SECOND LANGUAGE ACQUISITION

OF NOMINAL INFLECTION IN TURKISH

GÜLÜMSER EFEOĞLU

BOĞAZİÇİ UNIVERSITY

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Gülümser Efeoğlu

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DECLARATION OF ORIGINALITY

I, Gülümser Efeoğlu, certify that

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ABSTRACT

Second Language Acquisition of Nominal Inflection in Turkish

This study aims to investigate second language (L2) acquisition of Turkish nominal inflectional morphemes by L2 learners with typologically distinct L1s, namely Russian, Japanese, English and Chinese. Two experimental tasks were used to collect data from a total of 90 participants (72 L2 learners and 18 native speakers of Turkish). The first task was a timed oral production task where participants were required to produce grammatical sentences using pictures with relevant lexical items. A total of 95 pictures, each depicting a specific event, were presented via DMDX. Thirty of these were used to elicit target morphemes (Ablative, Accusative, Dative, Locative Case and Plural suffix), 60 were used as fillers, and there were five trial items. The second task was a written forced elicitation task consisting of 40 multiple-choice items. The participants were asked to choose the option that best completes a given sentence. In addition to the experimental tasks, a cloze test was used to gather information about participants' L2 Turkish proficiency. The most noticeable difference between the native and non-native groups was in the use of Accusative Case. Furthermore, as predicted by the L1 transfer view, while L2 learners with L1 Russian outperformed all other L2 groups in both tasks, L1 Chinese learners were the least accurate. Across the groups, Locative and Ablative Case morphemes were found to be used more accurately than Plural and Accusative Case in both tasks. The findings imply an accuracy order across L2 groups, governed mostly by L1 morphological features.

ÖZET

Yabancı Dil Olarak Türkçede Adsıl Çekim Eklerinin Edinimi

Bu çalışma, anadili biçimbirimsel olarak farklı olan Rusça, Japonca, İngilizce ve Çince anadilli yetişkinlerin Türkçe'deki adsıl çekim ekini edinimlerini incelemektedir. Çalışmada, Türkçe'yi yabancı dil olarak edinen 72 katılımcı ile Türkçe ana dilli 18 yetişkinden iki deneysel ödev aracılıyla elde edilen veriler kullanılmıştır. İlk ödev, süre kısıtlaması altında verilen sözlü üretimdir. Burada, katılımcılardan, DMDX programı aracılıyla bilgisayarda gösterilen resimleri verilen sözcükleri kullanarak anlamlı ve dilbilgisi kurallarına uygun bir tümce kurarak betimlemeleri istenmiştir. Toplam 95 resmin 30 tanesi, hedef ekleri (Ayrılma, Belirtme, Bulunma, Yönelme ve Çoğul ekleri) kullandırmayı hedeflemiş, 60 tanesi çeldirici, 5 tanesi de deneme öğesi olarak kullanılmıştır. İkinci araçta, katılımcılardan toplam çoktan seçmeli 40 soruda verilen boşluğu en uygun şekilde dolduracak şıkkı seçmeleri istenmiştir. Katılımcıların Türkçe dil yetilerine ilişkin bilgi edinmek üzere bir boşluk doldurma testi de kullanılmıştır. Çalışmanın bulguları, Türkçe ana dilli grup ile yabancı dil öğrenenler arasındaki en belirgin farkın Belirtme Durum ekinin kullanımında olduğunu göstermiştir. Buna ilaveten, ana dilinden aktarım görüşünü destekler bir bulgu olarak, Rusça ana dilli katılımcıların hedef ekleri diğer katılımcılardan daha başarılı kullandıkları bulgulanmıştır. Ayrıca, tüm grupların iki testte de Bulunma ve Ayrılma Durum eklerinde, Belirtme Durum eki ile Çoğul ekine kıyasla daha doğru kullanım yüzdesine sahip olduğu görülmüştür. Bulgular, her bir yabancı dil grubu için, ana dillerinin biçimbirimsel özelliklerinden kaynaklandığı düşünülen belli bir hedef ekleri doğru kullanım sırası/ örüntüsü olduğuna işaret etmektedir.

CURRICULUM VITAE

NAME: Gülümser Efeoğlu

DEGREES AWARDED
PhD in English Language Teaching, 2018, Boğaziçi University
MA in Linguistics, 2011, Boğaziçi University
BA in Foreign Language Education, 2007, Middle East Technical University

AREAS OF SPECIAL INTEREST
First and Second Language Acquisition of Morphosyntax, L1 Transfer,
Multilingualism, English Language Teaching and Education

PROFESSIONAL EXPERIENCE
Research Assistant, Department of Foreign Language Education, Yıldız Technical
University, 2009- present
Erasmus Coordinator, Department of Foreign Language Education, Yıldız Technical
University, 2011- present
Research Assistant, Center for Migration Studies, Bilgi University, 2008-2009
Assistant Teacher, Overbeck Grundschule, Cologne, Germany, 2007-2008

AWARDS AND HONORS
Highest Honors List, Middle East Technical University, Ankara, Turkey, 2007
TÜBİTAK PhD Scholarship, 2012-2018
GRANTS
Kemal Kurdaş Scholarship, İstanbul ODTÜ Mezunlar Derneği, 2006-2007
Comenius Teaching Assistantship Program Grant, Turkish National Agency, 2007-
2008

PROJECTS
Literacy Acquisition in the Social Context of Migration, VW Foundation,
Researcher, 2008-2009
IPHRAS, Interphraseologie für Studien und Berufsmobile, European Union,
Researcher, 2014

PUBLICATIONS
Journal Articles
Efeoglu, G. (2017). The effect of L2 English proficiency on request, advice and
apology of L1 Turkish-L2 English learners. *International Journal of Social Sciences
and Education Research,* vol.3. pp. 297-306.
Conference Proceedings
Efeoglu, G. (2011). Türkçe'de edilgen yapı çocuklar tarafından nasıl üretiliyor?. 25.
Dilbilim Kurultayı Bildiri Kitabı, Adana-Turkey. pp. 127-134.
Other Publications
Efeoglu, G. (2011). Acquisition of Passives in Turkish, Unpublished MA Thesis,
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ABBREVIATIONS

ABL: Ablative Case

AgrOP: Agreement for Object Phrase

AgrSP: Agreement for Subject Phrase

ACC: Accusative Case

DAT: Dative Case

EV: Evidential

FEM: Feminine

GEN: Genitive

LOC: Locative Case

MAS: Masculine

NEG: Negation

NP: Noun phrase

NOM: Nominative

PAST: Past Tense

PL: Plural

POSS: Possessive

SG: Singular

TOP: The topic marker

VP: Verb phrase

CHAPTER 1

INTRODUCTION

Variability in second language (L2) acquisition of inflectional morphology has been

much studied since Dulay and Burt's (1974) replication of Brown's (1973)

morpheme order study. The aim of these early studies was to test the availability of a

universal order for inflectional morphemes in the L2 context. Later on, with the

introduction of Chomsky's Universal Grammar (UG), the effect of L1 on L2

morphology has been explored with an aim to identify a potentially invariable

acquisition order in L2 acquisition irrespective of learners' L1 (Bailey, Madden,

Krashen, 1974; Dulay & Burt, 1974).

Within the UG perspective, transfer from the L1 has been examined in many

former studies with respect to its relation to the adult learners' access to UG in L2

acquisition. Within this context, views vary from full L1 transfer to no transfer

(White, 2003a). For example, the proponents of the Full Transfer-Full Access view

assume that the L1 is at play in L2 acquisition and this never counts as

counterevidence for the access of a universally constrained grammar (Haznedar &

Schwarz, 1997; Schwartz & Sprouse, 1996). A group of researchers assume partial

L1 transfer. For instance, Vainikka and Young-Scholten (1996, 1998) propose that

only lexical categories are available according to their Minimal Tree Hypothesis.

Therefore, this view predicts that functional categories and related inflectional

morphology will be missing at least in the initial L2 state. In a similar vein, Eubank's

(1996) Valueless Features Hypothesis argues that L2 feature strength associated with

functional projections is valueless (i.e., inert) in the L2 initial state and potentially

remains as such in cases where L1 and L2 differ from each other with respect to

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relevant morpho-syntactic properties. Within this context, Bley-Vroman's (1989) Fundamentally Difference Hypothesis is also relevant as it predicts that adult L2 learners do not have access to UG properties unlike child L1 learners. His argument, which was later on much criticized, is largely based on L2 learners' failure to acquire morphology in the L2. At the other extreme end, the No Transfer view holds that UG never ceases to operate in adult L2 acquisition and L1 transfer is not truly relevant in adult L2 acquisition (Flynn, 1996).

Recent studies on L2 morphology, however, have focused on the issue of variability in the use of L2 inflectional morphemes. Unlike previous studies that undermine the role of L1 transfer in L2 acquisition of morphemes, recent studies have attempted to identify the linguistic nature of L2 morphology and possible transfer effects from the L1.

In one of the well-cited study, Haznedar and Schwartz (1997) analyze longitudinally collected data of an L1 Turkish-L2 English-speaking child. The results indicate that despite intact syntactic representations, the child fails to supply correctly some nominal and verbal inflectional morphemes such as third person singular –s and regular past tense suffix. This was attributed to a form-function mapping problem. This account is referred to as the Missing Surface Inflection Hypothesis (Haznedar, 2001; Haznedar & Schwartz, 1997; Prévost & White, 1999).

In a related study, Prévost and White (2000) examine L2 French and L2 German data in terms of the overt realization of finiteness and agreement. The results reveal that although underlying syntactic restrictions are available to learners, they fail to provide morphology accurately. In the same vein, Lardiere's (1998a) study of an end-state L1 Chinese-L2 English learner addresses the incongruence between

interlanguage syntax and morphology, showing that an end-state L2 learner of English with L1 Chinese demonstrates persistent problems in the use of L2 morphology despite prolong exposure to the L2 in the L2 setting. White (2003c) also observes some divergent use of L2 morphology in the spontaneous speech data of an L1 Turkish-L2 English speaker. In line with the previous studies, the problem was related to overt realization of some inflectional morphemes, particularly in the use of definite and indefinite articles. All these studies report that albeit selective even end-state L2 learners who receive years of exposure to the L2 may still demonstrate persistent problems in the acquisition of L2 morphemes mostly due to L1 influence. Thus, most current research examining the issue of variability in supplying inflectional morphemes explores to what extent the L1 morphological system affects the sensitivity of L2 learners towards the use of L2 morphemes (Lardiere, 2008, 2009; Slabakova, 2009, 2014; see also White, 2003c).

To account for L1 transfer-based variability in L2 morphology, Lardiere (2008) proposes the Feature Reassembly Hypothesis which states that the task of L2 learners is to reassemble (reconfigure) formal features which are already organized in accordance with L1 properties (p. 26). Thus, this view suggests that variability in L2 morphology stems from the discrepancy between the L1 and L2 in the way formal linguistic features related with a particular morpheme are configured, implying that the L1 plays a more crucial role than it was once assumed.

In a more recent linguistic model, Slabakova (2009, 2014) proposes the Bottleneck Hypothesis which suggests that functional morphology is the "bottleneck" of L2 acquisition (p.4). She further argues this hypothesis accounts for the gap observed between syntax and morphology in L2 studies as noted earlier.

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Moreover, she also argues that the focus on form type of L2 instruction might help L2 learners to overcome difficulties encountered in L2 functional morphology (Slabakova, 2014, p.22), suggesting the role of formal and conscious learning might have a place in L2 acquisition

As can be seen from the discussion above, most studies on L2 morphology has focused on L2 English. Nevertheless, more research involving other languages learned as L2s is much needed. Within this background, studying Turkish as an L2 would be very revealing as it is a language with a rich morphological system. Therefore, the current study targets Turkish as the L2. The number of studies examining L2 acquisition of Turkish from a linguistic perspective is limited. Nevertheless, as will be discussed in subsequent chapters, since 2000s, there has been an attempt to explore different aspects of L2 acquisition of Turkish from a variety of linguistic perspectives (Gürel, 2000; 2002; Haznedar, 2006; see also contributions in Gürel, 2016; Haznedar & Ketrez, 2016; see also Yaylı & Bayyurt, 2011 for pedagogical perspectives of L2 Turkish).

The current thesis study aims to contribute to this line of research by providing data from L2 Turkish learners with L1s that differ from one another with respect to morphological typology. More specifically, data from L2 Turkish learners with L1 Russian, Japanese, English and Chinese is used to examine the extent of L1 effects in the acquisition of inflectional morphology in Turkish. The L1s involved in the study differ from one another with respect to the morphological system and the degree of inflectional richness. The study involves both comprehension and oral production tasks. The offline comprehension task is a written forced elicitation task that is assumed to tap metalinguistic knowledge of L2 learners, whereas the

production task is a timed oral production task designed via DMDX and it is believed to tap knowledge of more implicit nature. Thus, given the nature of the tasks, the study aims to provide deeper insights into the extent of L1 influence. The target suffixes tested involve nominal inflections, namely Ablative, Accusative, Dative, Locative Cases and Plural suffix. The present thesis will enable us to study the effects of L1 typology, task effects and potential differences among the different nominal morphemes with respect to the difficulty they pose for different L2 learners.

The rest of the thesis is organized as follows; Chapter 2 provides detailed definitions and theoretical background of inflectional morphology as well as descriptions of languages involved in the study, namely Turkish, Russian, Japanese, English, and Chinese. Chapter 3 presents a thorough discussion of theories of L2 acquisition and addresses some key findings of studies on the acquisition of nominal inflectional morphology, including the ones on L2 Turkish. Chapter 4 details the methodology of the current study by presenting participants, research questions, tasks, items and procedures. Chapter 5 reports the findings from each task. Chapter 6 provides an interpretation of the findings by making reference to the research questions and finally discusses implications, limitations and suggestions for further studies.

CHAPTER 2

LINGUISTIC BACKGROUND

2.1 Introduction

This chapter sets the background for the thesis study by discussing issues related to inflectional morphology in general and by providing a brief linguistic description of the inflectional system of the five languages involved in the present research. The first section starts with a general discussion of what a word is and how morphology is involved in the word formation process. In the second section, typology of inflectional morphology is elaborated. In the third section, nominal inflectional systems of Chinese, English, Japanese, Russian, and Turkish are presented along with the examples. The chapter ends with the key features that would be highlighted in the study.

2.2 Morphology: an introduction and general definitions

Morphology is quite an intricate domain of grammar for which decades of work has been produced cross-linguistically to identify different morphological systems available in the world's languages.

Morphology is traditionally defined as the study of word structure. A word is defined as a 'minimal free form' (Bloomfield, 1933, p. 178). Something is described as a word "if it can stand alone on its own as a reply to a question or as a statement or exclamation" (Carter, 1987, p. 5). The two traditional word categories involve content and function words. While the former refers to those that have a clear lexical content and denote specific meaning to entities and actions, the latter involves the ones that are necessary to refer to a grammatical relation and have either no or very

limited lexical content. The smallest meaningful units that a word is composed of are referred to as morphemes. In other words, a word is generally understood in reference to the morphemic constituents that it contains. The idea of (de)composition of individual morpheme(s) has had a place since the early Structuralist era (Spencer, 1991, p.49). In line with this, most views agreed on Bloomfield's (1933) definition of a morpheme as "a minimal meaningful unit". Nevertheless, morphological theories diverge with respect to how they perceive the relationship among different minimal meaningful units and what the word means.[1] There are also more recent approaches that attempt to account for the way morphemes interact (i.e. Paradigm Function Morphology of Bonami and Stump, 2016; Network Morphology of Brown and Hippisley, 2012 among many others).

However, since the scope of this study is restricted to the L2 acquisition of five morphemes that are attached to a variety of content words in Turkish, theories that account for the way morphemes interact with one another and how a word is formed remain out of the scope of the present investigation. Instead, as all morphemes targeted for the purposes of the current study are members of a particular set (i.e. inflectional morphology), in the next section, descriptions, typological differences, and some theories that explain how inflectional morphology works will be elaborated.

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[1] The three mainstream models that differ from one another as to how they perceive a word is formed involve Item-and-Arrangement Theory, Item-and-Process and Word-and-Paradigms (Spencer, 1991). Item-and-Arrangement theory (Hockett, 1954) posits that two morphemes come together in a predetermined order. For example, the word, *cars* in English is composed of two morphemes, *car* and regular plural marker -*s* attached to the free morpheme (i.e., the noun, *car*). The Item-and-Process Model (Hockett, 1954), on the other hand, highlights the process through which a word is formed. Given the same example, the word *cars* is the output of a process changing a singular noun into a plural one. The third model is the Word-and-Paradigm Model (Matthews, 1965, 1972) and it suggests that a word can only be explained in relation to other members of the same group. Going back to the example, *cars*, this model assumes that the plural morpheme /z/ can only be understood along with its allomorphs [z], [s] and [əz].

2.3 Inflectional morphology

As mentioned earlier, the scope of this thesis is restricted to five morphemes. In line with the distinction between content and function words, morphemes are defined and categorized in line with their functions. More specifically, those which denote a particular grammatical function to the stem that they are attached to are called inflectional morphemes whereas those that derive a new lexical item are called derivational morphemes (Katamba, 1993).

It is significant to note that there are some morphological theories that do not make a distinction between inflectional and derivational morphology. More specifically, within these frameworks, morphology is seen as part of grammar. For instance, Spencer (1991) claims that the only distinction between two suffixes in English namely, *-hood* as derivational and *–z* as inflectional marker is the latter is subcategorized for adjectives in addition to the nouns (p. 202). One of the latest accounts of this type is Distributed Morphology and it assumes a fully grammatical approach to morphology making no distinction between inflection and derivation (Halle & Marantz, 1994; Harley & Noyer, 1999). Instead, derivation is assumed to be based on the features of lexical bundles.

However, not all word formation processes are treated the same in other models of morphology. For example, derivational and inflectional morphology have been kept separate in the Lexicalist Hypothesis (Lapointe, 1980), Word Structure Autonomy Condition (Selkirk, 1982), the Atomicity Thesis (DiSciullo & Williams, 1987), the Lexical Integrity Principle (Borer, 1998). While derivational morphology deals with a lexical process through which new lexical items are formed, inflectional morphology is more in the service of grammar carrying out a grammatical function

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such as making nouns plural or specifying a time period for a verb. In addition, inflectional morphology focuses on categories that are "sensitive to grammatical environment" (Bickel & Nichols, 2001). Although inflection is regarded as an interface position between morphology and syntax there is no consensus on what is inflected and how and where it is inflected (i.e. whether in the lexicon or syntax).

A number of models have attempted to describe inflectional morphology from a variety of perspectives. Theories of inflectional morphology can be analyzed within two dimensions as proposed by Stump (2001). The first dimension is related to the inventory of inflectional morphemes and their representations in the grammar. A group of theories assume that all inflectional morphemes are separate lexical entries in the lexicon and these theories are called *Lexical* theories (Stump, 2001, p.5). Contrary to what Lexical theories suggest, *Inferential* theories claim that there are no separate lexical items for inflection, rather there are abstract rules that specify the exact environment that an inflectional morpheme appears.

The second dimension pertains to the function of inflectional morphemes. There are two accounts on this regard: while *Incremental* theories assume that inflectional morphemes denote further information or feature(s) to the stem that they are attached to, *Realizational* theories propose that all information is stored in the stem already and adding an inflectional morpheme to a stem helps this feature to be realized (Muller, Gunkel, Zifonum, 2004).

All this categorization produces four combinations of two dimensions: Lexical-Incremental, Lexical-Realizational, Inferential-Incremental and Inferential-Realizational (Muller, Gunkel, Zifonum, 2004; Stump, 2001). The classification of theories according to two dimensions is summarized in Table 1.

Table 1. Theories of Inflectional Morphology

	Lexical Theories	Inferential Theories
Incremental Theories	Minimalist Morphology by Lieber (1992); Wunderlicht (1996, 1997)	Articulated Morphology by Steele (1995)
Realizational Theories	Distributed Morphology by Halle & Marantz (1993); Halle (1994, 1997); Harley & Noyer (1999)	Word-and-paradigm by Matthews (1991), Anderson (1992), Corbett & Fraser (1993), Aronoff (1994)

To illustrate, in lexicalist theories such as Minimalist Morphology (Lieber, 1992), the suffix –*s* in English is assumed to be a separate lexical entry which marks plurality whereas in Inferential theories such as Articulated Morphology (Steele, 1995) the presence of suffix –s can only be explained via a stem to which it is attached. For instance, the word, *cars* can only be understood through association of a plural making rule and the suffix –s since the root is self-explanatory, as suggested by the Inferential Account.

More specifically, it is the presence of an abstract plural rule that we need to know but not the real suffix. Similarly, in Incremental theories (e.g. Minimalist Morphology, Lieber, 1992) it is assumed that the word *cars* becomes a plural noun through attachment of a suffix –s. Thus, further information is added through suffix –

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s. Nonetheless, in Realizational theories (e.g. Distributed Morphology, Halle & Marantz, 1993) the link between the stem *car* and morphosyntactic features of plural formation licenses the insertion of the suffix –s. Again, this can be achieved by either the insertion of a separate lexical item as it is proposed by the Lexicalist view or by the application of a particular morphosyntactic rule as assumed by Inferential theories.

In brief, all these morphological theories propose different definitions and functions for inflectional markers. Although this thesis does not aim to provide empirical data to test them, it may be possible to account for the L2 data collected in the study in light of tools and concepts provided by these models. Before we proceed to the thesis study, it will be necessary to give a brief background as to the typology of languages with respect to their morphological systems and discuss the morphological characteristics of languages involved in the study.

2.4 Morphological typology

The very first type of classification of languages in terms of their morphological properties dates back to the beginning of the 18th Century (Spencer, 1991). The aim was simply to group languages based on their morphological systems. However, it was Edward Sapir (1921) who first advocated a more systematic way of categorization by proposing two indices: the index of synthesis and the index of fusion (as cited in Brown, 2010, p.1). The former refers to the number of morphemes that can be attached to a word whereas the latter indicates the number of grammatical features that can be merged into a single morpheme. This dichotomy reveals two continuums revealing the prototypical categories at the two ends.

Isolating _____ Polysynthetic

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Agglutinating _____Fusional

Thus, as for the index of synthesis there are isolating and polysynthetic languages. In isolating languages, each word is generally composed of a single morpheme and grammatical features are usually expressed via a single word (e.g., Chinese and Vietnamese) (Song, 2001). Example (1) below indicates a sentence in Vietnamese (adapted from Comrie, 1981, p. 43).

(1) Khi   toi den   nha ban   toi, chung toi bat   dau lam bai.
    When I   come house friend   I   'plural' I   begin   do lesson

    'When I came to my friend' house, we began to do lessons'

Contrary to isolating languages, in polysynthetic languages, a number of morphemes are combined in a word and a sentence is often composed of a single word including a number of morphemes (e.g., Chukchee and Blackfoot). Example (2) is a sentence in Cherokee, a polysynthetic language.[2]

(2) Da-tsi-gowthi-sg-v'i
    Something-I-see-'progressive'-'past'

    'I was seeing something facing me'

In terms of the index of fusion, the ends of the continuum, there are fusional (which is also sometimes called (in)flectional (e.g., Spencer, 1991) and agglutinating languages. In the fusional languages a set of grammatical features are fused into a single morpheme (e.g., Russian and Latin) while in agglutinating languages each morpheme is identifiable and corresponds to only one grammatical feature at a time

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[2] The example was retrieved from http://www.native-languages.org/definitions/polysynthetic.htm, January 15, 2018.

(e.g., Turkish and Finnish). Example (3) and (4) present sample words for fusional (Russian) and agglutinative (Turkish) languages respectively.[3]

(3) del   del-yu   del-ami   del-e
matter matter-DAT&SG matter-INS&PL matter-LOC&SG

'matter' 'about a matter' 'with matters'   'in a matter'

(4) göz-lük-çü-ler-den
eye-DER-DER-PLU-ABL

'from opticians'

The above categorization is further elaborated by Greenberg (1954), who added a quantitative dimension to it so as to rank a language in terms of its relative similarity to one of the proposed classes (as cited in Croft, 2003). Furthermore, this helps a language to find its position roughly on the continuum. Greenberg (1954) calculates the indices of synthesis and fusion for three cases of morphology (i.e., inflectional, derivational and compounding) by dividing the number of X (inflectional, derivational and compounding) morphemes by the total number of words in a sample text (Pirkola, 2001). Then, the resultant ratio tells us how far that language is from being synthetic or fusional. For instance, the inflectional index of fusion for Turkish is expected to be closer to 5 (distant from 1, which corresponds to the fusional end) in a 1-to-5-point scale putting it on the agglutinative end of the continuum just because Turkish does not show any properties of fusion. Thus, Greenberg provides a quantitative ground for classifying languages in line with their morphological properties.

Nonetheless, this classification is not without limitations. It has been suggested that it is a great challenge to find a language that fits into only one of these

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[3] Russian words were adapted from Timberlake (2004, p. 92).

groups (Spencer, 1991). More specifically, most of the languages show properties of more than one class. For example, English can be considered an isolating language in terms of its very restricted inflection but an agglutinating language in terms of its derivational categories and even a polysynthetic language in terms of its limited compound words such as *horse-riding* (Spencer, 1991, p.38).

Furthermore, the usefulness and validity of these categories are questioned since they fail to answer how morphology of languages operates in distinct languages (Comrie, 1981; Spencer, 1991). Nevertheless, the distinction made between agglutinating and inflectional (or fusional) languages led to hardcore discussions of morphological theories since the accounts that shed light on this distinction also contributes to the conceptualization of inflection (Spencer, 1991).

In sum, theories of inflection and morphological typology of languages have been proved to be very fruitful in developing linguistic theories on morphology and morphological systems across languages. Within this context, the present L2 study is based on a widely-held assumption that the acquisition of inflectional morphology in the L2 might well be influenced by the typological similarity and differences between the L1 and the L2 of learners (Andersen, 1983; Bailey, et al. 1974; Dulay and Burt, 1974; Ellis, 2006; Gass, 1988; Kaili, Çeltek, Papadopoulou, 2016; Luk and Shirai, 2009; Makino & Tsutsui, 1991; Montrul, 2016; Zobl, 1982 among many others).

The following section, presents the morphological characteristics of five typologically distinct languages that are relevant for the current study, namely Chinese, English, Japanese, Russian and Turkish. Given the focus of the study, the discussion will only include the characteristics of their nominal inflection.

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2.4.1 Turkish

Turkish is a textbook example of an agglutinating language (Booij, 2015: 162). As discussed above, in this type of languages, an inflectional morpheme corresponds to a single grammatical function that can be easily identified and segmented. The affixation is predominantly in the form of suffixes although there are some loan prefixes (e.g., *anti*demokratik, 'antidemocratic') and the emphatic reduplicating prefixes (e.g., *yem*yeşil – '*very green*') (Göksel & Erguvanlı Taylan, 2008). However, in the case of inflection, all morphemes appear as suffixes (Erguvanlı Taylan & Göksel, 2008).

In terms of nominal inflection, like many other languages, Turkish inflects nominals for number, case and possession. The order of inflectional morphemes is as follows: stem, plural, agreement and case. The only linguistic feature that does not apply to Turkish resides in marking gender. Even though there are words which inherently reveals information with respect to the gender (e.g.; *kral*, 'king' vs. *kraliçe*, 'queen'), gender is not grammatically marked in Turkish (Göksel & Kerslake, 2005).

2.4.1.1 Number

To start with, the number is marked by a plural marker –lAr, which is phonologically conditioned by the rules of vowel harmony yielding two allomorphs [-lar] and [-ler] (Kornfilt, 1997). Moreover, as it is the case in other languages, it denotes more than one of a thing or person.

(5) a. ev-ler
house-PL

'houses'

b. araba-lar
car-PL

'cars'

In addition to this, when there is a numeral or quantifier, the plural suffix is not used to avoid redundancy since the plural meaning is already conveyed by the numeral or quantifier (Göksel & Kerslake, 2005):

(6) a. *dört masa-lar
four table-PL

'four tables'

b. *çok   sandalye-ler
a lot of   chair-PL

'a lot of chairs'

Nonetheless, Göksel & Kerslake (2005) note several cases in which the plural suffix is employed with either a numeral or a quantifier. For instance, there are some proper nouns to which the plural suffix is attached (Göksel & Kerslake, 2005, p. 166).

(7) Yedi Cüce-ler
Seven dwarf-PL

'The Seven Dwarfs'

In addition to these, nominals used along with a quantifier *birçok*, 'much-many' can be inflected by a numeral. Even though both plural marked noun along with a quantifier and unmarked forms are accepted as grammatical, the unmarked form is usually preferred (Göksel & Kerslake, 2005, p. 166).

(8) a. birçok nehir
       many   river

    'many rivers'

    b. birçok köprü-ler
       many   bridge-PL

    'many bridges'

Nevertheless, Göksel & Erguvanlı Taylan (2008) note that there is a change in the interpretation (i.e., in the semantics) of a sentence when the quantifier *çok* 'much-many' is used with a plural marked noun. More explicitly, the use of plural marker in such cases is to refer to the different kinds of something rather than referring to its being more than once (Göksel & Erguvanlı Taylan, 2008, p.54). To illustrate, in (9) it is not the same event happening again and again, the plurality is the variety observed in the event type.

(9) Dün   Taksim'de   çok   olay-lar   ol-muş.
    Yesterday Taksim-LOC   many   incidence-PL   happen-EV-3SG.

    'There happened a number of incidences in Taksim yesterday.'

Thus, in (9) the emphasis is on the variety in the incidences that took place in Taksim but not on the number of the events.

Moreover, Göksel & Kerslake (2005) point out that the use of plural marker with an indefinite determiner *bir* (a) is also acceptable in informal contexts while it is typically not used with a plural marker.

(10) Biz   ders   çalış-ırken   Aylin   bir şey-ler   ye-di.
     We   lesson study-WHILE   Aylin   something-PL   eat-PAST-3SG.

   'While we were studying Aylin ate something.'

Additionally, unlike English, Turkish uncountable mass nouns can be inflected by a plural marker (Ketrez, 2012, p. 55).

(11) Çorba-lar
     Soup-PL

   'soup'

Another use of the plural marker is to attach it to a proper name in order to refer to a group of people. For instance, in (12), it is certain that there is a group of people including *Ece who did not go to the meeting*. Thus, the plural marker implies that it was not only Ece but also some people who know Ece in some way did not go there.

(12) Ece'ler   o   toplantı-ya   git-me-di-ler.
     Ece-PL   that   meeting-DAT   go-NEG-PAST-3PL.

   'Ece and her family/friends did not go to that meeting.'

Göksel & Kerslake (2005) also note the use of plural marker with some time and place expressions so as to expand their conceptual referents.

(13) Bura-lar   çok   soğuk.
     Here-PL   very   cold

   'It is very cold here.'

Briefly, the use of plural marker in Turkish is extended to a number of contexts most of which express the plurality of something/somebody. Nonetheless, it is redundant with numerals and quantifiers and this limits the number of occurrences in which it

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may appear. Thus, when compared to the productivity of other nominal inflectional markers, the use of plural is noticeably restricted (Göksel & Erguvanlı Taylan, 2008).

2.4.1.2 Agreement

In nominal inflection, agreement is marked via possessive suffixes attaching to the possessed entity Turkish. Six possessive suffixes are phonologically conditioned in line with the rules of vowel harmony. The agreement paradigm is indicated in (14) and (15) and (16) provide examples of this distribution.

(14) 1st person singular -(I)m   'my'
      2nd person singular -(I)n   'your'
      3rd person singular -(s)I(n)   'his/her/its/their'
      1st person plural   -(I)mIz   'our'
      2nd person plural   -(I)nIz   'your'
      3rd person plural   -lArI(n)   'their'

(15) (ben-im)[4]   kedi-m
      (I-GEN)   cat-1SGPOSS

      'My cat'

      (sen-in)   kedi-n
                       cat-2SGPOSS
      'your cat'

      (o-nun)   kedi-si
                       cat-3SGPOSS

      'his/her/their cat'

      (bizim)   kedi-miz
                       cat-1PLPOSS

      'our cat'

      (sizin)   kedi-niz
                       cat-2PLPOSS

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[4] Due to the null-pronoun characteristics of Turkish, the genitive-marked subject can be dropped in certain discourse-pragmatic conditions.

19

'your cat'

(onların)   kedi-leri
                     cat-3PLPOSS

'their cat'

(16)   (benim)   at-ım
                        horse-1SGPOSS

'my horse'

(senin)   at-ın
                     horse- 2SGPOSS

'your horse'

(onun)   at-ı
                   horse- 3SGPOSS

'his/her/its horse'

(bizim)   at-ımız
                   horse-1PLPOSS

'our horse'

(sizin)   at-ınız
                 horse- 2PLPOSS

'your horse'

(onların)   at-ları
                  horse- 3PLPOSS

'their horse'

As can be seen in example (17), possessive markers also have some peculiarities. For example, in isolation, the word in (17) is ambiguous as the suffix can be decomposed as: a) –lar + ı (plural + 3rd person singular possessive) yielding the meaning 'his/her books'; b) the suffix -ları may not be decomposed yielding the meaning, 'their book' (3rd person plural marker) as there is only one book which belongs to a group of

people. In short, all nominals with the same set of inflectional markers are ambiguous in the same way.

(17) a. kitap-lar-ı
book-PL-3SGPOSS

'his/her books'

b. kitap-ları
book-3PL POSS

'their book'

c. kitap-ları
book-PL-3PLPOSS

'their books'

In isolation, the word, 'kitapları' can also be decomposed as kitap+lar+Accusative case -I. To illustrate this with another example, a second person singular possessive-marked stem which ends with a consonant is ambiguous if it is followed by the case suffix. More explicitly, the sentence in (18a) Arda lost somebody else's pen whereas in (18b) it is the 'his/her pen' that was lost. The ambiguity in this case can be resolved by employing possessive pronouns for each context.

(18) a. Arda   kalem-in-i   kaybet-miş.
Arda   pen-2SGPOSS-ACC   lose-EVIDENTIAL-3SG.

'Arda lost your pen.'

b. Arda   kalem-in-i   kaybet-miş.
Arda   pen-3SGPOSS-ACC   lose-EVIDENTIAL-3SG.

'Arda lost his pen.'

Moreover, as possessive compound marker is homophonous with the 3rd person singular possessive marker phrases like (19) are ambiguous. Compound in (19a) does not specify the possessor of the household while in (19b) the use of possessive pronoun his/her makes it clear that household belongs to the third party.

(19) a. ev   eşya-sı

house   stuff-NOUNCOMPOUND

'household'

b. (O-nun)   ev   eşya-sı
   (S/he-GEN)   house   stuff-3SGPOSS

'his/her household'

In addition to the possessive compounds, possessive markers are predominantly used

with genitive constructions (Göksel & Erguvanlı Taylan, 2008).

(20) okul-un   kapı-sı
      school-3SGGEN   door-3SGPOSS

'the door of the school'

To sum up, along with the ambiguities that they reveal when combined with a plural

or a case suffix, possessive markers are highly productive suffixes appearing in a

number of contexts in Turkish.

2.4.1.3 Case

Case signals the relationship among constituents in a sentence. Different from many

other languages all case markers are realized in the form of overt suffixes in Turkish.

With respect to the exact number of Cases in Turkish, there are different viewpoints.

Five Cases are discussed in some sources (e.g., Göksel, 1992; Göksel & Kerslake,

2005). Some others argue that with the comitative (/-ylA/) and genitive suffixes, the

number of Case morphemes become to six and seven (Göksel & Erguvanlı Taylan,

2008, Kornfilt, 1997; Ketrez, 2012). Overtly-marked case markers are

phonologically conditioned. In other words, the vowel harmony rules apply.[5]

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[5] The capital I and A indicate that when external vowel harmony rule applies to a stem. In other words, the capital I indicates that the vowel in the suffix may be one of the vowels /i/, /ı/, /u/ and /ü/. The capital A represents /a/ or /e/ on the final vowel in the stem. Similarly, when the stem ends with a consonant, the final sound's voice property determines the initial consonant of the suffix. For example, the Locative or Ablative suffixes start with either voiced /d/ or voiceless /t/ depending on the final consonant of a stem. In other words, the suffixes /-te(n)/ or /-ta(n)/ form comes after verbs that end in voiceless consonants; /-de(n)/ or /-da(n)/ form is used elsewhere (Serin & Erguvanlı Taylan, 2011, p. 51).

(21) Nominative   Ø
      Accusative   - (y)I
      Dative   - (y)A
      Locative   - DA
      Ablative   - Dan
      Genitive   - (n)In / - Im
      Comitative   -ylA

According to Case Theory proposed by Chomsky (1993) Nominative and Accusative

Cases are structural cases and they should be checked in a Spec-Head configuration

within a functional phrase (i.e. AgrSP for nominative and AgrOP for accusative,

respectively) (Hornstein, Nunes and Grohmann, 2005). Furthermore, Case is not

assigned but rather its Case features are checked against the relevant head at LF

while the overt realization has to do with the result of this checking process (i.e. for

languages such Turkish overt realization is possible in the form of suffixes). In short,

this account allows us to form a universal derivation process for Case checking,

which may differ in realization along with the morphological features of a particular

language. In line with this, covert and overt forms of Turkish Nominative and

Accusative Cases are exemplified in (22a) and (22b) below.

(22)   a. Ahmet- Ø   sinema-ya   git-ti.
           Ahmet-NOM   movie-DAT   go-PAST-3SG.

        'Ahmet went to a movie theater.'

        b. Duru   ilac-ı   al-dı.
           Duru-NOM   medicine-ACC   take-PAST-3SG.

        'Duru took the medicine.'

In the Chomskyan linguistic analyses, Case is traditionally grouped into two distinct

categories as structural and non-structural. This distinction is explained as follows by

Haspelmath (2009):

> Structural case is a case that is assigned in a particular structural
> configuration (e.g., accusative in the complement position of VP, nominative
> in the specifier of INFL, in the framework of 1980s), while the assignment of

inherent case is tied to a particular semantic role ("theta-role"), or to lexical properties of the governing head (e.g. dative case assigned by the German verb *helfen* 'help'). (pp. 3)

In line with this description, Dative Case-marked noun in (22a) (i.e. *sinema-ya* 'to the movie theater') is an example for non-structural case while Accusative Case-marked noun in (22b) (i.e. *ilac-ı* 'the medicine') is an example for the structural case. Non-structural case is classified as a) inherent case and b) lexical/idiosyncratic case (Woolford 2006, Richardson 2007, Pesetsky and Torrego 2009). The former suggests a particular theta-role (i.e. such as goal in example 22a) checking with an argument. Thus, the theta-role is predictable based on the semantic content of the case. On the other hand, the latter is used to refer to cases for idiosyncratic relation between the case and case assigner (i.e. a verb or a preposition usually). For instance, the Turkish verb *güven-* 'to trust' subcategorizes for a Dative Case. In short, non-structural case reflects more of a semantics syntax interface, structural cases such as Nominative and Accusative Cases are reflexes of Specifier-Head case checking which may or may not have a semantic content.

In addition to its being Structural Case, the Accusative marker in Turkish also marks the specificity of an object NP (Aygen, 2002; Enç, 1991; Erguvanlı-Taylan & Zimmer, 1994; Ketrez, 2003). With a highly flexible SOV word order, Turkish allows scrambling of its constituents including specific object NPs (which are by default Accusative Case-marked). However, non-specific object NPs (which are not Accusative Case-marked with) has to occupy the preverbal position (Kornfilt, 1997). Following Enç's (1991) and Öztürk's (2005) discussions, the sentences below are given to highlight the role of Accusative Case in word order restrictions observed in sentences consisting of specific and non-specific object NPs. The example in (23) indicates that a definite-specific object NP that can be scrambled in any position in

the sentence. The example in (24) shows an indefinite-specific object NP that can move up to the sentence initial position. As (25) shows, an indefinite non-specific object NP is grammatical only when it immediately precedes a VP. When the object NP is not Accusative Case marked, it has to be followed by the verb sticking strictly to the OV construction. In a similar fashion, (22) exhibits the restriction on word order when an indefinite non-specific object NP is used employed.

(23) a. Sezen kitab-ı oku-du.
     Sezen book-ACC read-PAST-3SG.

    'Sezen read the book.'

    b. Kitab-ı Sezen oku-du.
     book-ACC Sezen read-PAST-3SG.

    'Sezen read the book.'

(24) a. Sezen bir kitab-ı oku-du.
     Sezen one book-ACC read-PAST-3SG.

    'Sezen read one book.'

    b. Bir kitab-ı Sezen oku-du.
     One book-ACC Sezen read-PAST-3SG.

    'Sezen read one book.'

(25) a. Sezen bir kitap oku-du.
     Sezen a book read-PAST-3SG.

    'Sezen read a book.'

    b. *Bir kitap Sezen oku-du.
     One book Sezen read-PAST-3SG.

    'Sezen read a book.'

(26) a. Sezen kitap oku-du.
     Sezen book read-PAST-3SG.

    'Sezen read a book.'

    b. *Kitap Sezen oku-du.
     Book Sezen read-PAST-3SG.

'Sezen read a book.'

In sum, if the object NP is specific thus marked with an Accusative Case suffix,

Turkish allows scrambling of it. Yet, if it is non-specific lacking an Accusative Case

marker it has to be adjacent to the predicate.

Different from Nominative and Accusative Cases which necessitate the

projection of AgrSP and AgrOP in derivation; Dative, Locative, Ablative and

Commutative and Genitive cases which are also governed by a predicate that may be

composed of a verb, postposition, adjective and adverb in Turkish do not need to

agree with the TP of a sentence (Hornstein, Nunes and Grohmann, 2005; Öztürk,

2005). The following NPs represent each Case marker listed above respectively.

(27) bina-ya
     Building-DAT

    'to the building'

(28) sokak-ta
     Street-LOC

    'on the street'

(29) dükkan-dan
     Shop-ABL

    'from the shop'

(30) vapur-la   vapur ile
     Ferry-COM   Ferry COM

    'by ferry'

(31) otopark-ın
     Parking lot-GEN

    'parking lot's'

Examples from (27) to (31) indicate distinct Case makers and each denotes specific

semantic content to the stem that they are attached to. In particular, Dative Case

marker in (27) expresses destination or goal while Ablative in (29) expresses source

or departure point" (Erguvanlı Taylan & Serin, 2011, p.52). Similarly, Locative in (28) denotes semantic content of being at a particular location or place. Comitative in (30) expresses an instrument or a means of transport (Serin & Erguvanlı Taylan, 2011, p.74). Lastly, Genitive in (31) expresses the possessor.

Being a typical example of agglutinative languages, Turkish is highly rich in terms of nominal inflection markers. Except for gender, all grammatical relations in the nominal domain such as plurality and Case are overtly realized in the form of suffixes. Still, their use is restricted by the phonological (e.g., vowel harmony) and pragmatic/discourse constraints. In the next section, nominal inflection in English will be explored on the basis of gender, number, agreement and Case features.

2.4.2 English

Traditionally English is categorized as a synthetic language (Comrie, 1991). Nevertheless, it has been suggested that Modern English approximates to the isolating end of the index of synthesis since there are few instances of inflection (Blevins, 2006). Unlike Turkish, English is a poorly inflected language comprising only eight inflectional suffixes. These are listed in (32) (Fromkin, Rodman, Hyams, 2007, p. 99):

(32)   third person singular agreement marker   -s
         Past tense   -ed
         Progressive marker   -ing
         Past participle   -en
         Plural   -s
         Possessive   -'s
         Comparative   -er
         Superlative   -est

As can be seen in the list, English nouns are inflected only for number and possessive but not for gender and Case.

Similar to Turkish, nouns can be grouped in terms of the gender type that they reveal. Still, this is not grammatically-marked on nouns. Only third person singular pronominals (e.g. he/she/it) grammatically mark gender (Eckersley & Eckersley, 1960).

Furthermore, unlike Turkish, English nouns are not inflected for Case, either. Grammatical Case available in Old English for Nominative, Accusative, Vocative, Genitive and Dative in the form of suffixes were abandoned around the 15th Century[6] (Eckersley & Eckersley, 1960, p. 45). Genitive suffix, which marks the possessor, is the only Case suffix reminiscent of the Old English Case system. More details are presented on the possessive/genitive –'s in Section 2.2.2.3 below. The discussion below first includes English numeral marker –s.

2.4.2.1 Number

Traditionally, English plural markers are categorized into three depending on the morpho-phonological characteristics (e.g., Belvin, 2006). The first one is the English regular plural morpheme –s. It has three phonologically conditioned allomorphs, namely [z], [s] and [əz]. As the example (33), indicate the allomorph [əz] appears when the noun ends in a sibiliant phoneme. The [s] occurs following the nouns ending with a voiceless nonsibiliant phoneme whereas the [z] appears after a voiced nonsibiliant phoneme (Bybee, 2002, p.58).

(33) a. a bus – two bus*es* [əz]

b. a cat – two cat*s* [s]

c. a bag – two bag*s* [z]

The second group involves irregular plural marking with three types of affixation. Each example represents a different category in (34). The example in (34a) indicates

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[6] Comrie (2006) notes that "… dates are somewhat arbitrary in that English and they did not develop at the same rate in all regions nor at all levels of grammar" (p. 63).

zero marking for plural. In such contexts, plurality can only be understood via a preceding determiner. Similarly, (34b) exemplifies irregular uses related to a vowel change (Bauer, Lieber, & Plag, 2013, p. 131). The example in (34c), however, was claimed to be a late representative of the Anglo-Saxon plural suffixes (i.e. -as, -an, -u, -a, and -o) (Eckersley & Eckersley, 1960, p. 29).

(34)   a. a sheep – two sheep [Ø marking]

         b. a foot – two feet [ablaut / umlaut]

         c. a child – two children [-en]

The last category is reserved for the loan words and their plural formation process. (35a), (35b) and (35c) represent loan words which are pluralized according to rules of Latin, Greek and Italian (Eckersley & Eckersley, 1960, p. 31).

(35)   a. a locus – two loci

         b. an analysis – two analyses

         c. a soprano – two soprani

In brief, this section presented examples for the regular plural morpheme –s along with its allomorphs and indicated irregular uses at different contexts.

2.4.2.2 Agreement

As mentioned earlier, scarcity of overt inflectional morphemes is also evident in personal agreement. In English, personal agreement is expressed overtly only for third person singular (i.e. –s) (Carstairs-McCarthy, 2002, p. 38). Example (36b) shows that missing personal agreement morpheme yields an ungrammatical sentence in English.

(36)   a. Mary like-s John.

         b. *Mary like John.

         c. We like John.

2.4.2.2 Case in English: possessive/genitive marking

Overt Case marking is highly limited in English. Still, Case marking on pronominals

highlights the distinction for the structural case (Jepersen, 1933). To illustrate, the

pronominals in (37) differ with respect to Nominal and Accusative Case.

(37)   NOM: I, You, He/She/It, We, You, They

        ACC: me, you, him/her/it, us, you, them

In terms of the inherent case such as Ablative, Locative, Dative, and Instrumental,

English express them via prepositions. The only Case that is overtly grammaticalized

via a morpheme is the Genitive-Possessive relation. The possessive marker –'s' is

also called the 'Saxon Genitive' and it is homophonous with the regular plural suffix.

It is also phonologically conditioned yielding three allomorphs: [z], [s] and [əz].

(38)   a. horse's [əz]

        b. cat's [s]

        c. dog's [z]

Furthermore; the *of*-construction, which is referred to as the 'Norman Genitive', can

be employed to express possession. Some sources do not report a distinction between

these two constructions except for very restricted uses of Genitive that cannot be

replaced by any another construction (i.e. doctor's degree but not the degree of

doctor) (Eckersley & Eckersley, 1960, p. 48).

(39)   a. the plays of Shakespeare

          b. Shakespeare's plays

However, factors such as animacy of possessor, meaning relationship (e.g. some of my students vs. *my students' some), semantic category of the possessor (e.g. a piece of cake vs. *a cake's piece), length of possessor and possessum are reported to determine the type of Genitive to be used (Bauer, Lieber, & Plag, 2013, p. 147).

In brief, inflectional marking in the nominal domain in English is limited to two homophonous forms one being (i.e., plural) with several cases of irregular alternatives while the other is the genitive-possessive construction.

2.4.3 Russian

Russian is a typical example of a fusional language with a rich nominal inflectional system in which the nominal declension includes overt marking of gender (as masculine, feminine, and neuter), number (plural and singular) and Case (Nominative, Accusative, Genitive, Dative, Prepositional, Instrumental) on nouns (Levine, 2009). The discussion starts with number and continues with gender and ends with the introduction of Case.

2.4.3.1 Number

As Russian is a fusional language, there is no one/unique suffix that signals the plurality as it is the case in English and Turkish (Comrie, 2002, p.281). Instead, number marking interacts with gender and Case. As the Russian Case system will be discussed in the next section, the examples here will be limited to Nominative Case-marked plurals which differ in terms of gender.

The plural marker -i is used for both masculine and feminine nouns and it has two variants, namely, a phonetically hard -ы and soft –и (i.e. palatalized version of a

consonant).[7] On the other hand, nominative neutral nouns are plural-marked with –a or –ya on the basis of the same hard-soft distinction (Levine, 2009). The examples in (40) illustrate the variation (Levine, 2009, p.29).

(40)   a. stol-i   [masculine-nominative-plural]
         chair-PL

        'chairs'

      b. slov-a   [neutral-nominative-plural]
         word-PL

        'words'

      c. sestr-I   [feminine-nominative-plural]
         sister-PL

        'sisters'

In addition to these regular uses of plural marking, there are irregular cases which are grouped into three different uses (Timberlake, 2004). For the first two groups there is a pattern that governs the irregularity whereas the last group presents a case of suppletion. Below are some examples in (41) adapted from Levine (2009, p.32).

(41)   a. brat -   brat-iya
         brother - brother-PL&NOM&MAS

        'brother - brothers'

      b. mati -   mat-*er*-i
         mother - mother-PL&NOM&FEM

        'mother - mothers'

      c. rebenok - deti

        'child   children'

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[7] This distinction is related to consonant pairs in Russian (there are 15 pairs in the form of: б [b]–[b']). "A soft consonant is pronounced the same way as its hard counterpart, except for one important additional feature—the consonant is pronounced with the middle of the tongue raised toward the roof of the mouth, as in the pronunciation of the vowel и" (Levine, 2009, p. 8).

In conclusion, it is demanding to segment a specific numeral inflection in Russian due to the fusional nature of all nominal inflections on the same stem. The next section focuses on the nominal inflections in Russian.

2.4.3.2 Gender

Russian is a language exemplifying grammatical gender and natural gender (Levine, 2009). The grammatical gender is predictable based on the noun's last sound. There is no meaning-based division in determining the grammatical gender. For instance, if a noun ends with a consonant, then it is mostly masculine. If it ends with –a or –ja, then it is predominantly feminine. Similarly, if it ends with –o or –e sounds, then the grammatical gender of a nominative singular stem is usually neuter. However, the classification does not strictly apply to all nouns. In other words, there are some exceptions to these categories. Nouns in (42) highlight some examples of grammatical gender.

   (42)   a. [mágáz*ín*] [masculine]

                   'store'

                b. [kníg*á*]   [feminine]

                  'book'

                c. [mór*é*]   [neuter]

                   'sea'

On the other hand, natural gender is merely based on the semantic meaning of the noun. For example, [máma] (means mother in English) bares a natural gender feminine (Levine, 2009, p. 20).

        In line with three grammatical gender classes, nouns are divided in three distinct classes based on their gender. Therefore, not all nouns are inflected with the

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same number and case markers (Timberlake, 2004). Rather, there are different declensions including a specific set of noun lists. In each of these declension classes, grammatical gender is marked for all three classes mentioned above. These classes will be discussed in the following section since inflectional marker differences are available through Case marking.

2.4.3.3 Case

Unlike English but similar to Turkish, Russian marks nouns for six different Cases. These are Nominative, Accusative, Dative, Locative, Instrumental and Genitive (Brown, 2010). As noted earlier, there are some declension classes. However, the number of the declension classes is controversial. According to traditional grammar books, there are three classes[8] all of which are specified in terms of genders of nouns and the last sound of the stem (Levine, 2009; Timberlake, 2004). For instance, the first declension is composed of masculine nouns ending with a consonant and –i sound as well as neutrals ending in –o and –e. The second declension includes both feminine and masculine nouns ending in –a or –ja sound. Lastly, the third declension consists of feminine nouns ending in –i. Furthermore, it is crucial to know the declension class of a noun since each declension has its own set of fused suffixes marking gender, number and case at the same time. Four declensions of the singular paradigm were adapted from Müller (2004, p. 3-5). These declensions will be discussed as they are indicated in the tables. Table 2 indicates the first declension of masculine in Russian.

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[8] Several analyses propose four different declension classes in which they further divided the first declension into two distinct classes. (e.g., Corbett & Falser, 1993; Müller, 2004). However, for the sake of clarity, four-way division will be adopted here.

Table 2. First Declension Masculine in Russian

	I		
	Zavod ('factory')	*Student* ('student')	*Zitel* ('inhabitant')
Nom/sg	zavod-Ø	student-Ø	ˇzitel'-Ø
Acc/sg	zavod-Ø	student-a	ˇzitel-ja
Dat/sg	zavod-u	student-u	ˇzitel-ju
Gen/sg	zavod-a	student-a	ˇzitel-ja
Inst/sg	zavod-om	student-om	zitel-em
Loc/sg	zavod-e	student-e	ˇzitel-e

(adopted from Müller, 2004, p. 3-5).

As presented in Table 2, not all masculine nouns are inflected in the same way;

depending on the final consonant of the stem, the suffix that is added to the stem

changes. To illustrate, Accusative-marked masculine singular stems may take one of

the three suffixes: Ø, -a or –ja. Table 3 shows declension for feminine and masculine

nouns.

Table 3. Declension- Feminine & Masculine

	II		
	komnat ('room')	*uˇcitel'nic* ('teacher')	*nedel'* ('week')
Nom/sg	komnat-a	uˇcitel'nic-a	nedel-ja
Acc/sg	komnat-u	uˇcitel'nic-u	nedel-ju
Dat/sg	komnat-e	uˇcitel'nic-e	nedel-e
Gen/sg	komnat-y	uˇcitel'nic-y	nedel-I
Inst/sg	komnat-oj(u)	uˇcitel'nic-ej(u)	nedel-ej(u)
Loc/sg	komnat-e	uˇcitel'nic-e	nedel-e

(adopted from Müller, 2004, p. 4)

In this declension system, the instrumental singular suffix of feminine and masculine

stems is just the same for two different gender types while this uniformity is not

observed in feminine instrumental singular suffixes. This suggests that although

grammatical gender matters, the form of suffix largely depends on the type of (hard

vs. soft) the last sound of the stem. Different from the second declension system,

Table 4 presents the third declension that is valid for Feminine nouns.

Table 4. Declension- Feminine

	III		
	tetrad' ('notebook')	*myˇs* ('mouse')	*doˇc* ('daughter')
Nom/sg	tetrad'-Ø	myˇs'-Ø	doˇc'-Ø
Acc/sg	tetrad'-Ø	myˇs'-Ø	doˇc'-Ø

	tetrad-I	my�’s-I	do˘c-er-I
Dat/sg	tetrad-I	my˘s-I	do˘c-er-I
Gen/sg	tetrad-I	my˘s’-ju	do˘c-er’-ju
Inst/sg	tetrad’-ju	my˘s-I	do˘c-er-I
Loc/sg	tetrad-I	my˘s-I	do˘c-er-I

(adopted from Müller, 2004, p. 4)

Table 4 signals that not all feminine singular stems are inflected in the same way. For instance, different from first two feminine stems, the last one employs –er suffix for dative, genitive, instrumental and locative case. This is also true for the distribution of neutral stems as it is indicated in Table 5.

Table 5. Declension- Neutral

	IV		
	mest ('place')	*jablok* ('apple')	*su˘s˘cestv* ('creature')
Nom/sg	mest-o	jablok-o	su˘s˘cestv-o
Acc/sg	mest-o	jablok-o	su˘s˘cestv-o
Dat/sg	mest-u	jablok-u	su˘s˘cestv-u
Gen/sg	mest-a	jablok-a	su˘s˘cestv-a
Inst/sg	mest-om	jablok-om	su˘s˘cestv-om
Loc/sg	mest-e	jablok-e	su˘s˘cestv-e

(adopted from Müller, 2004, p. 5)

Lastly, plural-marked declensions provide a more unified picture with less variation. Table 6 indicates Case and plural-marked masculine, feminine and neutral stems.

Table 6. Plural marked Declension Systems

	I	II	III	IV
	Zavod ('factory')	*komnat* ('room')	*tetrad'* ('notebook')	*mest* ('place')
nom/pl	zavod-Ø	komnat-y	tetrad-I	mest-a
acc/pl	zavod-Ø	komnat-y	tetrad-I	mest-a
dat/pl	zavod-u	komnat-am	tetrad-jam	mest-am
gen/pl	zavod-a	komnat-Ø	tetrad-ej	mest-Ø
inst/pl	zavod-om	komnat-ami	tetrad-jami	mest-ami
loc/pl	zavod-e	komnat-ax	tetrad-jax	mest-ax

(adopted from Müller, 2004, p.14)

As presented in Table 6, Instrumental and Locative Case markers are just the same across all gender types when they are inflected with a plural.

In conclusion, the Russian nominal inflection system is highly rich considering its fusional nature. All components of inflection (gender, number, case)

yield a fully integrated declension system which further interacts with the phonological properties of the stem.

2.4.4 Chinese

Although there are a number of languages spoken in China such as Cantonese, Wu, and Hakka, only Mandarin Chinese will be discussed here as it represents the language of the approximately 70 per cent of the total Chinese population (Comrie, 2002, p. 702). Chinese is a typical example of an isolating language in which words are usually composed of single morpheme. In addition, Chinese lacks overt inflectional morphology in the nominal domain while it makes use of other ways such as word order or classifiers to mark inflection covertly (Huang, Li & Li, 2009). Classifiers are used frequently in Modern Mandarin Chinese NP. The components of an NP can be ordered as follows (Ross, 2004, p.22):

Specifier + Number + Classifier + Noun

A typical NP will include either a specifier or number or both along with a classifier which are word-specific items. Below is example (42) for two different NPs (Ross, 2004, p.27):

(43) a. Number + Classifier + Noun
      san   ben   shü

      'three books'

      b. Specifier + Number + Classifier + Noun
      nà   san   ben   shü

      'those three books'

As the above examples illustrate 'ben' is the classifier and cannot be translated into English since it has no meaning but it has to be there.

In terms of number marking, singular and plural forms of the nouns are just the same since there is no particular number marking. Numbers and quantifiers are employed in order to express plurality. However, nouns referring to human beings are added to a particle –men, which is claimed to be very "uncommon" since they cannot be modified by a number + classifier combination (Ross & Sheng, 2006). The example in (44) shows two words that are rarely used (Ross & Sheng, 2006, p. 23).

(44)   a. haizimen

'children'

b. xueshenmen

'students'

In addition, this particle is also used with personal pronouns. The Table 7 indicates the distribution.

Table 7. Plural Particle used with Personal Pronouns in Mandarin Chinese

	Singular	Plural
1st person	Wo (I and me)	Women (We and us)
1st person inclusive	-	Zanmen (We and us)
2nd person	Ni (you)	Nimen (you)
2nd person polite	Nin (you)	-
3rd person	Ta (S/he, it, him, her)	Tamen (They and them)

(adopted from Ross & Sheng, 2006, p. 24)

As it is clear, there is no distinction between Nominative and Accusative Cases in Chinese overtly. Thus, the position of the pronoun in a sentence is used instead of overt inflection of Case (Ross, 2004). Since Chinese is SVO language, 'wo' gets Nominative or Accusative case covertly if it occupies subject or object position respectively (Pulleyblank, 1995). The example in (45) highlights the distinction (Pulleyblank, 1995, p. 14):

(45)   a. wǒ gěile   tā   yī   běn   shū.
               I   give   him   a   CLASSIFIER   book

'I gave him a book.'

b. tā gěile wǒ yī běn　　　　　shū.
　　　　　　he give me　a CLASSIFIER　book

　　　'He gave me a book.'

In (45) except for the position in a sentence, there is no distinction between 'wǒ' and

'tā'. However, in the second sentence, 'tā' is Nominative case-marked covertly since

it appears in the subject position. In addition to Nominative and Accusative cases;

other Case features like Genitive, Locative and Instrumental are not overtly marked

on nouns. They are available through prepositions and particles (Ross, 2004).

　　　In terms of gender, similar to Turkish and English, Mandarin Chinese does

not mark gender grammatically whereas only the written form of third person

singular makes a distinction between masculine, feminine and neutral.

　　　In brief, Mandarin Chinese lacks affixation to mark nominal inflection on

nouns although these features are reflected by distinct tools of a language such as

word order.

2.4.5 Japanese

Japanese is an isolating and agglutinative language with highly inflected verbs and

comparatively little inflection on adjectives and nouns (Tsijimura, 2007). More

specifically, gender and number are not grammatically marked in Japanese

(Kamerman, 2010). However, number information is conveyed through a classifier

and a numeral (Sanecka, Kamenskaya, Ogura, Yamana & Yudovina, 2007). The

following examples indicate the use of plural in Japanese.

　　(46)　　　a. hana
　　　　　　　　flower

　　　　　　　'flower' and 'flowers'

　　　　　　b. futatsu no hana
　　　　　　　two CLASSIFIER flower

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'flowers'

In addition, every NP is marked with a Case marker. According to Kamerman (2010), these markers are not particles but 'clitic postpositons' while Tsijimura (2007) call them as 'invariant case particles'. The Table 8 indicates the Case particle and the Case category.

Table 8. Case Markers in Japanese

Nominative Case	-ga
Accusative Case	-o
Dative Case	-ni
Genitive Case	-no
The topic marker	-wa

For each Case participle, examples which were adapted from Tsujimura (2007, p.122) are given in (47).

(47)   a. Taroo-ga   hasit-ta.
           Taroo-NOM run-PAST

         'Taro ran.'

     b. Kodomo-ga   hon-o   yon-da.
        Child-NOM   book-ACC read-PAST.

        'The child read the book.'

     c. Ziroo-ga   Yoshio-ni   ringo-o   age-ta.
        Ziro-NOM Yoshio-DAT apple-ACC give-PAST.

     'Ziro gave an apple to Yoshio.'

     d. Hanako-no   musuku-ga   warat-ta.
        Hanako-GEN son-NOM   laugh-PAST

        'Hanako's son laughed.'

     e. Ano   uti-wa   ooki-i.
        That   house-TOP big-NONPAST

     'As for that house, it is big.'

As the example (47) shows, the particles do not change on the basis of the properties of the nouns that they are attached to. There are politeness prefixes that attach to nouns (o- and go-), yet these are not accepted as inflectional markers (Makino and Tsutsui, 1991).

Japanese marks other Cases in the form of postpositions: *de* (instrumental), *ni* (locative), *kare* (source), and *e* (goal) (Tsujimura, 2007, p.457).

All in all, in Japanese Case marking is overtly realized in the form of suffixes while there is no inflectional morpheme for gender and plural.

2.5 Conclusion

In this chapter, several theories of morphology were discussed and certain key terms were defined as relevant to the present study. Furthermore, morphological typology and inflectional systems were elaborated within different frameworks. This was followed by a brief descriptive note on the nominal inflectional patterns found in languages (i.e., English, Russian, Chinese and Japanese as well as Turkish) that are examined in the study. Table 9 below summarizes the relevant morphological features of these languages.

Table 9. A Summary of Languages and Target Morphemes

	Plural	Ablative	Accusative	Dative	Locative
Turkish	+	+	+	+	+
English	+	-	-	-	-
Russian	+	+	+	+	+
Chinese	-	-	-	-	-
Japanese	-	-	+	+	-

Next chapter will discuss the fundamental issues regarding the second language acquisition (SLA) of morphology.

CHAPTER 3

SECOND LANGUAGE ACQUISITION OF MORPHOLOGY

3.1 Introduction

This chapter discusses the role of morphology in different models and theories of
second language acquisition (SLA) and presents a review of second language (L2)
studies on the acquisition of morphology. This section is followed by the studies on
the acquisition of Turkish bringing both L1 and L2 perspectives together.

3.2 Conceptualization of L2 morphology in different SLA theories

The field of SLA has established itself as a distinct discipline with its own theories
and models. Nevertheless, until recently, as noted by Mitchell, Myles and Marsden
(2013), early SLA studies were more in the service of foreign languages teaching
pedagogy. For instance, in the early 1940s, Behaviorism was the dominant learning
theory. Accordingly, SLA studies focused mostly on the type of errors committed by
L2 learners since these errors were considered bad habits which should be replaced
with accurate uses in the target language through reinforcement. As a pedagogical
approach based on Behaviorism, the Contrastive Analysis Hypothesis (henceforth
CAH) put forward the idea that structural similarities and differences between the
target language and the native language determine how well and how fast an L2 will
be acquired (Dulay, Burt, and Krashen, 1982). Structural differences were believed
to pose potential problems for L2 learners as L1 linguistic properties were considered
'old habits' to be replaced by 'new habits. Thus, L1-L2 differences were brought to
L2 learners' attention assuming that this would prevent negative L1 transfer hence
smooth mastery of L2 properties (Howatt, 1988; Johnson, 2004).

In the subsequent years, the structuralist viewpoint based on Behaviorism was weakened on the basis of ample evidence indicating that neither similarities guarantee error-free acquisition nor differences necessarily pose an obstacle for SLA. Thus the Behaviorist accounts gradually became less popular. There were basically two arguments, based on L1 acquisition, which led to this change in the conceptualization of language acquisition in general. The first one was the child's capability of producing utterances that s/he has never heard before. This capability is linked to the creativity of language. The second one was the child's rapid mastery of highly complex linguistic rules at an age when s/he has not reached a complete cognitive maturity. The ability to acquire complex linguistic rules despite meager and insufficient input is referred to as the poverty of the stimulus problem or Plato's problem (Chomsky, 1987), which is essentially considered the 'logical problem of language acquisition' (Hornstein & Lightfood, 1981; Pinker, 1989). This issue has been used to promote the idea that L1 acquisition is guided by an innate linguistic capacity in Chomskyan Universal Grammar (UG). Different from earlier linguistic assumptions, the Chomskyan Generativists focused more on the properties that are common across all languages while maintaining the idea that language acquisition ability is innately available to all learners.

After the Chomskyan innatist view has become the dominant perspective in the field of L1 acquisition at the beginning of the 1960s, L2 research also followed this new theoretical approach. Thus, the downfall of the CAH came after the emergence of the Chomskyan Generative Linguistics framework. These developments paved the way to in-depth research that focuses on the mechanisms underlying the L2 learning capacity that is, for some researchers, also available to adult L2 learners. One of the most influential L2 studies that reveal invariant

acquisition order for adult L2 acquisition indeed came as an indirect support for this Universalist position. It is crucial to note that these L2 studies took Brown's (1973) morpheme order study in L1 acquisition of English as the basis. Brown (1973) claimed that there is a particular pattern in L1 acquisition of English morphemes based on the findings of a longitudinal study with three English children. Following this pioneering study, Dulay and Burt (1974) questioned whether such an invariable acquisition order was also valid for L2 learners. They conducted a study with three groups of L1 Spanish and L1 Chinese children learning English as a L2. The data collection tool was the Bilingual Syntax Measure, in which participants were shown seven pictures and were asked to answer to 33 questions. Then the percentage accuracy in the use of different morphemes in each obligatory context was calculated. Target linguistic features were ranked based on their accuracy count (Ellis, 1985). Results revealed a consistent pattern for the emergence of English morphemes for L2 learners with a variety of L1 backgrounds.[9]

Similarly, Bailey, Madden and Krashen (1974) tested, via the Bilingual Syntax Measure, the morpheme acquisition order in L2 English by including 73 adults with different L1 backgrounds. They also observed a similar order in L2 learners of English irrespective of their L1 backgrounds. Based on this observation, Krashen (1974) proposed the Natural Order Hypothesis, which assumes that the path that learners follow in L2 acquisition is predictable and crucially deliberate instruction has no use in changing this order.

In another L2 study, Larsen-Freeman (1975) tested the universal morpheme acquisition order in L2 English learners with different L1s (i.e., Arabic, Japanese,

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[9] The order found in L2 English differed from the one found in L1 studies. However, what was notable was the fact that there was a universal order for the emergence of morphemes in L2 English irrespective of the participants' L1 (Mitchell & Miles, 1998, p. 33).

Persian and Spanish) by employing Bilingual Syntax measure, reading, listening, writing and speaking tasks. An invariant acquisition order was observed in production tasks but there were some differences among different tasks in terms of the order of acquisition revealed. More specifically, the Bilingual Syntax Measure was found to be the most reliable tool of all tasks. Also, it was found that the reading task was a better task in identifying subject differences but not morpheme differences (Larsen-Freeman, 1975, p. 416). Moreover, the reading task differed from other tasks such as listening and speaking significantly. To sum up, Larsen-Freeman claimed that the order found was more like a "difficulty order" instead of an acquisition order and this order was not invariant across different tasks although the order for some morphemes overlapped in some tasks (Larsen-Freeman, 1975, p. 418).

Nevertheless, other studies such as Hakuta (1976), Rosansky (1976), Kessler and Idar (1979) also revealed data confirming that language development follows a predetermined route regardless of the L1, the age of the learner and the task used. Thus, the finding that there is an invariant acquisition order for L2 acquisition has contributed directly to the idea of a universal sequence for acquisition of certain grammatical forms not only in child L1 acquisition but also in adult L2 acquisition.

These earlier studies have been criticized in many subsequent works. For example, Ellis (2015) noted that the so-called acquisition order studies ignored the developmental pattern evident in the dynamic nature of acquisition. In a way, Ellis suggests that these earlier studies incorrectly equated accuracy order with acquisition order (Ellis, 2015, p.184).

Similarly, Lowie and Verspoor (2015) also note that these orders are based on the accuracy scores taken at a one spot in the developmental trajectory. Thus the

generalized group means fail to capture "the dynamic interconnectedness and the embodied nature of language development" (Lowie & Verspoor, 2015, p.84).

Despite the problems with earlier studies on a universal acquisition order, the idea of an innately-guided acquisition pattern not only downgraded the role of L1 in L2 acquisition but also has led to various different discussions in the field of theoretical SLA. An L1-independent acquisition order has served indirectly to the purpose of UG-based L2 research that examines whether or not some universally available grammatical constraints are also available to post-puberty L2 learners and whether or not adult L2 learners can gradually overcome negative transfer effects of the L1 in L2 acquisition (e.g., Mitchell & Miles, 1998; White, 1995; 1989). In this context, the poverty of stimulus argument has also been promoted for L2 learners. For example, White (1995; 2003a, b) argued that late L2 learners, like child L1 learners, also face the problem of meager input, the inadequacies of simplified input, lack of negative evidence but can still go beyond the input they receive in the L2 context. Thus, L2 research in the Chomskyan framework has attempted to work out how adult L2 learners perform compared to native speakers in the acquisition of UG-based core linguistic properties that are believed to be innately available and of L2-specific properties that need to be learned.

UG-based L2 research has generated many different proposals regarding the role of L1 and the extent of UG-access in L2 acquisition (Mitchell & Miles, 1998). As mentioned in Thomas (2013), some researchers claim that in adult SLA there is no access to UG. Due to a neurologically-based critical period, UG does not function in SLA thus adult L2 learners resort to general learning mechanisms rather than UG (e.g., Bley-Vroman, 1989; Johnson & Newport, 1989). This view has always been

associated with the Fundamental Difference Hypothesis of Bley-Vroman (1989) that holds that adult L2 learners' reliance on mechanisms other than UG makes their acquisition process "slow, unpredictable and variable" (Thomas, 2013, p. 38).

Contrary to this view, some others assume "Full Access to UG" for adult L2 learners. The proposals within the UG-is-available view, however, differ from one another as to the extent of L1 transfer effects. For instance, while Flynn (1993) argues that there is no direct transfer from L1 to L2, Schwartz and Sprouse (1994, 1996) claim that in the initial stages of L2 acquisition, L1 features are transferred into the L2 but in time, L2 learners adopt to L2 features constrained by UG. In between these two views, there exists a partial L1 transfer view. For instance, Vainikka and Young-Scholten (1996, 1998) argue, on the basis of their Minimal Tree Hypothesis, that only lexical categories are available at the initial stages of L2 acquisition; functional categories develop gradually. For example, a functional category, Tense Phrase (TP) can only be projected on the basis of the acquisition of tense inflection, suggesting a morphology-dependent syntactic development. In the same vein, Eubank's (1996) Valueless Features Hypothesis proposes that L2 feature strength associated with functional projections is valueless (i.e., inert) initially and this can only be fixed after learners acquire the full morphological paradigms in the L2. Nevertheless, some researchers assume that L2 knowledge of functional categories associated with feature strength may not be fully attained, suggesting a permanent impairment in the L2 grammatical representations (see also Beck, 1998).

These theoretical models have been formulated on the basis of substantial L2 work that focused on the acquisition of L2 morphology and syntax. In a way,

previous theoretical L2 work has discussed whether L2 syntactic projections can be acquired despite the absence of overt realization of L2 morphology (White, 2003b).

3.3 Studies on L2 acquisition of inflectional morphology

Following the earlier morpheme acquisition studies discussed in the previous section (e.g., Bailey, Madden, Krashen, 1974; Dulay & Burt, 1974) much work has been conducted on L2 acquisition of morphology and in some of the studies, the focus has shifted to the study of discrete linguistic (morphological) units. An early example for such studies is Stauble's (1984) study with 6 L1 Japanese and 6 L1 Spanish participants on L2 English verbal inflectional morphology across three proficiency levels (i.e., low intermediate, intermediate, advanced). The results revealed that some morphemes such as progressive /–ing/ emerge earlier than the regular past tense /–ed/ irrespective of L1. However, the use of copula *be* is different both across L1 and proficiency groups, suggesting that L1 can play a role in the acquisition of L2 morphology.

In more recent work, the issue of variability in the use of inflectional morphemes has become the central topic. The acquisition of L2 morphology has been explored in relation to the acquisition of syntactic categories. As noted earlier, the theoretical question of whether L2 syntax is dependent on L2 morphology was the main focus in these studies conducted in the late 1990s. White (2003c) makes a distinction between the morphology-before-syntax accounts and syntax-before-morphology views. As the labels reveal, while the former assumes that the acquisition of morphemes leads to the acquisition of functional (syntactic) projections (Clahsen, Penke and Paroli, 1993/94; Radford, 1990), the latter account

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assumes that syntactic categories are available to L2 learners before their overt morphological realizations are acquired fully (White, 2003c, p.182).

In this context, work on L2 English morphology (both in nominal and verbal domain) has attracted much attention. For instance, Haznedar and Schwartz (1997) collected oral production data from an L1 Turkish L2 English child over a period of 18 months' time. The results displayed a discrepancy between correct suppliance of certain inflectional suffixes (i.e., regular past tense and third person singular suffixes) on lexical verbs and accuracy of underlying syntactic structures. This was accepted as a further support for the accessibility of UG in SLA while the problem with the suppliance was attributed to a mapping problem between form and function. This account is also known as the Missing Surface Inflection Hypothesis (Haznedar, 2001; Haznedar & Schwartz, 1997; Prévost and White, 1999), according to which UG is intact in adult L2 learners and the problem has to do with the overt realization of functional features. In the same vein, Prévost and White (2000) analyzed longitudinally collected data of L2 French and L2 German in terms of finiteness and agreement. They observed that rule governed restrictions of finiteness are still valid for L2 acquirers. In other words, although there is a failure in correct morphological suppliance, finite forms never violate syntactic restrictions.

Similarly, Lardiere's (1998a) influential work on a steady state grammar of L1 Chinese L2 English learner, Patty unveils the gap between L2 syntax and morphology. In this study, Lardiere analyzed the spontaneous speech data of an adult L2 learner who lived in the USA more than 10 years, which frees the discussion from the developmental effects of SLA. The data revealed that the past tense and third person singular suffixes were supplied scarcely (34.5% and 4.5%, respectively within

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the overall data set) while Patty's grammar was highly compatible with other highly complex linguistic rules like Case assignment. On the basis of the data, Lardiere (1998a) concludes that even though interlanguage syntax is governed by the principles of UG, there is a problem in overt (morphological) realization of some linguistic phenomena.

Within more recent SLA studies based on the generativist framework (i.e., the Minimalist Program), variability is attributed to either interpretable or uninterpretable features (Lardiere, 2009). In this context, Lardiere (2008) claims that idiosyncratic properties of a language are assembled differently in different languages. Given that formal features of a syntactic category might be different for distinct languages, L2 acquisition should involve the reassembly of the features that are associated with a particular formal feature. For instance, based on the data gathered from an L1 Chinese-L2 English participant, she puts forward that restricted uses of plural in Chinese was accommodated or reassembled in a way that would capture the uses of plural in L2 English (Lardiere, 2008). In a similar vein, in another work, Lardiere (2009) provides examples for the acquisition of plural by comparing features in three languages (English, Chinese and Korean) and the acquisition of question marking in Korean and English. In all these cases, L2 acquirers' task is to figure out "how the relevant features are realized in the target language" (p.187). She further states developing morphological competence involves reassembling of the relevant features from the way they are conditioned and realized in the L1 to that of the L2." (Lardiere, 2008, p.15).

In addition to the studies showing morphological variability in the verbal domain, a few other L2 English studies reported similar results in the nominal

domain (Robertson, 2000; Leung, 2001; White, 2003c) For example, White (2003c) collected spontaneous speech data from an adult L1 Turkish-L2 English speaker in four sessions over a two-month period and she also used a grammaticality judgment task at the end of the study. Detailed analysis of the learner's verbal and nominal inflection use demonstrated that, similar to what Lardiere (1998a) found, White's participant was highly accurate in Case assignment. As for the nominal domain, she committed omission errors particularly in indefinite article use whereas she was highly accurate in plural marking. These studies suggest that to some extent L1 might play a role in the acquisition of L2 morphology.

In another study, Hawkins & Chan (1997) claim that variability observed in the suppliance of inflectional morphology stems from the incomplete parameter setting in the L2. More specifically, since the parameters are set in accordance with the L1, the acquisition of L2 features which require parameter re-setting results in a failure. This hypothesis is referred to as the Failed Functional Features Hypothesis (Hawkins & Chan, 1997). Later versions were termed as the Representational Deficit Hypothesis or Interpretability Hypothesis (Hawkins, 2004; Tsimpli, 2003; Hawkins & Hattori, 2006; Tsimpli & Dimitrakopoulou, 2007). In these views, it was suggested that in late L2 acquisition, acquisition of grammatical features and/or feature strengths that are incompatible with his/her L1 will be difficult, if not impossible.

In a review article which analyzes several L2 English morpheme order studies in terms of L1 influence, Luk & Shirai (2009) included 25 morpheme order studies that had been chosen by Goldschneider & DeKeyser (2001) on the basis of meta-analysis of a database. They compared Krashen's Natural Order with the orders observed in both child and adult learners of L1 Japanese-L2 English, L1 Chinese-L2

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English, L1 Korean-L2 English and lastly L1 Spanish-L2 English. The results revealed that there was no predetermined universal morpheme order. Instead, absence or presence of a morpheme in the L1 seems to determine the order of its emergence in the L2 setting. More specifically, since there is no specific plural marker in Japanese, the order varies across different studies (Luk & Shirai, p.740). To sum up, they conclude that the influence of L1 on the acquisition of L2 English morphemes is a more predominant phenomenon than it was once predicted (Luk & Shirai, p.742).

In conclusion, all these studies have looked at distinct domains of inflectional morphology in SLA and revealed variability mostly in oral production. Although the way they account for this variability differed in many respects, they converge on the idea that L2 acquisition of morphology poses a particular problem for late L2 learners, mostly due to L1 influence. In this context, much work has been conducted on L2 English. Nevertheless, theoretical assumptions on the acquisition of L2 morphology need to be tested on the basis of data from other languages with richer inflectional paradigms. This is the basic motivation behind the current study that aims to provide L2 data from Turkish, a morphologically rich language with a rather regular inflectional paradigm. It is believed that L2 Turkish data will contribute immensely to the investigations of L2 acquisition of morphology in general and to the field of L2 Turkish, in particular. Before moving onto a discussion on previous work on L2 acquisition of Turkish morphology, it will be relevant to briefly present the findings of L1 acquisition of Turkish morphology.

3.4 Acquisition of Turkish

In this section of the thesis, studies on the acquisition of both L1 and L2 Turkish will be discussed in line with their relevance to the study.

3.4.1 L1 Acquisition of Turkish Morphology

Available studies on L1 acquisition of Turkish inevitably include the acquisition of a variety of inflectional as well as derivational morphemes. As noted by Aksu-Koç and Slobin (1985), the first study on L1 Turkish was published by Özbaydar in 1970 and it was a report on language development of two children aged 12-24 months. Subsequent to this pioneering work, a number of other studies have explored the ways in which morphemes are acquired in Turkish. For example, in an earlier study, Ekmekçi (1979) examined the availability of a universal order of relations such as nomination, recurrence, disappearance, attribution, possession and agency in L1 Turkish by collecting data from a Turkish monolingual child. At the beginning of the study, the toddler, Didem was 15 months old. Sixty-minute long audio recordings were collected in monthly intervals. The study was completed when the child was 27 months old. Based on the detailed analysis of the data, Ekmekçi (1979) claimed that the order of acquisition of syntactic and semantic relations is corresponded the one proposed by Brown (1973). However, the number of the morphemes produced by Didem in each age level outnumbered the ones observed in the same stages in Brown's English study. Ekmekçi (1979) attributed this to the agglutinative nature of Turkish morphology and to morphology-dependent word order rules in Turkish. In other words, since word order is highly flexible in Turkish, the morphosyntactic markers on words are highly significant in revealing the syntactic relations. Thus, in order for a child to be understood, s/he has to produce morphemes accurately.

Ekmekçi (1979) also revealed an acquisition order for Case as follows (from earlier to later acquisition): Dative, Accusative, Locative, Instrumental, and Ablative. As Ekmekçi also noted, the early acquisition of Accusative Case was surprising. First of all, it is homophonic with the 3rd person possessive marker. In addition to that, it is used only with definite objects. However, other Case markers such as Dative, Locative and Ablative mark only Case and their use are comparatively more salient.

Other differences between two languages (namely English and Turkish) are attributed to linguistic differences between two languages. For instance, the plural marker in English emerges earlier compared to the emergence of the Turkish plural marker. Ekmekçi (1979) accounted for this by noting that unlike English the plural marker in Turkish is obligatorily absent before numbers and certain quantifiers (i.e. *altı araba* vs. *six cars*). Since Turkish children do not need to use it as frequently, it does not emerge as early as it is in English. In sum, Ekmekçi (1979) claimed that Brown's morpheme acquisition order is also valid for L1 Turkish acquisition although there is no complete one-to-one match between English and Turkish morphemes in their acquisition order.

Aksu-Koç & Slobin's (1985) study could be referred to be the first systematic study in which they analyzed most of the verbal and nominal inflectional morphemes in a detailed manner by referring to word order, semantics and prosodic features of Turkish. They provided a detailed analysis of acquisition errors of Turkish monolingual children based on the data they compiled from earlier acquisition studies such as Aksu (1982), Ekmekçi (1979), Savaşır (1983) and Slobin (1982). One of the most striking generalizations that they arrived at was that acquisition of Turkish morphemes is almost error free. They note that the number of errors is

highly restricted and they are highly predictable. In addition, compared to acquisition of many other languages, children make use of both nominal and verbal inflections productively quite early on. They list twelve reasons that would account for the ease of acquisition. First of all, in Turkish, a verb-final language, morphemes are postponed, syllabic, stressed, obligatory, and they are tied to content words, expressing only grammatical roles (Aksu-Koç and Slobin, 1985, p. 855). Also, morphemes follow a fixed order in line with their relevance to the stem (i.e. Noun-Plural-Possessive-Case and Verb-Modality-Tense/Aspect-Person/Number). Semantic mappings, regularity, phonological distinction among morphemes are among the other reasons that are claimed to facilitate the acquisition of morphemes in Turkish.

In a different review article, Küntay and Slobin (1999, p. 153) revisited the acquisition of Turkish as the L1 by referring to earlier studies. In their review, they noted that Turkish nominal inflection is fully acquired when toddlers are 24 months old and most of the markers are used productively when they are 15 months old. However, the early production comprises some overregularization errors (i.e. *bebeğin _ bebeki*) as it was also highlighted in Ekmekçi's data. This observation has also been confirmed Topbaş, Maviş, Başal, (1997) who investigated longitudinally the acquisition of nominal inflection by 100 L1 Turkish children. Topbaş et al. (1997) found that all case markers were present by the 23rd month in L1-speaking Turkish children. Their data also revealed an early emergence of multiple combinations of nominal use such as possessive + Locative and possessive + Dative (Küntay & Slobin, 1999, p. 153).

In a different study, Ketrez (1999) investigated the acquisition of the argument structure in Turkish on the basis of data collected at regular intervals in

their natural setting by the parents of four Turkish children. Spontaneous speech data were transcribed in line with the CHAT program designed for the analysis of child language data. The results revealed that although children make use of a number of highly complex structures quite early on, these are frozen chunks most of the time. The productive use of these structures emerged quite late after their first emergence. Furthermore, Ketrez (1999) argued that the study supports the discontinuity hypothesis[10] over the continuity hypothesis[11] since the early grammars of Turkish children is quite divergent than adult grammar.

3.4.2 L2 Acquisition of Turkish Morphology

The number of L2 studies on Turkish morphology is limited. Nevertheless, in recent years theoretically-driven work on L2 Turkish has increased (Gürel, 2016). Although available data differ in their focus and data collection tools, the findings are still revealing as to which verbal and nominal morphemes are more prone to persistent variability in L2 Turkish.

In an earlier study, Gürel (2000) investigated, via grammaticality judgment and elicited production tasks, variability in the use of nominal inflection. She collected data from adult L2 Turkish learners of L1 English speakers with varying degrees of L2 Turkish proficiency (i.e. seven beginners, seven intermediate and seven advanced). The results revealed that although L2 learners sometimes fail to use overt Case morphology, they have knowledge of abstract Case and of the interaction between Case and the word order restriction (Gürel, 2000, p. 390). In

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[10] Radford (1990) claims that children's language is different from the adult grammar with its own unique stages such as precategorical, lexical and functional stages.
[11] Macnamara (1982) and Pinker (1984) propose that every sample of child language is a part of adult language; the same rules that govern adult language govern the child language.

addition, Gürel's study revealed that the error rate in the use of Accusative case is higher than that of Dative and Genitive Case morphemes.

Following Gürel's (2000) study, Haznedar (2006) conducted a study with an L1 English-L2 Turkish learner via spontaneous speech collected over 1 year in 6 separate sessions. It was observed that although the L2 learner supplied tense and agreement markers correctly most of the time, he had problems with Case morphology. However, the analysis revealed that he was aware of word order restrictions on Case in Turkish. The variability in the use of Case markers was attributed to the mapping problem between the abstract rules of a language and its morpho-phonological realization.

Similarly, Papadopoulou et al. (2010) investigated the acquisition of Case morphology in L2 Turkish by L1 Greek learners by comparing predictions of three different views (namely, the Weak Continuity Hypothesis, Failed Features Hypothesis, and Missing Surface Inflection Hypothesis).[12] Data collected via a cloze test, sentence picture matching task, and online grammaticality judgment task. The results confirmed previous studies. The first finding suggested that learners had no real difficulty with verbal inflection. Secondly, similar to Gürel's (2000) finding, L2 learners were sensitive to Case-dependent word order restrictions. Lastly, omission errors outnumbered the submission errors. Thus, Papadopoulou et al. (2010) claimed that these findings provide further supports for the Missing Surface Inflection Hypothesis since there seems to be a mapping problem instead of a syntactic impairment.

In a more recent study, Kaili, Çeltek and Papadopoulou (2016) investigated L2 acquisition of Turkish tense, aspect and modality (henceforth TAM) morphemes via fill-in-the blank test and an elicited oral imitation task in order to identify the most difficult TAM morpheme and to see if there is the L1 Greek influence. There were fifteen participants with a varying degree of Turkish proficiency (two at B1 level, six at B2 level and seven at C1 level according to CEFR). The findings revealed that L2 Turkish learners had more difficulty with modal morphemes than the others (Kaili, Çeltek and Papadopoulou, 2016, p. 101). They claimed that there could be two possible sources for such a result. "Multifunctionality" of these modal morphemes (i.e. aorist –(A/I)r and evidential –mIş) was claimed to be one reason

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[12] In the Weak Continuity Hypothesis, Radford, (1990) and Clahsen, Penke and Parodi (1993) assume that absence of some morphological forms are related to the absence of functional categories. The Failed Features Hypothesis assumes representational deficit in L2 (Hawkins & Chan, 1997). The Missing Surface Inflection Hypothesis proposes that full UG representations available to L2 learner but there may be problem with the surface realization of these features (Haznedar & Schwartz, 1997; Lardiere, 1998a; 1998b; Prévost & White, 2000).

while the influence of L1 Greek which does not mark modality in the form of morphemes (instead there are lexical items to denote modality) could be the other (Kaili, Çeltek & Papadopoulou, 2016, p. 101).

In another study, Montrul (2016) addressed the L2 acquisition of Turkish voice morphology. The aim of the study, following the premises of Lardiere's (2009) Feature Reassembly Hypothesis, was to test whether the availability of targeted voice features (namely causative/inchoative) in the L1s facilitates L2 acquisition Turkish causative/inchoatives. Three distinct L2 Turkish learner groups (i.e., L1 English, L1 Spanish and L1 Japanese participants) took part in a picture judgment task in which 11 target verbs and their counterparts with a change in voice feature were shown. In addition to this, a cloze test which reveals the proficiency groups in Turkish and a vocabulary translation task which tests the lexical content knowledge of target items were administered. The results indicated that L1 influence was evident in line with the availability of abstract features for causatives or anticausatives. If they are available, then learners had little difficulty as it was the case in the L1 Japanese group (Montrul, 2016, p. 127-128). However, when L1 and L2 features differ as in English and Turkish, participants resort to L1 features. Therefore, the L1 English group was less accurate in their judgments when compared to other groups.

In addition to these studies, there are also some others that analyze the processing of morpho-syntactic features in L2 Turkish. One of them is Uygun and Gürel's (2016) study in which they tested whether L2 proficiency matched participants with different L1s (English with a restricted morphology in contrast to Russian with highly inflectional morphology) process nominally inflected lexical items in the same way. Data were collected via an unprimed lexical decision task

designed in E-prime 2.0 (Schneider, Eschman & Zuccolotto, 2002 cited in Uygun & Gürel). The task targeted 138 words (i.e. both monomorphemic and multimorphemic nouns inflected for Plural, Locative and Ablative Cases) and 280 nonwords. A Turkish cloze test revealed two proficiency groups (i.e. intermediate and advanced for each L1). The RT scores of the unprimed lexical decision task demonstrated that Turkish natives access multimorphemic words as fast as monomorphimic ones signaling that there was no decomposition in their processing (Uygun & Gürel, 2016, p. 270). Moreover, L1 English- L2 Turkish advanced participants were also fast in accessing multimorphemic words as it was the case in the L1 Turkish control group. Contrary to the L1 English-L2 Turkish advanced group, the L1 Russian- L2 Turkish advanced participants relied on decomposition in their processing of multimorphemic words showing slower performances in their retrieval. Moreover, there was also significant difference between the L1 English-L2 Turkish intermediate and L1 Russian-L2 Turkish intermediate groups in terms of their RTs. More specifically, the former was slow only in the Stem-Ablative and Stem-Plural-Ablative patterns of all multimorphemic words whereas the latter was slow in accessing almost all multimorphemic items except for the Stem-Locative nouns (Uygun & Gürel, 2016, p. 270). In conclusion, the study revealed that although L2 learners rely on decomposition irrespective of their L1s in their access to multimorphemic words at the initial stages of their developmental trajectory, they demonstrate more native-like performance as their L2 proficiency increases (Uygun & Gürel, 2016, p. 274).

In another study, Aydın, Aygüneş and Demiralp (2016) addressed neurophysiological basis of morphosyntactic properties of L2 Turkish learners with different L1s (i.e. Albanian, Arabic, English, French, German, Greek, Portuguese, Russian) and with different levels of L2 Turkish proficiency (i.e. low and high

intermediate) in order to test whether language distance and L2 proficiency has an impact on the acquisition of Case and Agreement features in L2 Turkish. Event-related potentials (henceforth ERPs) were collected in a timed grammaticality judgment task which involved 156 sentences in three conditions (i.e. grammatical conditions, sentences with Case violations, and sentences with Agreement violations). The results indicated that L1 and L2 Turkish groups differed only in Case violations (Aydın, Aygüneş & Demiralp, 2016, p. 306). Also, the L2 proficiency level appeared important only when L1 and L2 properties were divergent.

In brief, available data on L2 Turkish morphology reveals morphological variability to a certain extent particularly in oral production (Gürel 2000; Haznedar 2006). Omission errors appear to outnumber the substitution errors, suggesting that the problem may be related to online mapping of form and function (Gürel 2000; Haznedar 2006). In addition, variability does not appear to be a persistent problem for all L2 learners. Rather L2 proficiency- and exposure-based increase was relevant in the accuracy rates. More specifically, studies suggest a L2 proficiency- and L1-L2 similarity-dependent decrease in morphological variability (Aydın, Aygüneş & Demiralp 2016; Kaili, Çeltek & Papadopoulou 2016; Montrul 2016; Uygun & Gürel 2016). Furthermore, some studies reveal a distinction between the acquisition of nominal versus verbal inflection (Aydın, Aygüneş & Demiralp 2016; Haznedar 2006; Papadopoulou et al. 2010).

3.5 Conclusion

This chapter provided an overview of L2 research and discussed changes that have taken place in theoretical approaches to L2 acquisition of morphology. As discussed

above, starting with the morpheme acquisition studies much work has been conducted to examine the acquisition of morphology in the L2. A common observation was that morphology is one of the most notoriously difficult domains of grammar for late L2 learners. Based on this observation, much previous theoretical SLA work has devoted attention to the question of whether or not adult L2 learners have access to UG-based constraints despite problems in the suppliance of L2 morphology, questioning the issue of morphology-driven syntax in the L2. What is important to note at this point is that the design of the current study on L2 Turkish morphology does not allow us to be involved and take a stand in this theoretical discussion. However, the current data are novel as it provides both comprehension and oral production data from Turkish, a highly inflected language with an extremely regular inflectional paradigm in the verbal and nominal domain. The question of whether morphological variability is an unavoidable problem even for learners of L2 Turkish will be the core research question in the thesis study. Furthermore, the study will provide comprehensive data from L2 learners with a range of L1s (i.e., Chinese, English, Japanese and Russian) that differ from each other and from Turkish with respect to their morphological systems. The study aims to first provide descriptive data on the (in)accurate use of L2 morphemes and then attempts to account for the acquisition patterns in reference to influence of L1 typology and inherent complexity of the target morphemes.

CHAPTER 4

METHODOLOGY

4.1 Introduction

As stated earlier, the current study focuses on the role of L1 morphological system on the acquisition of nominal inflectional markers in L2 Turkish by adult native speakers of Chinese, English, Japanese and Russian. This chapter presents detailed information about the participants, tasks, materials, and procedures.

4.2 Research questions and predictions

The current study seeks answers for the following research questions:

1. Do adult L2 learners of Turkish differ from native Turkish speakers in terms of the rate (i.e., percentage) of correct suppliance of nominal inflection (i.e. Ablative, Accusative, Dative, and Locative, and Plural morpheme) in Turkish?

2. Are there L1-dependent differences in the acquisition/use of L2 Turkish inflectional morphology? More specifically, do L1-Russian, L1-Chinese, L1-English and L1-Japanese learners with the same level of L2 proficiency use Turkish nominal inflection differently (in terms of the correct suppliance rate and error type) due to the effects of L1 morphological structure?

3. What are the major morphological problems observed in these groups?

   a) Are there any differences among nominal inflectional morphemes in terms of accurate use?

b) Which of the morphemes tested in the nominal domain are used most and least accurately?

c) What are the potential reasons for this differential accuracy (if any) in the use of inflection?

With respect to predictions, the followings will be relevant in the context of above-mentioned questions:

i. Native-nonnative differences: Not all L2 Turkish learners will differ, from native Turkish speakers in the rate of correct use of nominal inflectional morphemes. L1-based differences will be observed in the extent of native-like attainment of L2 morphology.

ii. Typological (i.e., morphological) differences/similarities between the L1 and L2: L2 learners whose L1 is similar to Turkish in terms of the morphological system (e.g., Japanese, Russian, and to some extent English) will outperform those whose L1 is morphologically different from Turkish (e.g., Chinese). More specifically, L1 Japanese participants are predicted to be more accurate since nominals in Japanese are inflected with distinct suffixes. Similarly, being an inflectionally rich language, L1 Russian is also expected to facilitate the acquisition of nominal inflections in L2 Turkish. Although the fusional morphological paradigm in L1 Russian (i.e., nominal morpheme marks a number of syntactic features at the same time) is not directly comparable to the Turkish nominal paradigm, having a rich nominal inflectional system in L1 Russian might still sensitize L2 learners of Turkish towards the obligatory use of these morphemes.

Thus, L1 Russian learners are predicted to perform better than English and Chinese L1 participants. L1 English speakers are predicted to have more difficulty than Russian and Japanese L1 participants since English is highly scarce in terms of nominal inflectional markers. On the other hand, L1 Chinese participants are predicted to have the most difficulty among other L2 groups because no overt inflectional suffix is available in Chinese.

iii. Comparison of morphemes: Certain nominal morphemes in L2 Turkish are expected to be acquired more readily depending on the presence/absence of these morphemes in the L1. For instance, L1 English participants are predicted to be less accurate in their Case suffix use but be more successful in their use of plural morpheme due to its availability in English as well. Similarly, due to the absence of Plural morpheme in Japanese, L1 Japanese participants are predicted to be less accurate in their Plural morpheme use. Nevertheless, the way formal features are assembled in the L1 might also affect the acquisition of the corresponding morpheme in the L2, as suggested by Lardiere (2009).

4.3 Participants

Four groups of learners of L2 Turkish were included in the study. Specifically, L1 English, L1 Russian, L1 Chinese, and L1 Japanese learners of L2 Turkish took part in the study. Each L2 group had 18 participants. Participants were found via snowball sampling. They were paid 25 TLs for their participation. All L2 learners were late L2 learners (learned Turkish after age 10) and they all had the same

proficiency level in L2 Turkish, which was tested via a Turkish cloze test. Eighteen age- and education-matched adult Turkish native speakers served as a control group. L2 participants were also matched as much as possible in terms of the length of L2 Turkish exposure.

Demographic information of the participants in the experimental groups is provided in the Table 10.

Table 10. Demographic Information of the Participants in Experimental Groups

Groups	N	Gender	Mean age at the time of testing (range)	Mean age of first exposure to Turkish (range)	Mean length of stay in Turkey (range) (year)	Mean length of L2 Turkish exposure (range)
Chinese	18	F: 7 M: 11	34.7 (21 – 65)	24.7 (18 – 47)	7.5 (1 – 30)	8.7 (1 – 30)
English	18	F: 7 M: 11	35.1 (24 – 52)	26 (15 – 48)	6.4 (1 – 17)	6.4 (1 – 17)
Japanese	18	F: 15 M: 3	36.3 (21 – 71)	23.5 (17 – 47)	8.7 (1 – 40)	9.3 (1 – 40)
Russian	18	F: 13 M: 5	35.1 (25 – 43)	22.4 (14 – 29)	8.9 (2 – 22)	9.3 (2 – 22)

In addition to the experimental groups, 18 Turkish native speakers, who matched the L2 group in terms of age and education, were tested as a control group. Demographic information of the control group is presented in Table 11.

Table 11. Demographic Information of the Participants in Control Group

	N	Gender	Mean Age	Age Range
Turkish	18	Female: 15 Male: 3	27.5	21 – 55

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Lastly, none of the participants reported any loss of sight or hearing. Although the participants were informed that the tasks were related to the acquisition of Turkish as the L2, the focus of the study was not revealed in order not to bias them.

4.4 Tasks

In this study, the target inflections were four Case suffixes (i.e. Ablative, Accusative, Dative, and Locative) and the Plural suffix. The experimental tasks consisted of an elicited oral production task and a written (i.e. pen and paper) forced elicitation task. A linguistic background information questionnaire and a Turkish cloze test were also administered. The following sections detail these tasks.

4.4.1 Linguistic background information questionnaire

This task was basically designed to identify the demographic characteristics of participants as well as their linguistic background (see Appendix A for the form). Participants were requested to provide detailed information regarding their stay in Turkey and their experience in using Turkish. This questionnaire also included foreign language self-rating where the participants rated their Turkish in four skills (reading, writing, listening and speaking).

4.4.2 Turkish cloze test

It was administered to determine the current L2 Turkish proficiency level of the participants. The test was originally developed and used in Gürel & Uygun (2013). Since the original version involved some of the target morphemes like Plural and Accusative suffixes, the test was modified. The test was a 197-item test, in which every 7th word was deleted. This gave us 25 slots to fill in with a correct word and/or inflection. Participants were asked to fill in these gaps (see Appendix B for the cloze

test). All L2 participants in the study had already taken a placement test in their institution. They were all in advanced-level language classes. The cloze test and self-ratings were additional measures to obtain proficiency levels of the students. The placement test, the cloze test as well as self-ratings were all used to assure that all L2 participants had a comparable (advanced) level of L2 Turkish proficiency.

4.4.3 Elicited oral production task

In this task, participants were asked to describe 30 pictures presented on a computer screen via the software, DMDX (Forster & Forster, 1999). In this task, the dependent variable was the accuracy in the use of target morphemes while constructed utterances based on a picture context.

4.4.3.1 Materials

The task involved constructing a total of 95 items (5 trial items; 30 utterances requiring the Plural morpheme plus four Case inflections (i.e., Ablative, Accusative, Dative, and Locative), and 60 filler utterances). Pictures were used to create an obligatory context for a particular target morpheme and each picture targeted/required only one (target) morpheme. The pictures were created via a free web-based language learning tool, Toondoo. There were six items in each morpheme category hence a total of 30 target pictures (see Appendix C for the list of target utterances and the target morphemes they involve). There were also 60 fillers involving intransitive verbs with no object NPs (e.g. *Ali her gün koşar.* 'Ali runs every day.'). In addition to these, there were five trial items that were used to familiarize the participants with the task.

4.4.3.2 Procedure

Participants were asked to describe each picture using the cues (i.e., words) provided on the picture. For example, the following picture illustrates an obligatory context for the Dative Case morpheme. On the picture, the subject, object and the verb were provided. These cues (i.e., subject, object and the verb appeared in the same order for each picture/item). Participants were required to construct, as quickly as possible, a well-formed sentence by using these sentential cues provided and by supplying the obligatory target morpheme. The reason why the cues were given in a fixed SOV order is because in this experiment, we were only interested in the speed and accuracy in morpheme production. The word order variation-dependent morpheme suppliance was not one of the variables tested. In other words, thinking that participants' correct morpheme suppliance might be influenced by word order variations, all target constructions were meant to have an SOV word order. Accuracy in the use of target morphemes was analyzed as a dependent variable. Participants were seated in front of a laptop and were requested to wear a headphone set. After all voice recording devices were checked, the task was introduced to them. They were told to form sentences as quickly as possible immediately after they saw the pictures along with the necessary vocabulary items at the top of each picture. They were given 2500 milliseconds (ms) to construct each sentence and the onset of the recording for both voice recorder and RT timer in DMDX was set to the moment when the picture appeared on the screen for the first time. Before each picture was presented, there appeared + sign in the middle of the screen to fix their attention to the upcoming test item. No feedback was given to the participants as they proceed in the test and all items (both target and fillers) were randomized by the program automatically. The task lasted approximately 15 to 20 minutes for each participant.

At the end of the task, participants were given a vocabulary list and requested to rank their familiarity with the words appeared in the test on a scale of 1 to 4 (1=I have never seen this word before; 4=I know this word very well). This was to ensure that there were no unfamiliar vocabulary items that they had to use in constructing sentences on the basis of pictures. The subsequent analysis showed that participants were familiar with all the items in the vocabulary test. The mean score of familiarity was above 3.96 out of 4. This way, it was ensured that participants were asked to construct sentences using the target morphemes on the vocabulary items that they were familiar with.

The motivation for including a timed production task was to ensure that they would not have time to monitor their morpheme selection and overall sentence production on the basis of their conscious metalinguistic knowledge of L2 morphology. This way, we believed that, the production task was close to online measures that tap unconscious implicit knowledge.

A sample picture and the targeted nominal inflectional marker are presented in the example below.

(48)   Target Sentence expected: Futbolcu şimdi top-a vur-uyor[13]

Prompt picture:

(49)   Filler Sentence: Adam dün taşın-dı.
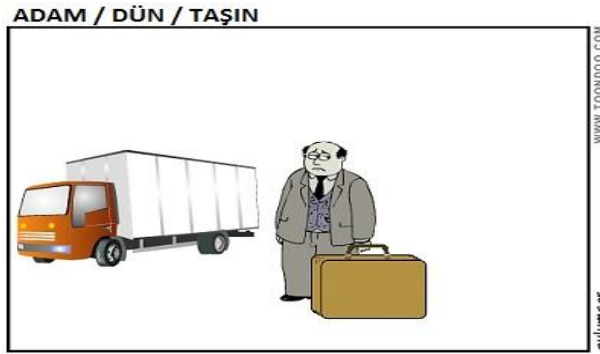
Prompt picture:

4.4.3.3. Coding and scoring

As noted above, six pictures for each category were used to trigger the use of nominal inflectional marker. To obtain a measure of accuracy, the responses to prompt questions were grouped into four categories: correct use, omission, substitution and an accurate use of an alternative structure.

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[13] In the absence of an adverb provided on the picture, other tense/aspect markers on the verb were also accepted.

4.4.4 Written Forced Elicitation Task

In this task, participants were given a pen-and-paper multiple-choice task. Unlike the production task, this task is not timed and it aims to tap metalinguistic knowledge of the participants by forcing them to choose the correct morpheme from among the ones presented in the test.

4.4.4.1 Materials

The test included 40 sentences to be filled out with one of the six options provided on the test. Choices consisted of target morphemes plus a null (empty) option. All choices were the same for all items. For example, as given below, there were six choices for each item, only one of them being the correct option. All options were phonologically controlled leaving the inflectional marker itself as the only variable. To illustrate this, in the example below although the suffixes, *–ler, -yi, -ye* and *–de* are perfectly acceptable with the stem '*fare*' (mouse) in any other context, only the use of *–den* yields a grammatical sentence due to the argument structure of the verb '*nefret etmek*' (to hate) which subcategorizes for an Ablative Case-marked NP in Turkish.

> (50)　　　Zeynep fare___ nefret ediyor.
>
>　　*a. Ø　b. –ler　c. -yi　　d. -ye　　e. -de　　f. -den*

In other words, each item/sentence tested only one morpheme and there was only one correct option to fill in each slot. To ensure this, the test was piloted several times with native and nonnative speakers (those that did not take the real test) and items that appeared to have more than one correct answer were revised or eliminated. Due to the metalinguistic nature of the task, there was no time-limit and the purpose of

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the task, which was always given after the production test, was not disguised. Thus, no filler items were used in this task (see Appendix D for the complete set of items used in the task).

4.4.4.2 Procedure

The written forced elicitation task was administered after the online oral production task. Also, as in the first task, each participant was tested separately. They were requested to take the multiple choice test in one session without any break. Participants were not allowed to go back to the items they marked. Due to the nature of the task, it was ensured that no one among the participants were majoring linguistics or language studies. As noted earlier, the task was untimed so that participants spent as much time as they needed. All items were written on a word document and printed out and the participants were asked to put a tick on the correct option after reading each item. The test lasted for an average of 20 minutes for each participant.

4.4.4.3 Coding and scoring

Correct answers (i.e., selection of the correct morpheme) were counted for each participant. Errors were categorized as either omissions or substitution. Then, the type of substitution was determined for each morpheme.

In order to eliminate the possibility that participants failed to select the correct answer (i.e., morpheme) due to their lack of lexical/word knowledge, all items were presented to the participants at the end of the test, and as in the first task, participants were requested to rank their familiarity with the target verbs appeared in the test on a scale of 1-4 (1=I have never seen this word before; 4=I know this word

very well). The aim was to exclude the items that they did not know from the analysis. Similar to the first task, the analysis revealed that the test did not include vocabulary items that the participants were not familiar with. The mean score of familiarity was above 3.89 out of 4.

4.5 Conclusion

This chapter detailed the methodology of the current study. The results of the analyses are discussed in the following chapter.

CHAPTER 5

RESULTS

5.1 Introduction

This chapter presents the results of the study[14]. The first section indicates the findings of the oral production task. The second section provides the results of the written forced elicitation task across four L2 groups for five nominal inflection morphemes in Turkish. In the third section, findings of the cloze test that targets to measure L2 Turkish proficiency of the participants are presented. The chapter ends with a summary of findings.

5.2 Results of the oral production task

Recall that in this task, participants produced a total of 95 utterances (five utterances as trial items, 30 utterances involving target Case morphemes and for the plural suffix, and 60 utterances as filler sentences). Only target items were included in the analysis. However, there were some missing items in the data due to several reasons (i.e., failure to answer in time, meaning-related problems, performance errors, etc.). Thus, the overall accuracy scores were based on the percentage accuracy for each morpheme by excluding the missing items.

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[14] Since the homogeneity of variance was violated in all cases, the interaction between various L1s and target suffixes could not have been analyzed within a mixed designed analysis. Thus, the current analysis consists of tests in which these two independent variables have been examined across two tasks separately.

Table 12 presents the overall mean accuracy percentages (out of 100) for all morphemes across all groups.

Table 12. Mean Percentage Accuracy Results

Group & Case*	Ablative	Accusative	Dative	Locative	Plural
L1 Turkish	58.69	73.00	71.00	64.33	67.94
L1 Russian	57.11	46.17	57.69	58.22	51.89
L1 Japanese	42.00	46.00	34.47	42.74	43.91
L1 English	36.33	33.17	31.25	33.06	36.42
L1 Chinese	33.82	30.05	33.16	29.87	28.21

5.2.1 L1 vs. L2 differences

The first analysis involved L1 Turkish participants in order to identify potential L1-L2 differences. Besides, the accuracy rate obtained for each case suffix was analyzed one by one across five groups. Since the homogeneity assumption was violated, the Kruskal-Wallis test was conducted as a non-parametric alternative to the one-way ANOVA in SPSS version 21.0.

The analysis of the Ablative Case morpheme revealed that there was a significant difference among groups $H(4) = 16.530$, $p = .002$ with a mean percentage of 33.82 for L1 Chinese; 36.33 for L1 English;42.00 for L1 Japanese; 57.11 for L1 Russian, and 58.69 for L1 Turkish groups. Pairwise comparisons indicated a further significant difference between the L1 Chinese and L1 Russian groups ($p = .038$) and between L1 Chinese and L1 Turkish ($p = .020$).

The Kruskal-Wallis test run for Accusative Case signaled significant differences among all groups $H(4) = 32.091$, $p < .001$ with a mean accuracy percentage of 30.05 for L1 Chinese; 33.17 for L1 English; 46.00 for L1 Japanese;

46.17 for L1 Russian, and 73.00 for L1 Turkish. Pairwise comparisons highlighted a significant difference between Turkish native speakers and all other groups: L1 Chinese vs. L1 Turkish ($p < .001$); L1 English vs. L1 Turkish ($p < .001$); L1 Japanese vs. L1 Turkish ($p = .018$), and L1 Russian vs. L1 Turkish ($p = .016$).

The results of the Kruskal-Wallis test for Dative Case showed statistically significant differences among groups $H(4) = 35.653$, $p < .001$ with a mean accuracy percentage of 33.16 for L1 Chinese; 31.25 for L1 English; 34.47 for L1 Japanese; 57.69 for L1 Russian and 71.00 for L1 Turkish. Further analysis of pairwise comparisons revealed significant differences between L1 English and L1 Russian ($p = .018$), L1 English and L1 Turkish ($p < .001$), L1 Chinese and L1 Russian ($p = .033$); L1 Chinese and L1 Turkish ($p < .001$), and L1 Japanese and L1 Turkish ($p < .001$). In other words, L2 groups except for those with L1 Russian were significantly less accurate than native Turkish speakers.

As for the Locative Case suffix, the Kruskal Wallis analysis indicated significant differences among all the groups, $H(4) = 27.866$, $p < .001$ with a mean rank of 29.87 for L1 Chinese; 33.06 for L1 English; 42.74 for L1 Japanese; 58.22 for L1 Russian, and 64.33 for L1 Turkish. Pairwise comparisons with adjusted p-values revealed that there were significant differences between L1 Chinese and L1 Russian ($p = .005$); L1 Chinese and L1 Turkish ($p < .001$); L1 English and L1 Russian ($p = .021$), and between L1 English and L1 Turkish ($p = .001$).

Lastly, the Kruskal Wallis analysis for the Plural suffix demonstrated significant differences among the groups, $H(4) = 27.311$, $p < .001$ with a mean of 28.21 for L1 Chinese; 36.42 for L1 English; 43.91 for L1 Japanese; 51.89 for L1 Russian, and 67.94 for Turkish. Pairwise comparisons showed that there was a

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significant difference between L1 Chinese and L1 Russian ($p = .039$); L1 Chinese and L1 Turkish ($p < .001$); L1 English and L1 Turkish ($p = .002$), L1 Japanese and L1 English ($p = .044$).

In sum, inclusion of the L1 Turkish participants in the analysis as the control group showed significant differences among the groups for all five suffixes. In all Case categories, the L1 Chinese group performed significantly lower than native Turkish speakers, whereas the L1 Russian group did not differ from native Turkish speakers in the use of Case morphemes except for Accusative Case. The L1 English group was also found to be less accurate than native Turkish speakers in the Plural suffix and all Case categories (except for Ablative). The L1 Japanese group differed from native Turkish speakers in the use of Accusative, Dative and Plural suffixes.

5.2.2 Differences among L2 groups

To identify potential differences among different L2 groups, the L1 Turkish group was excluded from the second analysis of the Kruskal Wallis test.

The results for Ablative Case indicated significant differences among the L2 groups ($H(3) = 9.699$, $p = .021$). Pairwise comparisons revealed significant differences between L1 Chinese ($M = 29.55$) and L1 Russian ($M = 48.47$) groups with a p-value .024. Unlike Ablative, no significant difference was observed for Accusative among L2 Turkish groups. As for Dative, the Kruskal Wallis analysis highlighted a significant effect of Case suffixes ($H(3) = 12.347$, $p = .006$), which was further supported by the pairwise comparisons showing a significant difference between L1 Russian ($M = 51.19$) and L1 English ($M = 30.50$) ($p = .016$) and between L1 Russian ($M = 51.19$) and L1 Chinese ($M = 31.34$) ($p = .020$). The same analysis demonstrated a significant difference among L2 groups for Locative Case as well

(H(3) = 13.884, p = .003). Pairwise comparisons disclosed a significant difference between L1 Russian (M = 50.39) and L1 Chinese (M = 27.74) (p = 0.004) and L1 Russian (M = 50.39) and L1 English (M = 30.31) (p = .017). Lastly, the results of the Plural suffix showed significant differences among the L2 groups (H(3) = 9.757, p = .021). Pairwise comparisons revealed the difference between L1 Russian (M = 48.47) and L1 Chinese (M = 26.55) groups was significant (p = .017).

To sum up, except for the Accusative Case suffix, there was a significant difference among the L2 groups with respect to the accurate use of nominal suffixes. Moreover; pairwise comparisons revealed that the differences were mostly due to the fact that the L1 Russian group was significantly more accurate than L1 Chinese and L1 English groups. With respect to the Ablative and Plural suffixes, L1 Russian group outperformed only the L1 Chinese group. However, as for Dative and Locative, the L1 Russian group was also more accurate than the L1 English group. It is important to note that all L2 groups irrespective of the L1 morphological differences did not differ from one another with respect to the use of Accusative Case morpheme, which appears to be equally problematic for all groups.

5.2.3 Case accuracy within L2 groups

In order to test whether the Case type is a significant variable for the oral production task, the accuracy scores for five case suffixes were compared within each L2 group. Since the homogeneity assumption was not met, Friedman's ANOVA (a non-parametric equivalence of Repeated Measures One-way ANOVA) was conducted in SPSS 21.0.

Friedman's ANOVA was run for the L1 Russian group and significant differences for the Case type was found (χ^2(4) = 21.662, p < .001). Pairwise

comparisons of Wilcoxon Signed ranks test demonstrated that there was a significant difference between Plural ($M = 69.44$) and Ablative ($M = 91.56$), $Z = -2.490$, $p = .013$); between Dative ($M = 83.33$) and Accusative ($M = 66.06$), $Z = -3.028$, $p = .002$); between Locative ($M = 91.06$) and Accusative ($M = 66.06$), $Z = -3.084$, $p = .002$); between Locative ($M = 91.06$) and Dative ($M = 83.33$), $Z = -2.379$, $p = .017$); between Locative ($M = 91.06$) and Plural ($M = 69.44$), $Z = -2.504$, $p = .012$. In short, the difference resulted from the Case type for the L1 Russian group in the oral production task was further supported by the pairwise comparisons. Figure 1 displays the mean accuracy across the Case and Plural suffixes.
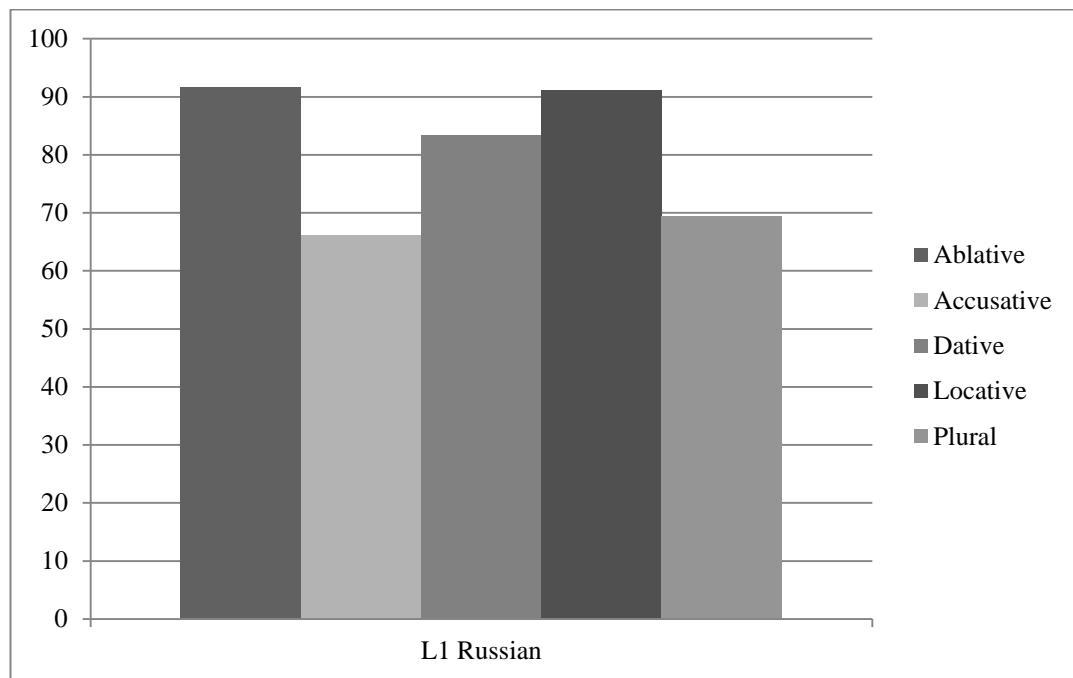
Fig. 1 L1 Russian-L2 Turkish mean accuracy percentages for all cases in the oral production

When Friedman's ANOVA was conducted for L1 Japanese participants, the results did not reveal a significant difference among Case suffixes $\chi^2(4) = 8.921$, $p > .05$. Thus, for the production task of L1 Japanese group there was no further analysis of

pairwise comparison. Besides, the L1 Japanese group was the only group that did not

yield any significant difference for the Case type. Figure 2 shows the L1 Japanese

group's Case and Plural suffix comparisons.
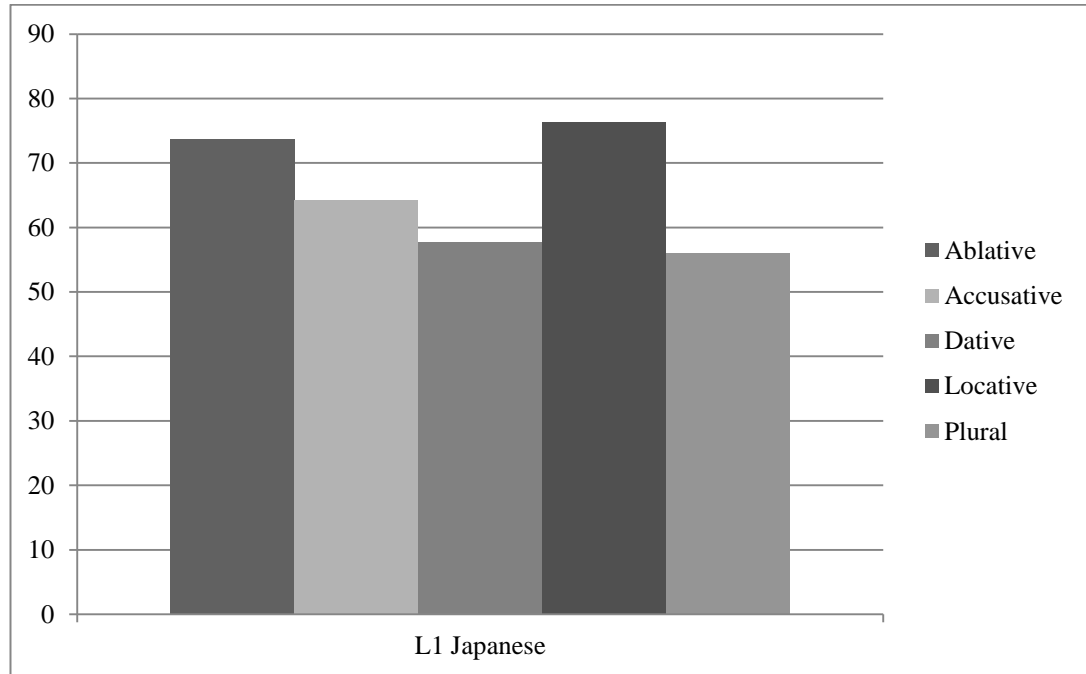
Fig. 2 L1 Japanese-L2 Turkish mean accuracy percentages for all cases in the oral

production

Friedman's ANOVA conducted for the L1 English group indicated a significant

difference for the Case type ($\chi^2(4) = 12.669$, $p = .013$). Pairwise comparisons of

Wilcoxon Signed ranks showed that there was a difference between Locative ($M =$

64.39) and Accusative ($M = 47.50$, $Z = -2.015$, $p = .044$); and between Locative ($M =$

64.39) and Dative ($M = 52.83$), $Z = -2.123$, $p = .034$). In brief, significant differences

among Case suffixes appeared to result from the differences between Locative and

Accusative and Locative and Dative suffixes. Figure 3 demonstrates Case-wise

comparisons for L1 English group.
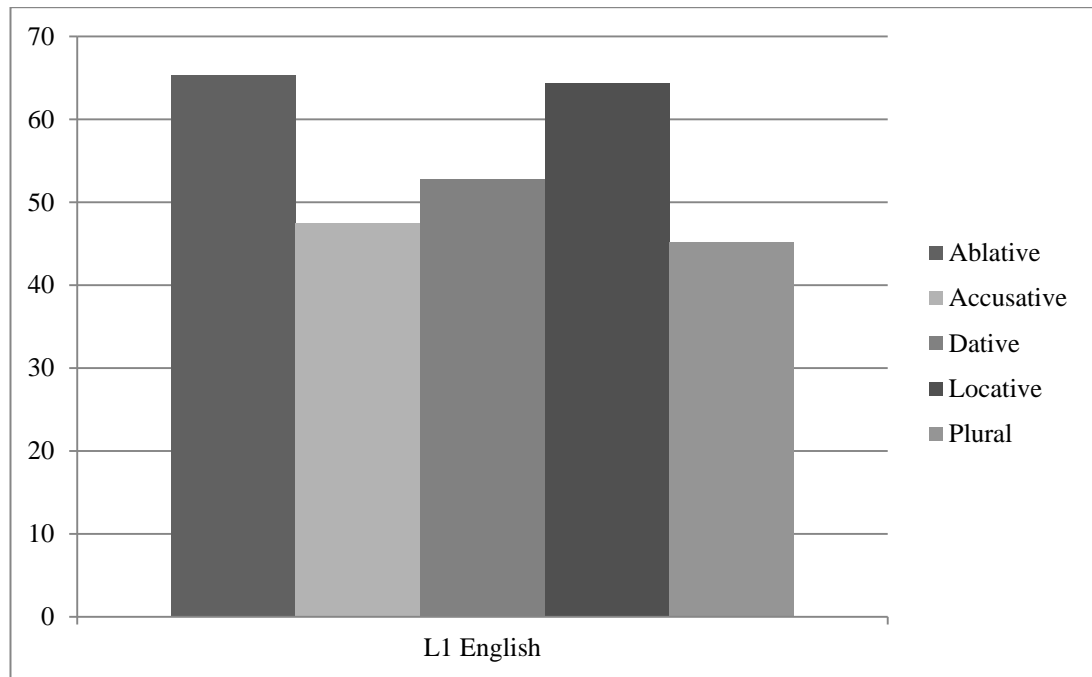
Fig. 3 L1 English-L2 Turkish mean accuracy percentages for all cases in the oral production

Lastly, the results for the L1 Chinese group indicated a statistically significant difference among five Case suffixes, $\chi^2(4) = 15.261$, $p = .004$. Pairwise comparisons of Wilcoxon Signed ranks demonstrated that there was a difference between Locative ($M = 60.63$) and Accusative ($M = 42.16$), $Z = -3.130$, $p = .002$) and between Locative ($M = 60.63$) and plural ($M = 28.11$), $Z = -2.799$, $p = .005$). Although, there were significant differences among all Case suffixes, only the interaction between Locative and Accusative and Locative and Plural yielded a significant difference.

Figure 4 displays L1 Chinese group's mean accuracy percentages for all target Case morphemes.
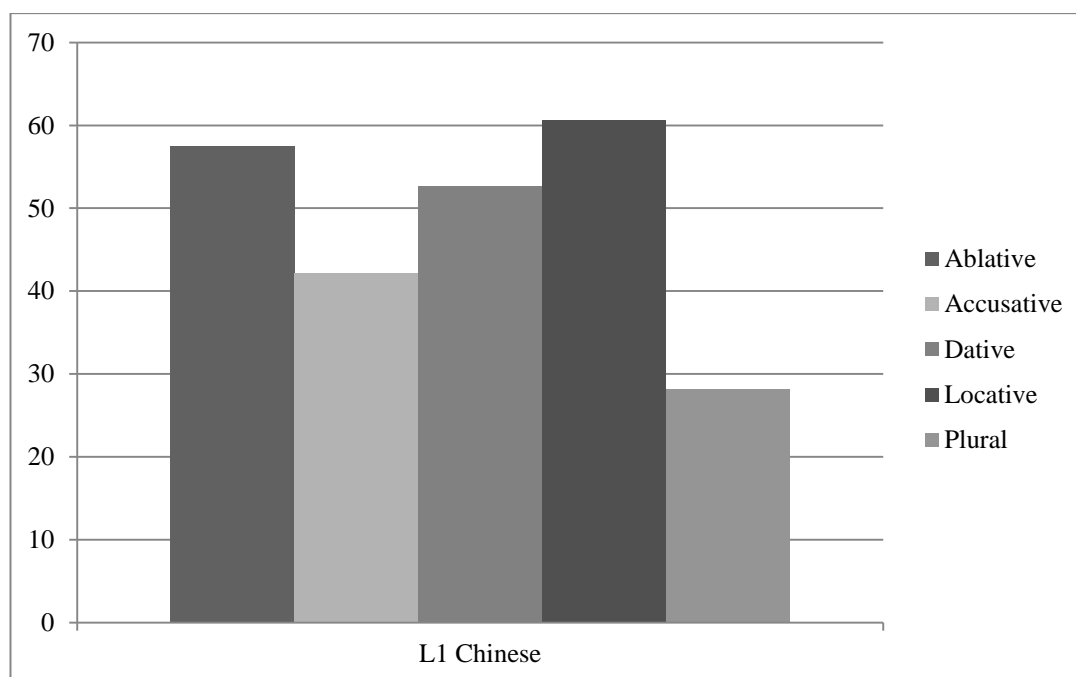
Fig.4 L1 Chinese-L2 Turkish mean accuracy percentages for all cases in the oral production

Eventually, results gathered from the tests for all groups in the oral production task indicated that the Case type was a distinctive variable that makes a significant difference within each L1 group except for L1 Japanese.

5.2.4 Error analysis

Errors in the oral production task were analyzed and categorized as in Table 13.

Table 13. Error Type Percentages for the Oral Production Task

	ABL		ACC		DAT		LOC		PLU	
	Omission	Substitution	Omission	Substitution	Omission	Substitution	Omission	Substitution	Omission	Substitution
L1 Russian	4.6%	3.7%	30.8%	2.8%	11.6%	5.8%	7.4%	0.9%	29.6%	0
L1 Japanese	13.1%	13.1%	34.6%	0.9%	16.4%	25.7%	20.2%	4%	40.5%	2.9%
L1 English	21.1%	8.6%	50%	1.9%	27.3%	19.8%	31.1%	3.7%	53.7%	1.8%
L1 Chinese	25.2%	11.1%	48.1%	1.8%	30%	14.5%	30.1%	2.8%	75.9%	0
Overall	15.8%	9%	41%	2%	21.5%	16.3%	22.2%	2.8%	50.1%	1.1%

As can be seen from the Table 13, overall the highest error rate for Ablative Case and Plural was observed in the L1 Chinese group while the lowest error rate was in the L1 Russian group. In terms of Accusative, Dative and Locative Cases, the L1 English was the group committed most of the errors whereas the L1 Russian group was comparatively the least erroneous.

The omission errors outnumbered the substitution errors for all L2 groups and for each suffix in the oral production task. The rate of omission for the L1 Chinese groups' Plural use was the highest (75.9%) while neither the L1 Chinese nor L1 Russian groups committed substitution errors for Plural. All L2 Turkish groups except for L1 Japanese groups had more omission errors than substitution errors in the use of Case morphology in the oral production task. Interestingly enough, L1

Japanese group's substitution error rates were higher than their omission error rates (i.e., 25.7% and 16.4% respectively) for Dative Case whereas they were equal (i.e., 13.1%) for Ablative Case.

Table 14. Substitution Errors in the Oral Production Task

	Target Morpheme	Ablative	Accusative	Dative	Locative	Plural	Other*
L1 Russian	Ablative	N/A	-	26.6%	-	-	
	Accusative	-	N/A	13.3%	-	6.6%	
	Dative	6.6%	33.3%	N/A	6.6%	-	
	Locative	-	-	6.6%	N/A	-	
	Plural	-	-	-	-	N/A	
L1 Japanese	Ablative	N/A	13.6%	11.3%	-	-	2.2% (INS)
	Accusative	2.2%	N/A	-	-	-	
	Dative	13.6%	38.6%	N/A	-	-	2.2% (INS)
	Locative	-	4.5%	4.5%	N/A	-	
	Plural	2.2%	4.5%	-	-	N/A	
L1 English	Ablative	N/A	-	19.4%	5.5%	-	
	Accusative	-	N/A	-	-	2.7%	2.7% (POSS)
	Dative	4.5%	38.8%	N/A	-	2.7%	4.5% (POSS)
	Locative	4.5%	4.5%	-	N/A	-	
	Plural	-	4.5%	-	-	N/A	
L1 Chinese	Ablative	N/A	-	25.8%	9.6%	-	
	Accusative	-	N/A	3.2%	-	3.2%	
	Dative	-	45.1%	N/A	3.2%	-	
	Locative	-	6.4%	3.2%	N/A	-	
	Plural	-	-	-	-	N/A	

*In addition to target morphemes, some other nominal inflectional morphemes such as Genitive (GEN), Possessive (POSS) and Instrumental (INS) were used.

As shown in the Table 14, all L2 Turkish groups committed substitution errors

mostly in the use of Accusative Case (i.e. L1 Russian: 33.3%, L1 Japanese: 38.6%,

L1 English: 38.8%, L1 Chinese: 45.1%) substituting it with a Dative Case

irrespective of their L1 differences. In addition to these, two L2 groups, namely the L1 Japanese and L1 English groups used some other nominal inflectional morphemes that are not targeted (i.e. Instrumental and Possessive morphemes, respectively).

5.3 Results of the written forced elicitation task

As discussed earlier, this task involved 40 items (eight for each inflectional morpheme) and 18 participants with different L1s took part in it. There were no missing items since this task was structured in the form of a forced multiple-choice task. SPSS 21.0 version was run in order to analyze the data gathered from 90 participants in total. Initially, one-way ANOVA was run for each morpheme across five L2 groups as independent variables. Since Levene's test for equality of variance was found to be violated for each morpheme, non-parametric alternative of the one-way ANOVA, namely, Kruskal Wallis was preferred. Table 15 indicates the mean accuracy scores out of eight.

Table 15. Mean Accuracy Percentages in the Written Forced Elicitation Task

Group & Case*	Ablative	Accusative	Dative	Locative	Plural
L1 Turkish	93.75	99.25	99.25	100	100
L1 Russian	88.25	95.37	91	97.25	93.75
L1 Japanese	73.62	84	72.25	94.5	64.62
L1 English	75	75	70.87	91.62	75
L1 Chinese	70.87	75	79.87	94.5	64.62

5.3.1 L1 vs. L2 Differences

The first analysis involved the Turkish native speaker group in order to identify any L1 and L2 differences. Furthermore, each Case morpheme was analyzed across five groups separately.

As for the Ablative Case, there was a statistically significant differences among all groups ($H(4) = 17.978$, $p = .001$) with a mean percentage of 32.56 for L1 Chinese; 38.47 for L1 English; 39.22 for L1 Japanese; 54.19 for L1 Russian, and 63.06 for the L1 Turkish group. The post-hoc rank sum revealed that there was a statistically significant difference between L1 Turkish and L1 Chinese ($p = .003$), L1 Turkish and L1 English ($p = .036$), and L1 Turkish and L1 Japanese groups ($p = .047$).

The Kruskal Wallis analysis of the Accusative Case showed statistically significant differences among all groups ($H(4) = 20.190$, $p < .001$). The mean percentage was 35.50 for L1 Chinese; 35.69 for L1 English; 44.47 for L1 Japanese, 44.50 for L1 Russian, and 67.33 for L1 Turkish groups. The post-hoc analysis demonstrated that there was a statistically significant difference between L1 Turkish and L1 Chinese ($p = .001$), L1 Turkish and L1 English ($p = .001$).

With respect to the accuracy scores on the use of Dative Case, the Kruskal Wallis analysis revealed that there was statistically significant differences among the groups ($H(4) = 29.365$, $p < .001$) with a mean percentage of 30.17 for the L1 English; 34.19 for L1 Japanese; 40.50 for L1 Chinese; 53.72 for L1 Russian, and 68.92 for L1 Turkish groups. The post hoc analysis indicated significant differences between L1 Turkish and L1 Chinese ($p = .006$), L1 Turkish and L1 English ($p = 0.000$), L1 Turkish and L1 Japanese groups ($p < .001$).

Likewise, the Kruskal-Wallis analysis of Locative Case revealed statistically significant differences among groups ($H(4) = 10.596$, $p = .031$) with a mean percentage of 38.72 for L1 English; 40.28 for L1 Japanese; 42.00 for L1 Chinese;

49.50 for L1 Russian; and 57.00 for L1 Turkish groups. However, the posthoc comparisons revealed no differences among the groups.

Lastly, the Kruskal Wallis analysis of Plural showed statistically significant differences among groups ($H(4) = 37.893$, $p < .001$) with a mean percentage of 26.64 for the L1 Chinese, 33.64 for L1 Japanese, 39.39 for L1 English; 60.33 for L1 Russian and 67.50 for L1 Turkish participants. The post-hoc comparisons demonstrated differences between L1 Turkish and L1 Chinese ($p < .001$); L1 Turkish and L1 Japanese ($p < .001$); L1 Turkish and L1 English ($p = .005$).

In brief, the results signaled statistically significant differences between L1 and L2 Turkish groups for all morphemes. Detailed further analysis of pairwise comparisons revealed that there were no significant differences among the groups in the use of Locative Case. On the other hand, while the L1 Chinese and L1 English groups were significantly less accurate than L1 Turkish speakers in Ablative, Accusative, Dative, and Plural morphemes, the L1 Japanese differed from the L1 Turkish group in Ablative, Dative and Plural but not in Accusative Case use. Different from other L2 groups, the differences between the L1 Russian group and L1 Turkish speakers were significant only in the context of Dative Case use.

5.3.2 Differences among L2 Groups

In this section, the L1 Turkish group was excluded in order to explore potential differences among L2 groups only.

The Kruskal-Wallis analysis of the Ablative Case across four L2 Turkish groups displayed no differences among groups, $H(3) = 7.358$, $p > .05$. Similarly, results of the Accusative Case indicated no differences among the groups ($H(3) =$

2.667, $p = .446$). However, as for the Dative Case, the Kruskal-Wallis test yielded a statistically significant difference between the groups ($H(3) = 10.420$, $p = .015$) with a mean percentage of 28.50 for the L1 English; 31.47 for L1 Japanese; 37.25 for L1 Chinese; and 48.78 for L1 Russian groups. Pairwise comparisons showed a statistically significant difference only in the comparison of L1 Russian and L1 English groups ($p = 0.017$). As for the Locative Case suffix, the results indicated no significant differences among the groups ($H(3) = 2.697$, $p = .441$). In terms of Plural, the results showed statistically significant differences among the groups ($H(3) = 18.022$, $p < .001$). The mean accuracy percentages were as follows: 26.14 for the L1 Chinese; 30.64 for L1 Japanese; 36.39 for L1 English; 52.83 for L1 Russian Groups. Also, the post-hoc rank sum signaled a statistically significant difference between the L1 Russian and L1 Chinese ($p < .001$) and L1 Russian and L1 Japanese groups ($p = .006$).

To sum up, in the written forced elicitation task, the L2 groups differed significantly from one another only in the use of Dative and Plural. Further comparisons demonstrated differences between the L1 Russian and L1 English groups in the use of Dative; and there was a significant difference between L1 Russian and L1 Chinese as well as the L1 Russian and L1 Japanese groups in the use of the Plural morpheme. In terms of Ablative, Accusative and Locative Cases, no differences were observed among the groups in the L2.

5.3.3 Case Accuracy within L2 Groups

In the previous sections, the Case phenomenon was treated as a single variable and the analysis was based on the overall accuracy scores of all five Cases for each L2 group. However, in order to understand whether the Case type matters within groups,

Case accuracy scores for each distinct Case type were also compared within each L2 group. Due to the lack of group homogeneity, Friedman's ANOVA (a non-parametric equivalence of Repeated Measures One-way ANOVA) was run in SPSS 21.0.

For the L1 Russian group, Friedman's ANOVA was conducted and the results indicated a significant difference among Case types, $\chi^2(4) = 17.868$, $p < 0.001$. Further pairwise comparisons of Wilcoxon Signed ranks uncovered statistically significant interaction between Locative ($M = 7.78$) and Accusative ($M = 6.83$), $Z = -2.877$, $p = .004$. Locative seems to be the case suffix that poses less difficulty for the L1 Russian group while Accusative Case is the one being the most difficult as Figure 5 displays.
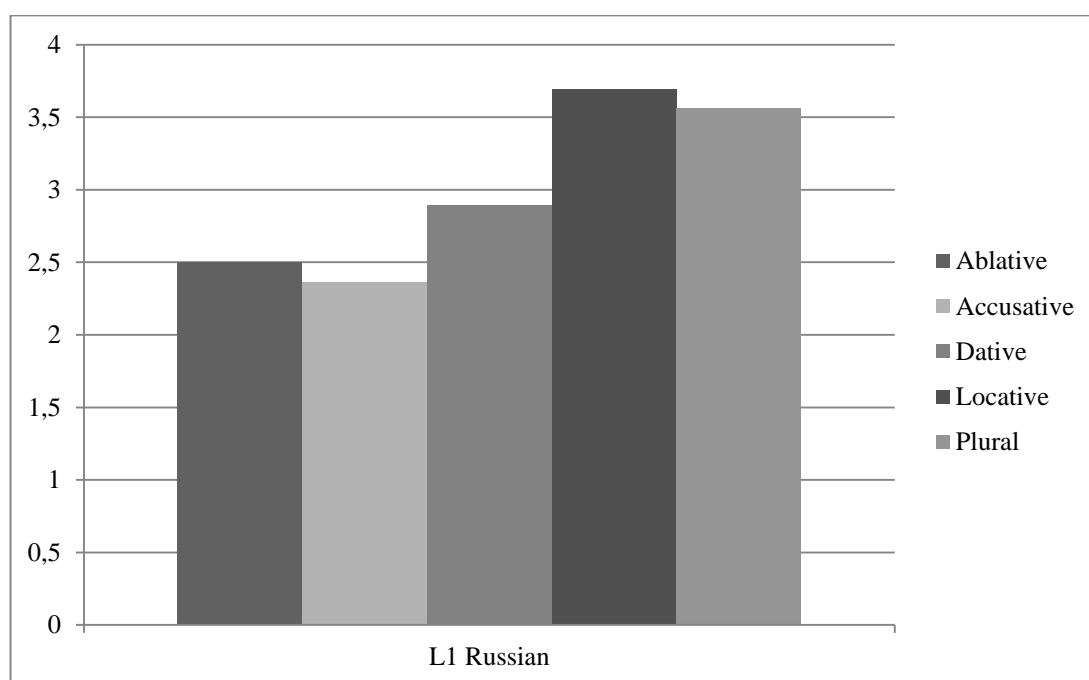
Fig. 5 L1 Russian − L2 Turkish participants' mean accuracy scores for all Cases in the forced elicitation task

As for the L1 Japanese participants, Friedman's ANOVA was run and the results yielded a significant difference for the Case type, $\chi^2(4) = 17.133$, $p < .002$. The detailed analysis of pairwise comparisons of Wilcoxon Signed ranks showed that Locative ($M = 7.56$) differed significantly from Ablative ($M = 5.89$), $Z = -3.108$, $p = .002$; and from Dative ($M = 5.78$), $Z = -2.940$, $p = .003$); and from Plural ($M = 5.17$), $Z = -2.914$, $p = .004$). Briefly, although the Case type matters for the L1 Japanese group, the significant difference was evident only among Locative and Ablative and Plural as shown in Figure 6.
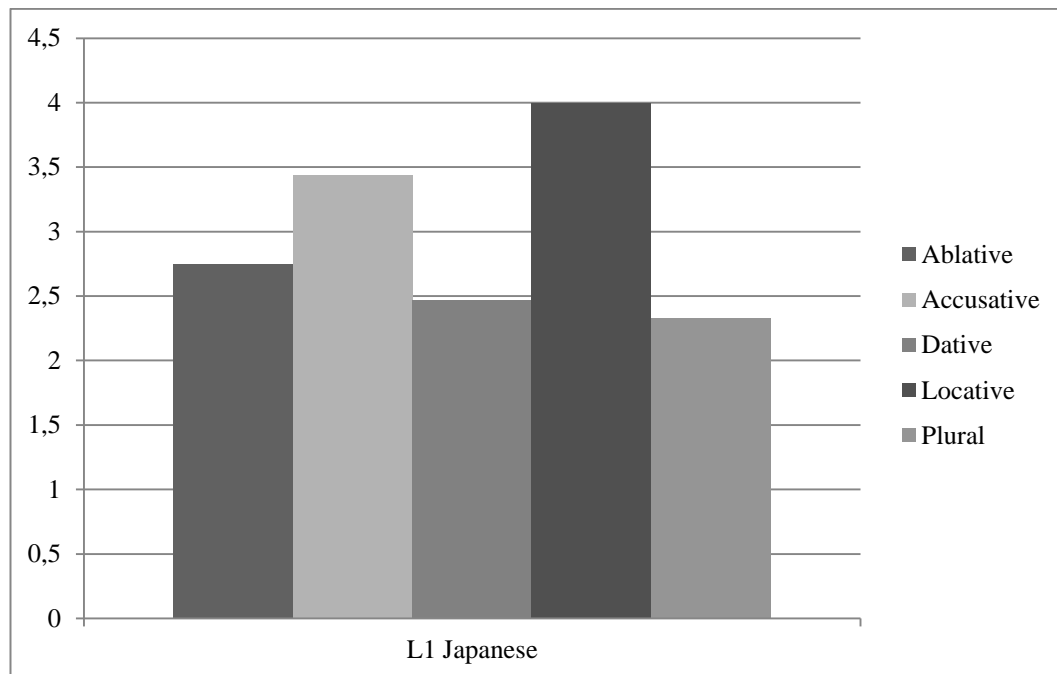
Fig. 6 L1 Japanese – L2 Turkish participants' mean accuracy scores for all Cases in the forced elicitation task

When the Friedman's ANOVA was conducted for the L1 English group, the results revealed significant differences among Case types, $\chi^2(4) = 16.927$, $p < .002$. Pairwise comparisons of Wilcoxon Signed ranks test displayed a statistically significant difference between Locative ($M = 7.33$) and Ablative ($M = 6.00$), $Z = -3.235$, $p =$

.001; and between Locative ($M = 7.33$) and Dative ($M = 5.67$), $Z = -3.351$, $p = .001$.

In short, the L1 English group used Locative more accurately than Ablative and

Dative as Figure 7 shows.
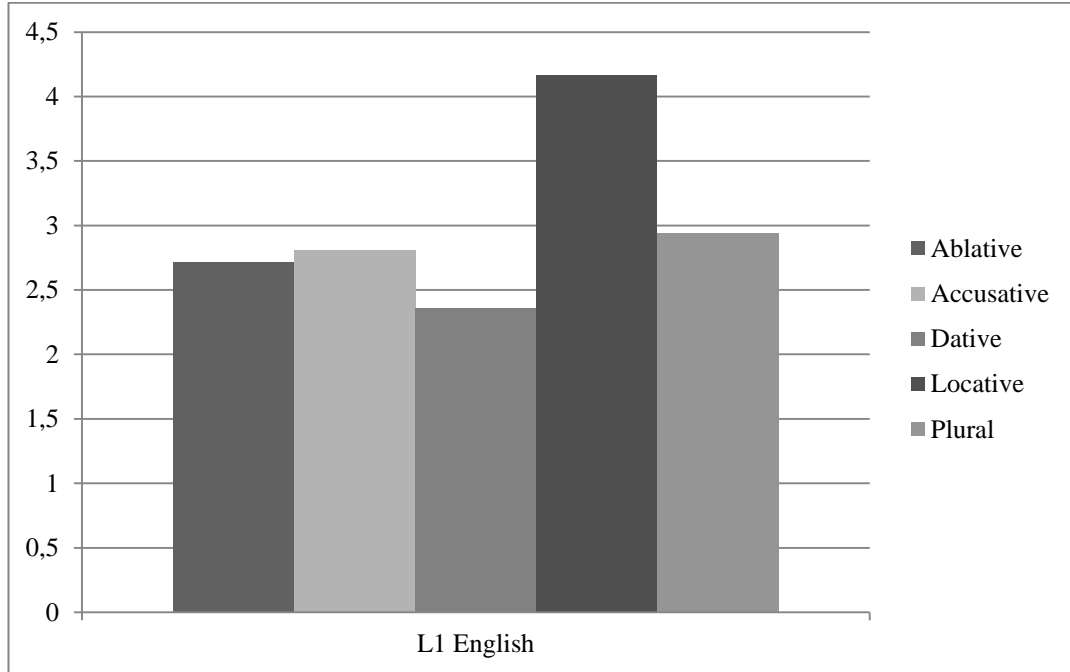
Fig. 7 L1 English – L2 Turkish participants' mean accuracy scores for all Cases in

the forced elicitation task

Finally, the results of the analysis for the L1 Chinese group indicated that there was a

significant difference among Case types, $\chi^2(4) = 27.113$, $p < .001$. A further analysis

of a Wilcoxon Signed ranks test revealed that there was a significant difference

between Locative ($M = 7.56$) and Ablative ($M = 5.67$), $Z = -3.434$, $p = .001$; between

Locative ($M = 7.56$) and Accusative ($M = 6.00$), $Z = -2.812$, $p = .005$; between

Locative ($M = 7.56$) and Dative ($M = 6.39$), $Z = -2.831$, $p = .005$; between Locative

($M = 7.56$) and Plural ($M = 5.17$), $Z = -3.435$, $p = .001$.

In brief, similar to findings of other L2 groups, Locative Case seems to be the case marker with which the L1 Chinese group has had the least difficulty as illustrated in Figure 8.
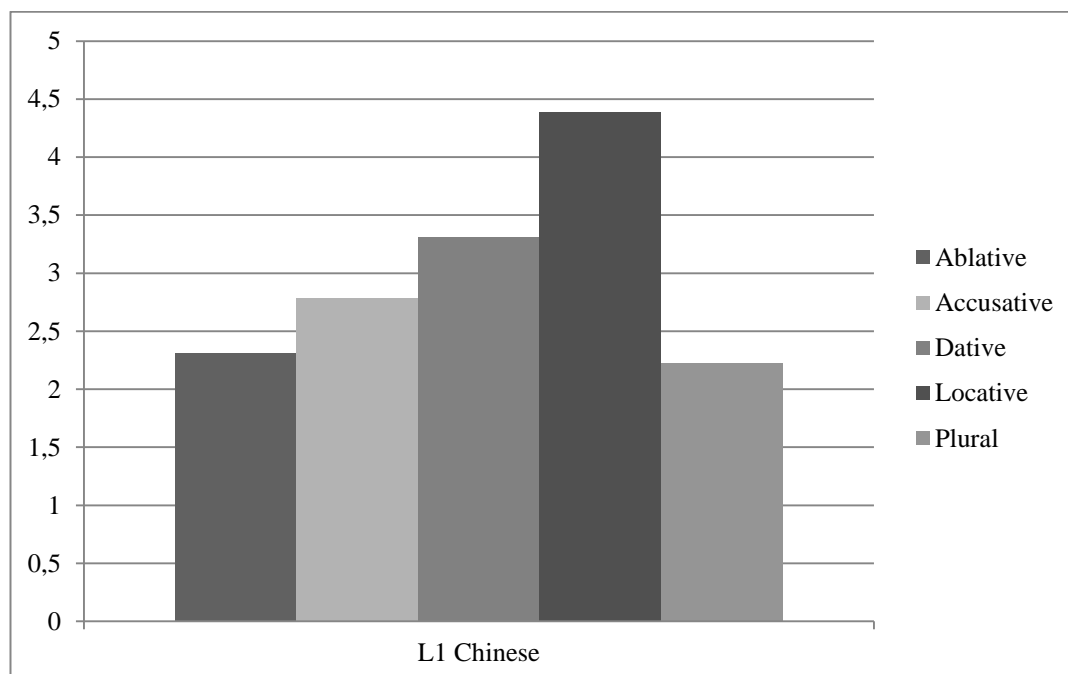
Fig. 8 L1 Chinese – L2 Turkish participants' mean accuracy scores for all Cases in the forced elicitation task

All in all, in the written forced elicitation task, the comparisons of Case suffixes within the L2 groups revealed two noteworthy findings for the written forced elicitation task. First of all, the Case type was a significant variable that yielded differences within each L2 group. Secondly, Locative Case seems to the least difficult suffix to be acquired in L2 Turkish while there is no one single most difficult morpheme. Instead, Accusative Case seems to be the most difficult for the L1 Russian whereas Dative Case for the L1 English and Plural for the L1 Chinese and L1 Japanese groups.

5.3.4 Error Analysis

Detailed comparisons between and within groups shed some light on the way L1 and L2 groups interact with both one another and target Case suffixes. Nevertheless, all analyses were based on the accuracy scores.

The Table 16 indicates the distribution of errors in percentages across L2 Turkish groups for each suffix.

Table 16. Error Analysis for the Written Forced Elicitation Task

	ABL		ACC		DAT		LOC		PLU	
	Omission	Substitution	Omission	Substitution	Omission	Substitution	Omission	Substitution	Omission	Substitution
L1 Russian	0.6%	11.1%	6.2%	8.3%	0.6%	8.3%	0	2.7%	6.2%	0
L1 Japanese	2.7%	23.6%	5.5%	10.4%	4.1%	23.6%	0	5.5%	22.9%	12.5%
L1 English	3.4%	21.5%	12.5%	12.5%	2.7%	26.3%	0.6%	7.6%	18.7%	6.2%
L1 Chinese	4.6%	23%	7.8%	15.1%	0.6%	18.4%	1.9%	3.2%	19.7%	13.8%
Overall	2.9%	19.8%	8%	11.6%	2%	19.1%	0.6%	4.7%	16.9%	8.2%

As shown in Table 16, in this task, substitution errors outnumbered the omission errors. The only exception to this was Plural use, where all L2 Turkish groups committed more omission errors than substitution errors although one would expect more substitution errors more than omission errors in a multiple choice task.

Moreover, the rate of omission errors was either zero as in the L1 Japanese and L1 Russian groups' Locative use or very low in the L1 Chinese and L1 Russian's Dative use and L1 Russian participants' Ablative use. Lastly, the L1 English group committed the same number of errors in Accusative Case in the written forced elicitation task.

Detailed analysis of substitution error rates are presented in Table 17 below.

Table 17. Substitution Errors in the Forced Elicitation Task

	Target Morpheme	Ablative	Accusative	Dative	Locative	Plural
L1 Russian	Ablative	N/A	4.5%	25%	6.8%	-
	Accusative	6.8%	N/A	9%	-	11.3%
	Dative	4.5%	15.9%	N/A	6.8%	-
	Locative	4.5%	-	4.5%	N/A	-
	Plural	-	-	-	-	N/A
L1 Japanese	Ablative	N/A	8.2%	14.4%	9.27%	-
	Accusative	2%	N/A	5.1%	4.1%	3%
	Dative	3%	25.7%	N/A	6.1%	-
	Locative	5.1%	2%	1%	N/A	-
	Plural	7.2%	6.1%	1%	4.1%	N/A
L1 English	Ablative	N/A	11.2%	7.4%	6.5%	2.8%
	Accusative	2.8%	N/A	9.3%	-	4.6%
	Dative	9.3%	15.8%	N/A	10.2%	-
	Locative	3.7%	2.8%	3.7%	N/A	-
	Plural	0.9%	6.5%	0.9%	-	N/A
L1 Chinese	Ablative	N/A	11.6%	16%	2.6%	-
	Accusative	3.5%	N/A	8.9%	2.6%	5.3%
	Dative	4.4%	14.2%	N/A	5.3%	0.8%
	Locative	2.6%	0.8%	0.8%	N/A	-
	Plural	2.6%	9.8%	3.5%	2.6%	N/A

In contrast to the oral production task, the type of substitution varied to a great extent in this task. However, the results revealed the same pattern in oral production. Specifically, substituting Accusative Case with a Dative Case was the most commonly committed error. This implies that there is a tendency to use Dative instead of Accusative irrespective of the task (i.e. oral production and written forced elicitation) and L1 background.

5.4 Results of the cloze test

In this task which was adapted from Gürel & Uygun (2013), participants were asked to fill out 25 gaps in a paragraph about Turkey. The aim of this task was to determine the level of their Turkish proficiency. Some gaps were to be filled with a vocabulary item that is inflected with an appropriate suffix. Participants received scored between 0 and 25. The overall results were analyzed by comparing the mean scores of all L2 groups and L1 Turkish participants by conducting a one-way ANOVA in SPSS 21.0. The results revealed a statistically significant group differences [$F(4, 86)= 6.524$, $p < .05$]. Post-hoc analyses using Games-Howel indicated that the L1 Turkish group's performance on the cloze test was significantly different higher than that of the L1 Chinese ($p < .001$), L1 English ($p = .003$), L1 Japanese ($p = .005$), and L1 Russian ($p = .002$) groups. However, the L2 groups did not differ from one another in terms of their L2 Turkish proficiency. In brief, the cloze test highlighted a distinction between native and non-native speakers in terms of their Turkish proficiency.

5.5 Summary of the results and conclusion

The current chapter presented the results of three tasks; the oral production, the written forced elicitation tasks and the cloze test. The first two tasks were experimental tasks and they were analyzed by; 1) comparing and contrasting native

speakers and L2 groups, 2) focusing only L2 groups, 3) by investigating the Case type effect within L2 groups, and 4) discussing error types.

To summarize, the results of the oral production task revealed that overall L1 Russian learners of Turkish were as accurate as native Turkish speakers in most contexts. With respect to the overall accuracy scores, the Chinese group was the least accurate group and they were followed by the L1 English group and then the L1 Japanese group. For all L2 participants, the most problematic context was the Accusative Case context. This was the category that caused difficulty even for L1 Russian speakers. For the L1 Japanese group, besides Accusative, the Dative Case context yielded lower accuracy compared to native speakers. For the L1 English group, the only context in which they did not differ from native Turkish speakers was the Ablative Case context.

The written forced elicitation task also revealed similar results in the sense that again the L1 Russian group was the most accurate L2 group. They did not differ from native Turkish speakers in any of the target contexts. Also, in this off-line task, compared to the oral production task, all L2 groups were slightly more accurate in the selection of the target morpheme. There were no differences among the L2 groups in terms of accuracy. Table 18 below provides a summary of the results obtained from the comparisons between native and non-native groups and within L2groups. In the next chapter, findings of the current study will be elaborated in a detailed manner.

Table 18. Results' Summary for Group Comparisons

Case	L1 – L2 Comparisons		L2 Only Comparisons	
	Oral Production	Forced Elicitation	Oral Production	Forced Elicitation
Ablative	L1 Chinese - L1 Turkish L1 Chinese – L1 Russian	L1 Japanese – L1 Turkish L1 Chinese - L1 Turkish L1 English – L1 Turkish	L1 Chinese – L1 Russian	No difference between groups
Accusative	L1 Chinese - L1 Turkish L1 English – L1 Turkish L1 Japanese – L1 Turkish L1 Russian – L1 Turkish	L1 Chinese - L1 Turkish L1 English – L1 Turkish	No difference between groups	No difference between groups
Dative	L1 English – L1 Turkish L1 English – L1 Russian L1 Chinese - L1 Turkish L1 Japanese – L1 Turkish	L1 Chinese - L1 Turkish L1 English – L1 Turkish L1 English – L1 Russian L1 Japanese – L1 Turkish	L1 Chinese – L1 Russian L1 English – L1 Russian	L1 English – L1 Russian
Locative	L1 Chinese – L1 Russian L1 Chinese - L1 Turkish L1 English – L1 Russian L1 English – L1 Turkish	No difference between groups	L1 Chinese – L1 Russian L1 English – L1 Russian	No difference between groups
Plural	L1 English – L1 Turkish L1 Chinese – L1 Russian L1 Chinese - L1 Turkish L1 English - L1 Japanese	L1 Chinese - L1 Turkish L1 Chinese – L1 Russian L1 English – L1 Turkish L1 Japanese – L1 Turkish L1 Japanese – L1 Russian	L1 Chinese – L1 Russian	L1 Chinese – L1 Russian L1 Japanese – L1 Russian

CHAPTER 6

DISCUSSION AND CONCLUSION

6.1 Introduction

The previous chapter presented the results of the two tasks. This chapter aims to
interpret the findings in light of the research questions and predictions discussed
earlier. The discussion starts with native – nonnative comparisons. Then, findings
displaying L1 influence will be discussed in reference to the typological properties of
each language. An accuracy order of L2 Turkish morphemes found in this study will
also be presented. The chapter ends with a summary of the major findings of the
study.

6.2 Native - non-native speaker differences

The present study addressed several issues in adult L2 acquisition of morphology.
The first one was potential differences between native and non-native speakers' in
the use of nominal inflectional morphemes in both production and comprehension
tasks. The results of the production task revealed that overall L2 Turkish groups
differed significantly from the native speaker group in terms of the rate of accurate
use of inflectional suffixes. Nevertheless, as predicted, the L1 Russian group was as
accurate as the L1 Turkish group in the timed production task. Specifically, L1
Russian did not differ from native Turkish speakers in their oral production of
Ablative, Dative and Locative. Their accuracy scores in the use of Plural suffix were
also similar. Yet, in the use of Accusative Case suffix, the L1 Russian group failed to
display native-like accuracy. All this suggests that native-like performance in oral
production of L2 morphology is possible depending on a variety of factors such as

the morphological typology of the L1. Given that the L1 Russian learners of Turkish had difficulty in correct suppliance of only the Accusative Case suffix suggests that native-like performance also depends on the type of morpheme and its language-specific inherent characteristics that regulate its use. Although Russian includes Accusative Case in its Case paradigm, this does not seem to help L1 Russian learners of L2 Turkish in the accurate use of Accusative Case in Turkish. This might be due to the fact that L1 Russian group fails to remap or reconfigure features that are present in their L1 (Lardiere, 2009). Moreover, the fused nature of inflectional morphology in Russian might have also brought additional problems in learners' feature reassembly in Turkish hence the problems with Accusative Case in the L1 Russian group contrary to the predictions.

As for the other L2 groups, as predicted, the L1 Chinese group appeared to have the most difficulty in the oral production task as they tended to omit the target morphemes more than other L2 groups. Even in the written forced elicitation task, L1 Chinese group's omission errors outnumbered the substitution errors. On the basis of L1 Russian and L1 Chinese learners' data, we can argue that inflectional richness and morphological typology of the L1 seem to sensitize L2 learners towards the use of target morphemes. Also, as predicted, the L1 Japanese group appeared to be more native-like than the L1 Chinese and L1 English groups but lagged behind the Russian group in terms of overall accuracy percentages. It is important to note that while the L1 Japanese group was as accurate as the native Turkish speakers in the context of Ablative, Locative and Plural, the L1 English group displayed native-like performance only in the Ablative Case suffix. Japanese has overt Dative and Accusative Cases suffixes while it has postpositions for Ablative and Locative and a classifier for Plural. It is obvious that overt Dative and Accusative Case suffixes in

L1 Japanese did not guarantee an error-free and direct transfer of these uses in L2 Turkish morphology. But still, availability of these tools in the L1 helped them to be more successful than both L1 English and L1 Chinese groups. Similarly, although English has a very limited inflectional morphology and no suffix for Ablative Case, the L1 English group showed a better performance in using Ablative Case. Hence, these findings confirm L1 influence on the acquisition of L2 morphology while making it also clear that there are also some other factors interacting with the L1 transfer effects.

The untimed written forced elicitation task tapped mostly explicit linguistic knowledge and overall, it revealed differences between L1 and L2 groups across five morphemes. However, findings showed that in terms of overall accuracy (as well as error rate), all L2 groups displayed better performance in all target morpheme contexts in the untimed (off-line) written task than oral production task, suggesting that task-dependent changes in accuracy are also relevant for the L2 participants tested in this study. As the off-line written production task reveals, when given time to monitor their outputs and they are asked to recognize (but not recall) most L2 learners perform better in L2 morphology irrespective of their L1 morphological typology. Nevertheless, even in this off-line task, an L1-dependent accuracy ranking can be made for L2 learners. In other words, even in this task, the number of contexts in which L1 Russian learners of Turkish showed native-like performance was more than that of other L2 groups. For example, while the L1 Chinese, L1 English and L1 Japanese learners differed significantly from native Turkish speakers in terms of accurate morpheme selection in Ablative, Dative, Accusative and Plural, L1 Russian learners were native-like in all contexts.

6.3 L1 influence on the acquisition of L2 morphemes

As reported earlier, two analyses were conducted to evaluate nominal inflectional morpheme use of L2 Turkish learners. In the first one, the L1 Turkish group was included in the analysis whereas in the second analysis only the L2 Turkish groups were compared and contrasted with one another in terms of their performance in both tasks. The aim of the former analysis was to see L1 and L2 distinction as discussed in the previous section while in the latter analysis, we aimed to examine more closely potential differences among the L2 groups and account for these differences in reference to L1 morphological typology. In the following section, the results of each L2 group were discussed in more detail and their performance in the context of each individual morpheme was examined more closely.

6.3.1   The L1 Russian group

The results of the study revealed that L1 Russian group differed from L1 Turkish group only in Accusative Case in the oral production task. Furthermore, the L1 Russian was the group that showed the least divergence from the L1 Turkish group in both tasks. It is highly probable that the rich L1 morphosyntactic structure in which case, gender and number interact in the form of morphemes (Comrie, 2002) made it far easier to acquire target suffixes in L2 Turkish. Moreover, it was also observed that the L1 Russian group showed native-like performance contrasting with other L2 groups as well. However, the only difference between L1 Russian and L1 Turkish group was Accusative Case in the oral production task and it may stem from specific structure targeted in the test. More specifically, in Turkish the use of accusative case morpheme interacts with specificity (Aygen, 2002; Enç, 1991; Erguvanlı-Taylan & Zimmer, 1994; Ketrez, 2003, Kornfield, 1997).Thus only the

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[+specific] feature is relevant for Turkish. In order to provide the obligatory context that would result in ungrammaticality when Accusative Case is not used, definite-specific NPs preceded by a demonstrative were used. Examples from (1) to (6) list the target sentences in the production task.

(1) Çocuk / biraz önce / bu balon / at-
Child / a while ago / this balloon / throw

(2) Çocuk / biraz önce / şu kapı / aç-
Child / a while ago/ that door / open

(3) Kız / dün / o çiçek / kopar-
Girl / yesterday / that flower / pick

(4) Doktor / şimdi / şu eldiven / giy-
Doctor /now/ that glove / wear

(5) Çocuk / şu anda / bu domates / ye-
Child / right now/ this tomato/ eat

(6) Çocuk /şimdi / o uçak / göster-
Child /now/ that plane / show

In the absence of demonstratives *bu, şu, o* (i.e. 'this' and 'that') it is totally acceptable to use NPs without any overt case morpheme (with a slight change in meaning resulted from definiteness and specificity). However, when there is a demonstrative which restricts the semantic content of the referent NP, it is a must to use the accusative case suffix attached to the object NP.

Going back to the properties of Accusative Case targeted in two tasks, structural case has to be feature checked in a Spec-Head configuration within Generativist framework. Thus, uninterpretable features of this particular structural case in Turkish (henceforth [uCase: ACC]) are assembled as [+ definite, +specific] for the contexts targeted in this study. This assembly of features represents a subset of [uCase: ACC] which has to be overtly realized when it is preceded by a quantifier (DP) as discussed in a detailed manner in Chapter 2.

Potentially relevant features for Accusative Case such as [±specific; ± definite; ±animate] were not configured the same way in the L1Russian and L2 Turkish. In Russian uninterpretable features of [uCase: ACC] involve the following: [±gender, ±number, ±person]. Thus, L1 Russian - L2 Turkish learners have to reconfigure features of [uCase: ACC] so that they become compatible with L2 Turkish.

As noted above, the divergence between native and non-natives in using Accusative Case may be resulted from the way the bundle of features that are relevant with Accusative Case differed in the two languages. [15] As Lardiere (2009) argues, an L2 learner has to learn the form and feature content of language-specific lexical items and functional categories in the L2. In addition to that, this difference is particular to the oral production task while there was no difference between L1 Russian and L1 Turkish groups in using Accusative Case in the written forced elicitation task. This further reveals that although L1 Russian group has an access to the metalinguistic knowledge of Accusative Case uses in Turkish, under the time pressure in the oral production task they fail to resort to it.

Even though L1 Russian groups committed errors far less than any other L2 groups their error rates were the highest in Accusative Case in both tasks. In terms of the error types, substitution errors outnumbered the omission errors in the written forced elicitation task except for Plural. Contrary to the results of this task, in the oral production omission errors outnumbered the substitution. Furthermore, in Plural use

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[15] This finding is also interesting as Accusative Case in both Turkish and Russian is considered structural case rather than morphological case. In other words, as proposed in the Chomskyan Theorizing, a DP checks its structural Accusative case by virtue of being in a certain structural configuration and not because of a specific theta-role or other idiosyncrasies (see Lenchuk, 2016 for a recent discussion on Russian). Despite this similarity, Accusative Case appears to pose problems for the L1 Russian learners of Turkish at least in the oral production task.

of this task, there was no single incidence of a substitution error, which may be interpreted as L1 Russian's being aware of restricted uses of Plural suffix in Turkish.

The L1 Russian group differed from the L1 English group in Dative Case and from the L1 Chinese and the L1 Japanese in Plural in the written forced elicitation task. In the oral production task, there was a difference between L1 Russian and L1 Chinese in Ablative, Dative, Locative Cases, and Plural while the L1 Russian group also differed from the L1 English group in Dative and Locative Cases.

Among the targeted morphemes, Accusative was the case that L1 Russian group had the most difficulty whereas Locative Case posed the least difficulty. Moreover, their use of Dative Case was not very problematic in either task. However, their performances of Plural and Ablative Case fluctuated across tasks. While Ablative Case was used more accurately in the production task it was the second erroneously used suffix in the written forced elicitation task. It was just the same for the Plural suffix being the second most accurately used morpheme in the forced elicitation task and the forth one in the oral production.

In brief, except for Accusative Case, the L1 Russian group performed as accurately as the L1 Turkish group obscuring the native – nonnative distinctions. It is highly probable that highly inflectional nature of L1 Russian contributed to this by making it far easier to sort out possible restrictions on the use of nominal inflectional morphemes in Turkish.

6.3.2 The L1 Japanese group

The L1 Japanese group showed discrepancy with the L1 Turkish group for Ablative, Dative Cases and Plural in the written forced elicitation task and for Accusative and

Dative Cases in the oral production task. Furthermore, error rates revealed that the L1 Japanese group erred mostly in Plural in both tasks. Similar to L1 Russian group's failure in Accusative Case, L1 Japanese group's failure in Turkish Plural might be explained in line with Lardiere's Feature Re-assembly Hypothesis.

To begin with, Plural is one of the phi-features (i.e. number) that have to be checked and valued within Chomskyan minimalist approach to grammar. Turkish Plural, in particular, has two versions which are in complementary distribution within nominal domain. Namely, [+plural] (in the form of suffix –lAr) is required under two conditions: 1) when a quantifier precedes an NP (i.e. *Bazı kalem-ler kısa* 'Some pens are short') or 2) when it agrees with the verb marked for Plural (i.e. *Öğrenci-ler ağaç diktiler*. 'Students planted a tree.'). On the other hand, the second version of Turkish Plural is a null morpheme (i.e. [-plural]) that is used when a numeral precedes an NP (i.e. *beş ev-Ø* 'five houses').

Going back to Japanese Plural discussed in Chapter 2, it is just the same as Turkish Plural in second condition with a numeral (i.e. [-plural]). Specifically, there is no overt Plural marker but the meaning is conveyed through a numeral (i.e. *hana* 'flower(s)' vs. *futatsu no hana* 'two flowers'). Thus, based on the Feature Re-assembly account, it may be claimed that L1 Japanese L2 Turkish group failed to reconfigure their [-plural] feature due to the overlap with L2 Turkish [-plural]. Yet, the target Turkish Plural in two tasks necessitates [+plural], which requires them to rearrange features of Plural so that it covers both [+plural] and [-plural].

As for the type of error, omission errors outnumbered the substitution errors in the oral production while it was the opposite in the forced elicitation task. However, in the oral production they committed more substitution errors than

omission errors in Dative use contrary to expectations. Also, in the forced elicitation, omission errors in Locative Case outnumbered the substitution errors.

In terms of L2 group comparisons, no statistically significant differences were found between L1 Japanese and any other groups in the oral production task. Moreover, the L2 groups' comparisons indicated L1 Russian and L1 Japanese groups' difference for Plural in the written forced elicitation task, which may be attributed to the absence of a plural morpheme in Japanese (Sarnecka, et. al, 2007).

As for the morpheme accuracy order, Locative Case was the most accurately used while Plural was the least accurately used in both tasks. Dative Case was the forth in the ranking in both tasks being one of most inaccurately used morphemes. There was a slight difference between Accusative and Ablative Cases.

Although Japanese has Accusative and Dative case suffixes similar to Turkish (Tsijimura, 2007), this did not have an observable facilitative impact on L2 acquisition of Turkish for the L1 Japanese group contrary to predictions of the study. There was a statistically significant difference between the L1 Japanese and L1 Turkish groups in the use of Accusative and Dative Cases.

In short, the L1 Japanese group's overall performance was better than that of the L1 English and the L1 Chinese groups, as predicted and worse than the L1 Russian group. Moreover, native – nonnative distinction between the L1 Japanese and L1 Turkish was evident. However, the availability of inflectional morphemes in Japanese did not have an observable positive effect on the targeted morphemes. This finding, together with the finding regarding the Russian group's performance on Accusative Case, suggests that a crude contrastive analysis approach to L1-L2 differences does not provide us the necessary sophistication in the context of L2

acquisition of morphology. It might be true that rich inflectional paradigms in the L1 may sensitize learners towards the full mastery of the L2 morphemes but this alone may not be sufficient. It is not the presence of a particular morpheme in the L1 that matters in L2 acquisition but it is how a particular feature (e.g. Case) is configured in the L1 and the L2.

6.3.3 The L1 English group

The overall accuracy data suggest that the L1 English group was the second least successful group among the L2 learners. Their performance demonstrated variability. In both tasks, they were significantly less accurate than native Turkish speakers in the use of most target morphemes. Specifically, except for Ablative Case in oral production, and Locative Case in the written forced elicitation task, they were less accurate than native speakers. It is surprising that despite the presence of the English plural suffix, they failed to supply correct plural suffix in Turkish in the obligatory contexts. This might be due to difficulty in selecting the correct obligatory contexts for the plural suffix in Turkish as it is not allowed with numerals and certain quantifiers contrary to English.

More specifically, as noted earlier, Turkish Plural [+plural] and English Plural marking nouns for plural productively in the form of suffix −s, thus, [+plural] are not the same although the binary representation implies that they are just the same. However, for very similar conditions between English [+plural] and Chinese [+plural][16] and between English [+past] and Somali [+past], Lardiere (2008, 2009) warns that although they are available in each language 'they are assembled

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[16] In most of the grammar reference books for Chinese, it is stated that there is no plural marker in Chinese. However, Lardiere (2009) cites Li's account (1999) of a suffix which is also called a collective marker that marks [+animate] and [+definite] pronouns for plural (i.e. −men) (p. 193).

differently in each language' (p. 187). Thus, she further claims 'The language-specific morphological differences in how features are assembled in lexical items present a true learning problem for L2 acquirers' (Lardiere, 2009, p.187). In brief, Turkish and English features for [+plural] are distinctly fused into a plural morpheme (i.e. –lAr in Turkish and –s in English), which might account for L1 English group failure in Turkish Plural.

The error rates also confirm these results. The highest error rate was in Plural use in the oral production task whereas it was the Dative Case in the written forced elicitation task. The error type demonstrated that omission errors outnumbered substitution errors for all Cases in the oral production. However, in the forced elicitation task, the same number of errors was committed in Accusative Case and there were more omission errors than substitution errors in Plural use, which was a very rare case in this task.

With respect to L2 group comparisons, the L1 English participants differed significantly from L1 Russian participants in the use of Dative and Locative Case suffixes in oral production while they differed only in their Dative Case uses in the written forced elicitation task. There was no other condition where the L1 English group diverged from the other L2 Turkish groups.

When we focus on the performance in each individual morpheme, we see that overall L1 English participants had problems in the correct suppliance of Dative Case and Plural in both tasks. Furthermore, Locative Case seems to be the most accurately used while Ablative and Accusative Cases are in between in these in the accuracy ranking.

Unlike Plural, Accusative, Dative, Locative and Ablative Cases are not overtly grammaticalized in English (Jepersen, 1933). The findings of this study indicated that contrary to other L2 groups, L1 English participants had the greatest difficulty with Dative suffix. This is compatible with L1 characteristics since there is no overt case marking in English (Belvin, 2006). However, their better performance in Locative Case which is not available in English in the form of a suffix either signals that there could be other factors that influence this failure in Dative Case.

In brief, discrepancy between L1 Turkish and L1 English points out a L1 − L2 acquisition difference. Moreover, it is evident that the L1 English group's performance falls behind that of the L1 Russian and L1 Japanese groups (i.e. based on error rates and mean accuracy scores in two tasks) although statistically significant difference was only available in comparison with the L1 Russian group. In addition to these, the L1 English group is the one that committed most of the errors in Dative Case. All these suggest that restricted inflectional morphology of L1 English affects L2 acquisition of Turkish morphology. Nevertheless, as noted above, this alone does not seem to be the sole reason of performance differences among target morphemes in L2 Turkish.

6.3.4 The L1 Chinese group

According to the results of the first analysis, the L1 Chinese group differed significantly from the L1 Turkish group across all target morphemes in both tasks. In addition to that, performance of the L1 Chinese group was lower than all other L2 Turkish groups particularly in the oral production task. With respect to the error rates, the L1 Chinese group was the most inaccurate L2 group committing the highest number of errors in almost all Cases in both tasks. In particular, the highest

error rate was the L1 Chinese performance in Plural suffix in the oral production task (i.e. 75.9%). In line with the discussion on Turkish Plural [+plural] for L1 Japanese and L1 English groups, L2 Turkish learners of L1 Chinese which lacks a plural morpheme except for a collective marker, thus being a [-plural] language, might need to rearrange features for Plural to make it compatible with L2 Turkish in line with Lardiere's (2008, 2009) argument.

Moreover, in line with the task type, there was more omission than substitution in the production task while it was just the opposite in the written forced elicitation task. Detailed analysis of substitution errors revealed that the most frequent substitution error was the L1 Chinese group's using Accusative Case instead of Dative Case in both task.

As for the differences between the L1 Chinese group and other L2 participants, the L1 Chinese participants diverged from the L1 Russian group in Ablative, Dative, Locative, and Plural suffix contexts in the oral production task. Similar differences were also found in the written task. Although a statistically significant difference was found only between L1 Chinese and L1 Russian groups' use of Plural suffix, the overall mean accuracy scores of the L1 Chinese group was lower than all other L2 groups in both tasks.

With respect to the accuracy ranking among the individual morphemes, the analyses revealed that the L1 Chinese group had problems in all categories but the lowest accuracy (and the highest error rate) was obtained in the Plural morpheme. Their failure in Plural may be attributed to the very restricted obligatory contexts used to trigger Turkish Plural suffix in two tasks (i.e. the one with quantifiers). In addition to that, this failure may also stem from the lack of inflectional morphology

in Chinese, desensitizing L1 Chinese participants towards the rich inflectional system in L2 Turkish. Furthermore, just like all other L2 Turkish groups, the highest accuracy rate was in Locative Case in two tasks. The order of other case morphemes changes in their accuracy rankings from the highest to the lowest across tasks (i.e. Dative, Accusative and Ablative in the written forced elicitation and Ablative, Dative, Accusative in the oral production respectively).

These findings were predicted as there is no overt case marking in Chinese (Huang, Li & Li, 2009). It is highly probable that the scarcity of grammaticalized morphemes in Chinese (most of them are not called morphemes but classifiers or clitics (Ross & Sheng, 2006) may make it even more difficult for L1 Chinese L2 Turkish acquirers to correctly supply target nominal inflectional morphemes in L2 Turkish.

6.3.5 Summary

The results of the current thesis revealed that L2 Turkish groups had particular difficulties which led to variability in their use of nominal inflectional suffixes in both tasks. This finding has been in line with variability in morphology reported in a number of studies (Gürel, 2000; Gürel, 2016; Haznedar & Schwartz, 1998; Lardiere, 1998; Prévost &White, 2000; among many others).

The comparison of accuracy scores of all L2 groups in two tasks so far implies L1 influence. The L1 Chinese group appears to be the least accurate group, whereas the L1 Russian group was the most native-like group in terms of oral production. It is highly probable that rich inflectional suffixation in Russian has made L2 acquisition of Turkish morphemes easier while this was not the case for L1 Chinese whose linguistic properties do not involve any suffixation. While this

general contrastive approach is on the right track, it still fails to account for the full picture. As discussed in Slabakova's (2009) Bottleneck Hypothesis, L2 acquisition of inflectional morphology poses particular difficulty for L2 acquirers since "it reflects syntactic and semantic differences between languages." (p. 292). On this note, as proposed by Lardiere (2009), although there is a universal set of features, each language has its own feature configuration.

Comparisons across Cases revealed that overall Ablative and Locative were noted to be the least erroneously used suffixes while Accusative Case and Plural suffixes were the most erroneously used one. While it is possible to account for L2 Turkish learners' failure in Accusative Case and Plural via the way these features are bundled in their L1s as discussed in line with Lardiere's account, their notable success with Locative Case may be attributed to the Location theta-role, which represents a sample of inherent case in all test conditions in Turkish. Göksel and Kerslake (2005) notes that Locative Case in Turkish may be used as an oblique object of a very restricted set of verbs (i. e. *karar ver-* 'decide on' and *ısrar et-* 'insist on'). Except for these idiosyncrasies which were not targeted in either task, Locative Case 'expresses physical or abstract location' (Göksel & Kerslake, 2005, p. 178). All Locative Case examples in both tasks were inherent case samples, which might have eased the pain for L2 learners. Their comparatively less accurate uses in Ablative and Dative might have resulted from some idiosyncratic cases in addition to inherent case samples for these cases. For instance, in the offline written task following sentences represent inherent and idiosyncratic cases respectively: a) *Ayşe Ali'ye para verdi* 'Ayşe gave money to Ali.' vs b) *Mehmet Fatma'ya güvendi.* 'Mehmet trusted on Fatma.'. As it is obvious with these examples, among non-structural cases, Locative

Case might have been used more accurately due to the one to one mapping with a Location theta role and Locative Case suffix (i.e. –DA) in Turkish.

All these comparisons in the oral production are compatible with the ones in the written forced elicitation task. Thus, these findings indicate that morphological properties of L1 have a considerable impact on the acquisition of Turkish as an L2.

Results of the analysis also demonstrated that the morpheme type was a significant variable for each group (except for the L1 Japanese in oral production). The L1 Chinese, L1 English and L1 Russian groups indicated that not all nominal inflectional morphemes in L2 Turkish are acquired in the same way. For instance, Locative Case seems to differ from at least one other morpheme within each L2 group. Moreover, of all the interaction observed within groups, Locative Case appeared in 17 cases while there were six instances indicating a difference for Accusative and Dative Cases, five for Plural and four for Ablative Case. This is also compatible with what Gürel (2000) found in her study, concluding that the erroneous use of Accusative is higher than Dative and Genitive Cases.

Furthermore, morpheme-based distinctions in L2 acquisition were also confirmed by other scholars. For instance; Lardiere (2009) accounts for such a difference as follows:

> …to the extent formal morphological and word order contrasts are in fact detectable to adult learners, the greater difficulty for the second language acquirer lies in assembling just the right combination of features into the right lexical items for each language, and in determining the appropriate conditioning environments or their expression. This is especially so in cases where such features (interpretable or uninterpretable) do exist in the L1 but are configured differently, and/or are expressed under different contextual conditions, including pragmatically-governed ones. (pp. 215)

In brief, L2 acquisition of Turkish nominal inflection morphemes seems to require acquirers to reassemble L1 features so that they become compatible with the target structures. However, this does not guarantee an error-free route. In their acquisition they either reassemble the existing features or they fail to do so (as in Turkish Accusative and Plural which pose more difficulty due to restrictions stemming from the interaction between these and quantifiers, definiteness, specificity, etc.). When they fail, omission errors usually outnumber the submission errors (Lardiere, 1999; Papadopoulou et al., 2010 among many others) as it was the case in this study's oral production task.

Another significant finding was the incongruence between the written forced elicitation and the oral production tasks in the L1 Japanese group. The L1 Japanese group showed within group difference for Locative – Ablative, Locative – Dative, Locative – Plural in the written task whereas there was no morpheme-based statistically significant difference in the oral production task, suggesting the role of task difference (i.e. comprehension vs. production). As Prévost and White (2000) put it, "L2 learners might be expected to perform more accurately on an untimed grammaticality judgment task (where they have time to access the relevant representation) than in spontaneous production or in timed tasks." (p. 129).

As the results section indicated, error types differed in accordance with the task type. In the written forced elicitation task, substitution errors outnumbered the omission errors. Due to the more structured multiple choice nature of the written forced elicitation task, participants might have felt the need to fill each gap although they were given the chance to choose empty slot/option as one of the distracters. Apart from that, L1-based comparisons demonstrated that the L1 Russian group

committed both omission and substitution errors less than any other groups, whereas the L1 Chinese group committed these errors at a highest rate. Furthermore, only in Plural use, the omission errors outnumbered substitution errors in the written forced elicitation task. This may stem from the restriction on Plural morpheme which is used within a particular structure with a quantifier in the nominal domain. Specifically, all target items that would trigger the use of Plural in Turkish were constructed with the use of particular quantifiers (i.e. in this study *bazı* – 'some') since this was the only obligatory context for Plural. It is highly probable that due to limited uses of Plural, participants might have preferred not to use it instead of providing another nominal inflectional suffix. The acquisition of an uninterpretable feature, namely Plural which is highly distinct from all target languages poses an obstacle for L2 Turkish acquirers in this study. As Lardiere (2008) puts it '… selection part of language acquisition seems easy, it is the assembly part that is difficult, especially if it is complicated by already having learned how features are organized and assembled in particular lexical items in one's prior language(s).' (p. 26).In brief, L2 learners seem to have particular difficulty in rearranging features of Plural.

In the oral production task, omission errors outnumbered substitution errors contrary to findings of the written task. As explained in the Missing Surface Inflection Hypothesis (Haznedar & Schwartz, 1997; Prévost & White, 1999), this discrepancy between the tasks might stem from the mismatch between the underlying structure and surface realization of these structures under the time pressure in oral production. More specifically, although participants have access to linguistic information related to target structures, they might fail to produce target suffixes when they are urged to use them under some circumstances. Moreover, instead of

substituting these with a form that would lead ungrammaticality, they prefer not to use any suffixes committing omission errors more often than substitution errors.

Lastly, one of the research objectives in this study was to identify whether we could talk about an accuracy order for each L2 group on the basis of their target morpheme use in both tasks. As discussed in each section above, there are certain morphemes that each L2 group found more difficult to use. The accuracy order was based on the accuracy percentages for all case suffixes in both tasks and these percentages are presented in The Table 19.

Table 19. Accuracy Percentages across L2 Turkish Groups

Language	Task	Accuracy Percentages (%)				
		Ablative	Accusative	Dative	Locative	Plural
L1 Russian	Oral	57.11	46.17	57.69	58.22	51.89
	Written	88.25	95.37	91	97.25	93.75
L1 Japanese	Oral	42	46	34.47	42.74	43.91
	Written	73.62	84	72.25	94.5	64.62
L1 English	Oral	36.33	33.17	31.25	33.06	36.42
	Written	75	75	70.87	91.62	75
L1 Chinese	Oral	33.82	30.05	33.16	29.87	28.21
	Written	70.87	75	79.87	94.5	64.62

In line with the accuracy percentages of all L2 Turkish groups for all inflectional

suffixes in both tasks, the Table 20 summarizes these individual accuracy orders for

each L2 group.

Table 20. Accuracy Order across L2 Turkish Groups

Language	Task	Accuracy Order
L1 Russian	Oral	Locative > Dative ≥ Ablative ≥ Plural ≥ Accusative
	Written	Locative > Accusative ≥ Plural ≥ Dative ≥ Ablative
L1 Japanese	Oral	Accusative ≥ Plural ≥ Locative ≥ Ablative ≥ Dative
	Written	Locative ≥ Accusative ≥ Ablative ≥ Dative ≥ Plural
L1 English	Oral	Plural ≥ Ablative ≥ Accusative ≥ Locative > Dative
	Written	Locative > Ablative ≥ Accusative ≥ Plural ≥ Dative
L1 Chinese	Oral	Ablative ≥ Dative ≥ Accusative ≥ Locative > Plural
	Written	Locative > Dative ≥ Accusative ≥ Ablative ≥ Plural

*'>' symbol indicates higher accuracy rate on the basis of statistically significant

difference between morphemes.

Based on the group means for each morpheme, it is not possible to propose an

accuracy order that would account for all L2 Turkish groups. However, Locative

Case seems to be more readily acquired by all L2 Turkish groups. Recall that in L1

acquisition study, the acquisition order Ekmekçi (1979) found for Turkish was

Dative, Accusative, Locative, Instrumental, and Ablative Cases. Dative Case was

noted to be the first in the order in that particular study. Thus, there seems to be

incongruence between L1 data discussed by Ekmekçi and L2 data presented here.

Finally, the current study revealed that Case and Plural suffixes in Turkish as

L2 are not equally difficult to acquire for L2 learners with various L1 backgrounds.

In particular, Accusative Case and Plural suffixes were the most troublesome

morphemes. One of the pedagogical implications for such a conclusion might be

form focused instruction that would draw attention to these restricted uses of

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Accusative Case and Plural suffix in Turkish. As discussed in Slabakova's Bottleneck Hypothesis (2009, 2014), the difficulty in the L2 acquisition of functional morphology might be remedied by "increased emphasis on practicing grammar in the classroom" (p. 22). Thus, L2 Turkish learners might benefit from form focused instruction that would target interaction between Accusative Case and definiteness and specificity as well as the interaction between quantifiers and Plural suffix.

6.4 Conclusion

This chapter discussed the findings obtained from two tasks in reference to the research questions. The first issue examined was the potential differences between L1 and L2 acquisition of Turkish in both tasks and the results revealed L1-based differences between native and nonnative groups. Specifically, the L1 Russian-speaking participants were more native-like than all other groups, while the Chinese-speaking group appeared to be the least accurate of all, suggesting morphosyntactic differences between L1 and L2 play a role in the acquisition of L2 morphology. Nevertheless, given that even the presence of a particular morpheme did not seem to guarantee native-like mastery of L2 morphemes (as in the case of Russian participants' problems with Accusative Case or L1 English learners' problem with Plural), a simple contrastive approach does not account for all the results. Instead the L1 and L2 differences with respect to the feature configurations might account for such findings. Nevertheless, irrespective of the L1 background of the learners, some morphemes were produced more easily than others in all groups. Specifically, Locative Case was the easiest while Accusative Case and Plural being the most difficult ones.

6.5 Limitations and suggestions for further research

There are several limitations to the present study. The first one pertains to sample size. As noted earlier, the current study involved 18 participants for each L1 group making it 90 in total. It could have been better to involve more participants to gain deeper insights on the issue. Nevertheless, although the number of individuals learning Turkish as a L2 has increased over the last 10 years, to find comparable number of participants from different L1 background is still not easy. In addition to that, it could have been better to involve participants with a longer mean length of exposure to Turkish. Therefore, the number of L2 participants remained low in the study. Furthermore, the tool used to test L2 Turkish proficiency (i.e., cloze test) might have been insufficient. Due to the lack of a standardized Turkish proficiency test that is readily available to L2 researchers, the present study relied on an in-hose cloze test. Nevertheless, a more reliable and valid test for proficiency should be used in further studies.

APPENDIX A

LINGUISTIC BACKGROUND INFORMATION QUESTIONNAIRE

Dear Participant, this questionnaire is a part of a PHD thesis on the acquisition of Turkish as a foreign language under the supervision of Prof. Dr. Ayşe Gürel at Boğaziçi University. Thanks for your participation.

I agree to participate in this study:

Signature:_____Name: (Please print):_____

Date:_____

I.   PERSONAL INFORMATION (Will Remain Confidential)

Last Name, First Name:_____

Telephone Number:_____E-mail address:_____ _____

Sex: Female_____ Male:_____

Date of Birth:_____Place of Birth: City:_____ Country:_____

Occupation:_____

Highest Level of Schooling: Secondary_____High school_____University

II.   LINGUISTIC INFORMATION

Mother Tongue: _____

Language of Education:_____

Primary School:_____Secondary School:_____

High School:_____University:_____

Age & place of first exposure to Turkish: _____

How long have you been learning Turkish? (*e.g. for 8 months*)_____

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How long have you been living in Turkey? _____

How often do you use Turkish? (e.g., *5 hours a week*)   _____

What language do you generally use? Home:_____Work: _____ ____Social:_____

III. TURKISH LANGUAGE PROFICIENCY

Have you taken any formal instruction in Turkish? If so, where and how long?__

Have you taken any Turkish proficiency/placement test? If so, please note the result

How would you rate your linguistic ability in Turkish in the following areas?

	Beginner	Intermediate	Advanced	Near-Native
Reading				
Writing				
Speaking				
Listening				
Overall Competence				

IV. SECOND/FOREIGN LANGUAGE(S): (besides Turkish)

Second/Foreign Language 1:_____

	Beginner	Intermediate	Advanced	Near-Native
Reading				
Writing				
Speaking				
Listening				
Overall Competence				

Second/Foreign Language 2: _____

	Beginner	Intermediate	Advanced	Near-Native
Reading				
Writing				
Speaking				
Listening				
Overall Competence				

TURKISH CLOZE TEST

Aşağıdaki parçayı okuyarak boşlukları anlamlı kelimelerle doldurunuz.

Türkiye

Türkiye dünyada yer alan 180 ülkeden biridir. Türkiye, Avrupa ve Asya kıtalarının arasında, _____[1] başka değişle Avrasya'da bulunmaktadır. Türkiye devletinin _____[2] adı Türkiye Cumhuriyetidir. Türkiye sekiz ülke _____[3] sınır komşusudur. Türkiye'nin üç tarafı denizlerle _____[4]. Türkiye'nin Avrupa ile Asya kıtalarını birleştirdiği _____[5]dünya çapında jeopolitik ve ekonomik olarak _____[6] önemli bir yeri vardır. Türkler nüfusun _____[7] bir kısmını oluşturmaktadır. Türkiye'de en yaygın _____[8] İslam olup ülkenin resmi dili Türkçedir. _____[9] en büyük gelir kaynaklarından biri turizmdir. _____[10] yıl Avrupa'nın değişik ülkelerinden Türkiye'ye milyonlarca _____[11] gelmektedir ve ülkenin değişik bölgelerini ziyaret _____[12].

Türkiye 1923 yılında Osmanlı İmparatorluğu'nun _____[13] Mustafa Kemal Atatürk önderliğinde kurulmuştur. Türkiye'nin _____[14] ve laik bir yapısı vardır ve _____[15] yapı anayasa tarafından belirlenmiştir. Türkiye oldukça _____[16] bir kültür ve tarih mirasına sahiptir. Türkiye _____[17] devletleri ile iyi ilişkiler kurup Avrupa Konseyi, NATO, OECD _____[18] organizasyonlara katılmıştır. Türkiye 2005 yılında Avrupa _____[19] ile tam üyelik

konusunda müzakerelere başlamıştır _____ [20] görüşmeler halen

sürmektedir. Türkiye aynı zamanda _____ [21] devletleri ile de kültürel,

ekonomik ve _____ [22] bağlarını koparmayıp iyi ilişkilerini devam

ettirip _____ [23] dünya tarafından gelişmiş bir ülke olarak

_____ [24]. Bunun yanı sıra Türkiye politika uzmanları

_____ [25] bulunduğu bölgede önemli bir güç olarak görülmektedir.

LIST OF TARGET UTTERANCES FOR THE ORAL PRODUCTION TASK

A) TARGET ITEMS

Target Suffix	Items	Target Sentence	Further notes
Plural (-lAr)	Bazı / kalem / kısa	Bazı kalem-**ler** kısa.	
	Bazı / bardak / boş	Bazı bardak-**lar** boş.	
	Bazı / kutu / dolu	Bazı kutu-**lar** dolu.	
	Bazı / sandalye / kırık	Bazı sandalye-**ler** kırık.	
	Bazı / bilgisayar / bozuk	Bazı bilgisayar-**lar** bozuk.	
	Bazı /saat / farklı	Bazı saat-**ler** farklı.	
Accusative (-I)	Çocuk / biraz önce / bu balon / at-	Çocuk biraz önce bu taş-**ı** attı.	Past
	Çocuk / biraz önce / şu kapı / aç-	Polis biraz önce şu kapı-**yı** açtı.	Past
	Kız / dün / o çiçek / kopar-	Kız dün o çiçeğ-**i** kopardı.	Past
	Doktor / şimdi / şu eldiven / giy-	Doktor şimdi şu eldiven-**i** giyiyor.	Prog.
	Çocuk / şu anda / bu domates / ye-	Çocuk şu anda bu domates-**i** yiyor.	Prog.
	Çocuk /şimdi / o uçak / göster-	Çocuk şimdi o uçağ-**ı** gösteriyor.	Prog.
Dative (-A)	Çocuk / dün / dağ / tırman-	Çocuk dün dağa-**a** tırmandı.	Past
	Müdür / dün / sekreter / bağır-	Müdür dün akşam sekreter-**e** bağırdı.	Past
	Yüzücü / hemen / havuz / atla-	Yüzücü hemen havuz-**a** atladı.	Past
	Çocuk / şimdi / anne / sarıl-	Çocuk şimdi anne-**ye** sarılıyor.	Prog.
	Çocuk / şimdi / kreş / git-	Çocuk şimdi kreş-**e** gidiyor.	Prog.
	Futbolcu / şimdi / top / vur-	Futbolcu şimdi top-**a** vuruyor.	Prog.
Locative (-DA)	Çocuk / bütün gece / bahçe / saklan-	Çocuk bütün gece bahçe-**de** saklandı.	Past
	Adam /dün / park /	Adam dün park-**ta**	Past

Target Suffix	Items	Target Sentence	Further notes
	kaybol-	kayboldu.	
	Çocuk / bütün gün / deniz / oyna-	Çocuk bütün gün deniz-**de** oynadı.	Past
	Çocuk / yarım saattir / salıncak / sallan-	Çocuk yarım saattir salıncak-**ta** sallanıyor.	Prog.
	Adam / ayda bir / orman /koş-	Adam ayda bir orman-**da** koşuyor.	Prog.
	Yemek / iki saattir / tencere / piş-	Yemek iki saattir tencere-**de** pişiyor.	Prog.
Ablative (-DAn)	Adam / az önce / çatı / düş-	Adam az önce çatı-**dan** düştü.	Past
	Adam / geçen yıl / kanser / öl-	Adam geçen yıl kanser-**den** öldü.	Past
	Adam / dün gece / soğuk / don-	Adam dün gece soğuk-**tan** dondu.	Past
	Bebek / şu anda / açlık / ağla-	Bebek şu anda açlık-**tan** ağlıyor.	Prog.
	Yolcu / şu anda / otobüs / in-	Yolcu şu anda otobüs-**ten** iniyor.	Prog.
	Kadın / şu anda / alışveriş / dön-	Kadın şu anda alışveriş-**ten** dönüyor.	Prog.

THE WRITTEN FORCED ELICITATION TASK

Değerli Katılımcı,

Bu anket Boğaziçi Üniversitesi, İngiliz Dili Eğitimi Anabilim Dalı'nda yürütülen bir doktora tez çalışması için kullanılacaktır. Kimliğiniz kesinlikle gizli tutulacaktır. Çalışmanın herhangi bir aşamasında ayrılabilirsiniz. Katılımınız için çok teşekkür ederiz.

Tez Danışmanı: Prof. Ayşe GÜREL & Tez yürütücüsü: Gülümser Efeoğlu

Ad & Soyad:_____

Aşağıdaki cümleleri okuyunuz. Boşlukları dolduracak doğru yanıtı işaretleyiniz. Her bir cümle için *sadece tek bir doğru yanıt* bulunmaktadır.

Örnek

    Kek__ güzel kokular geldi.

    a. Ø   *b. -ler*   *c. -i*   *d. -e*   *e. –te*   *f. –ten*

1) Zeynep fare___ nefret ediyor.

    a. Ø   *b. –ler*   *c. -yi*   *d. -ye*   *e. -de*   *f. -den*

2) Hastane___ yangın çıktı.

    a. Ø   *b. –ler*   *c. -yi*   *d. –ye*   *e. -de*   *f. -den*

3) Fatma___ Ali hoşlanıyor.

    a. Ø   *b. –lar*   *c. -yı*   *d. –ya* *e. -da*   *f. -dan*

4) Ayşe İstanbul___ gece vardı.

    a. Ø   *b. –lar* *c. -u*   *d. -a*   *e. -da*   *f. -dan*

5) Öğrenci___ ağaç diktiler.

    a. Ø   *b. –ler*   *c. -yi*   *d. -ye*   *e. -de*   *f. -den*

6) Soru___ Mehmet sordu.

    a. Ø   *b. –lar*   *c. -yu*   *d. -ya*   *e. -da* *f. -dan*

7) Hasan Adana___ oturuyor.

    a. Ø   b. –lar   c. -yı   d. –ya   e. -da   f. -dan

8) Ayı___ kış uykusuna yatıyorlar.

    a. Ø   b. -lar   c. -yı   d. -ya   e. -da   f. -dan

9) Fatma sıcak___ bunaldı.

    a. Ø   b. –lar   c. –ğı   d. -ğa   e. -ta   f. -tan

10) Kitap ofis___ kaldı.

    a. Ø   b. –ler   c. –i   d. –e   e. -te   f. -ten

11) Ayşe___ Ali para verdi.

    a. Ø   b. –ler   c. -yi   d. –ye   e. -de   f. -den

12) Fatma köy___ özledi.

    a. Ø   b. -ler   c. -ü   d. -e   e. -de   f. -den

13) Mehmet köprü___ aşağı atladı.

    a. Ø   b. –ler   c. -yü   d. -ye   e. -de   f. -den

14) Kek___ Ali beğendi.

    a. Ø   b. –ler   c. -i   d. –e   e. -te   f. -ten

15) Ali Hasan___ benziyor.

    a. Ø   b. -lar   c. -ı   d. -a   e. -da   f. -dan

16) Kedi___ Zeynep korkuyor.

    a. Ø   b. –ler   c. -yi   d. -ye   e. –de   f. -den

17) Mehmet gemi___ çalışıyor.

    a. Ø   b. –ler   c. -yi   d. -ye   e. -de   f. -den

18) Bazı bomba___ patladı.

    a. Ø   b. –lar   c. -yı   d. -ya   e. -da   f. -dan

19) Mehmet Fatma___ güvendi.

a. Ø   b. -lar   c. -yı   d. -ya   e. -da   f. -dan

20) Salon___ Ayşe uyudu.

a. Ø   b. -lar   c. -u   d. -a   e. -da   f. -dan

21) Şoför___ çay içtiler.

a. Ø   b. –ler   c. -ü   d. -e   e. -de   f. -den

22) Zeynep Hasan___ bıktı.

a. Ø   b. –lar   c. -ı   d. -a   e. -da   f. -dan

23) Ali___ Ayşe güldü.

a. Ø   b. –ler   c. -yi   d. -ye   e. -de   f. -den

24) Ankara___ Mehmet ayrıldı.

a. Ø   b. –lar   c. -yı   d. -ya   e. -da   f. -dan

25) Zeynep İzmir___ sevdi.

a. Ø   b. –ler   c. -i   d. -e   e. -de   f. -den

26) Göl___ Hasan yüzüyor.

a. Ø   b. –ler   c. -ü   d. -e e. -de   f. -den

27) Tüm hırsız___ kaçtı.

a. Ø   b. –lar c. -ı   d. -a   e. -da   f. -dan

28) Pencere___ sinek girdi.

a. Ø   b. –ler c. -i d. -ye   e. -de   f. -den

29) Şirket, su___ kesti.

a. Ø   b. –lar c. -yu   d. -ya   e. -da   f. -dan

30) Araba___ Fatma bindi.

a. Ø   b. –lar c. -yı   d. –ya   e. -da   f. -dan

31) Tüm kuş___ uçtu.

a. Ø   b. –lar   c. -u   d. -a   e. -ta   f. -tan

32) Ayşe şu cam___ kırdı.

 a. Ø   b. -lar   c. -ı   d. -a   e. -da   f. -dan

33) Zeynep güneş___ baktı.

 a. Ø   b. –ler   c. -i   d. -e   e. -te   f. -ten

34) Otel___ yemek bitti.

 a. Ø   b. –ler   c. -i   d. -e   e. -de   f. -den

35) Bütün eski ev___ yandı.

 a. Ø   b. –ler   c. -i   d. -e   e. -de   f. -den

36) Şarkı___ Zeynep söyledi.

 a. Ø   b. –lar   c. -yı   d. -ya   e. -da   f. -dan

37) Bazı meyve___ çürüdü.

 a. Ø   b. –ler   c. -yi   d. -ye   e. -de   f. -den

38) Hasan polis___ yalan söyledi.

 a. Ø   b. –ler   c. -i   d. -e   e. -te   f. -ten

39) Bu apartman___ Fatma yaşıyor.

 a. Ø   b. –lar   c. -ı   d. -a   e. -da   f. -dan

40) Hikaye___ Mehmet yazdı.

 a. Ø   b. –ler   c. -yi   d. -ye   e. -de   f. -den

 Test bitmiştir.

 Teşekkür ederiz.

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