/2010-Wk14)

One possible reason for singular/plural noun errors may be the different realizations of plurality between Turkish and English languages. Plural is marked on all nouns in English, whether preceded by a quantifier or not, whereas plural is not marked on nouns in Turkish when there is a quantifier or numeral preceding the nouns.

As for the lexical error category, the most common lexical error types were choosing the wrong word, which is also known as a near-synonym error, or a borrowing error. In example 9 is a near-synonym error:

(9) \*İki göz, iki omuz ve bir **geri** var.

Two eye, two shoulder, and one **back** be.

‘He/She has two eyes, two shoulders and one back.

(Kevser, 2nd-year Turkish, Fall-2011-Wk14)

In example 9, the participant used the wrong word for ‘back.’ Here, the intended meaning of *sirt* was not clearly expressed by the near synonym *geri* because the word *geri* has a different connotation, which is ‘behind.’ In some cases, the cause of this error might be so-called divergent polysemy, that is, when a word has multiple meanings in one language but not the other. This is particularly difficult when the target language definition is more narrower. For example, in example 10 the participant intended to use ‘Turkish’ as in the meaning of ‘Turkish origins.’ Although the word ‘Turkish’ corresponds to both the Turkish language and Turkish origin in English, there is a different word for each use in Turkish (i.e., Türkçe and Türk, respectively). In example 10 below, the participant chose the word ‘Türkçe’ (i.e., Turkish language) instead of

‘Türk’ (i.e., having Turkish origins) even though she intended to provide information about her parents’ origins.

- (10) \*Benim ailem **Türkçe**.  
 My family-Poss **Turkish**  
 ‘My parents are Turkish’  
 (Ayşe, 1<sup>st</sup>-year Turkish, Spring-2011, Wk7)

Another common problem among English-speaking learners of Turkish is the occurrence of L1 words in Turkish sentences. Words from participants’ first language frequently showed up in their L2 production, as a form of lexical shift—which is known as borrowing errors (or code-mixing). In example 11 one can see this error type:

- (11) \*Belki bir çocuğu **adopt**cam.  
 Maybe one child-Acc **adopt**-Future-1sg  
 ‘Maybe I will adopt a child’  
 (Cengiz, 3rd-year Turkish, Spring-2011, Wk7)

Even though the source of these errors might be learners’ incomplete mastery of the target language vocabulary, there were a few cases where learners seemed to intentionally use the L1 words to fill the expressional vacancy in the L2 due to cross-culture differences. For instance, in example 12, the lack of a specific, equivalent word for ‘tailgate’ in Turkish seemed to have caused the learner to use it directly.

- (12) \*Amerikalı futbol maçında **tailgate** yapıyorum.  
 American football game-locative **tailgate** do-Pres  
 Prog-1sg  
 ‘I am tailgating in the football game’  
 (Elif, 3rd-year Turkish, Fall-2010, Wk14)

In addition to these two lexical error types, there were a number of literal translation (or calque) errors. This category usually includes a word-for-word translation from the L1 into the L2, which

is usually ungrammatical in the L2. This error type was found even among third-year learners. In example 13, the participant intended to use the expression ‘famous for’ and therefore used the literal translation of ‘famous’ and ‘for’ (*meşhur* and *için*, respectively) following the Turkish word order. However, such a use is ungrammatical in Turkish.

- (13) \*Üniversite basketbol ve futbol **için** çok **meşhur**.  
University basketball and football **for** very **famous**. ‘The university is famous for football and basketball (teams)’

(Elif, 3rd-year Turkish, Fall-2010, Wk14)

## 6. Conclusion

Morphology has been shown to be an area of persistent difficulty for L2 learners (e.g., Hawkins & Liszka, 2003; Lardiere, 2008, 2009). It is no different for English-speaking learners of Turkish. Indeed, English-speaking learners of Turkish have difficulties with the grammatical aspects of Turkish, in particular case morphology. It is informative to see that English-speaking learners of Turkish, be they lower-level or higher-level, have quantitatively different but qualitatively similar case errors. Consistent with previous Turkish studies (Gürel, 2000; Haznedar, 2006; Papadopoulou et al., 2011), we found that some of the errors detected in this study can likely be attributed to the fact that Turkish is an agglutinative language while English is to a large extent isolating. Recent approaches to explaining learner difficulty such as Feature Reassembly (Lardiere, 2008; 2009) suggest that these types of differences between languages could feasibly cause difficulty. In addition, the roots of some of other grammatical errors such as subject-verb agreement and singular/plural errors might be attributed to negative transfer between English and Turkish. However, research with learners whose L1 is more highly inflected would help distinguish whether these errors are due to transfer or some property specific to agglutinative languages.

Similarly, most of the lexical errors found in this study seem

to bear the traces of L1 (English) influence. Further research could help indicate whether learners at higher levels of proficiency continue to produce these errors, or whether they can be overcome with greater mastery of Turkish.

Given the limited number of studies on the acquisition and teaching of LTCLs, the contribution of this small-scale study on a LCTL is quite important not only for Turkish teachers and textbook designers but also the larger field of less commonly taught languages. First, the results of this error analysis inform Turkish teachers and practitioners as to what aspects of the Turkish language are challenging for learners and need further attention. For example, English speakers apparently need a large amount of input and training to acquire Turkish cases. Therefore, Turkish instructors can make use of activities that increase L2 learners' morphological awareness.

One particular approach that can be of importance in teaching agglutinative languages is an input processing approach (VanPatten, 2004). This approach involves 'forcing' learners to process morphological forms for meaning. The approach was first shown by VanPatten and Cadierno (1993) to be successful for teaching L2 Spanish syntax such as word order. For example, language learners were presented with syntactically difficult-to-process sentences (which error analysis had shown were difficult for the learners) and asked to choose for each sentence the one, correct corresponding picture out of a selection of pictures, with each picture showing a different interpretation of the sentence. After repeated exercises in interpreting the syntax through picture selection, the researchers found that the language learners were significantly more likely to correctly produce the syntax when speaking. While input processing instruction is widespread in French and Spanish language programs and represented well in French and Spanish textbooks in the United States (see VanPatten, 2004; VanPatten & Cadierno, 1993), it has not yet, as far as we know, been robustly applied to LCTL programs such as Turkish.

Even though the current study sheds light on the potential difficulties English speakers encounter in acquiring Turkish, there are

several limitations that should be kept in mind. First and foremost is the sample of participants. It is likely to be representative of the population of English-speaking learners studying Turkish as a foreign language in U.S. universities, but it is a small group. Clearly more research is needed, and we are currently launching a large-scale data collection project to do just that. Second, due to the nature of error analysis, in which the main focus is only on what learners do, there was no way to investigate avoidance—that is, what they choose not to do. Interviews with learners recently after they produce speech may shed light on avoidance issues and help researchers better understand the reasons behind the language they use. A third limitation is that the study drew only on spoken data. Future research would do well to analyze both spoken and written production, and to interview learners broadly in order to better understand the challenging aspects of Turkish. This is certainly an area worthy of future research.

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### Notes:

1. Turkish case markings are affected by vowel harmony; thus the exact form of the suffix may differ.
2. All names are pseudonyms.

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