

**REPUBLIC OF TURKEY
ÇUKUROVA UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
DEPARTMENT OF ENGLISH LANGUAGE TEACHING**

**A COMPARATIVE STUDY OF MOTION VERBS USED BY TURKISH EFL
LEARNERS IN THEIR L1 AND L2**

Nebahat BADEM

Ph.D. DISSERTATION

ADANA / 2020

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Ph.D. DISSERTATION

ADANA / 2020

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We certify that this dissertation is satisfactory for the award of the degree Doctor of Philosophy in the Department of English Language Teaching.

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- Kullanılan verilerde ve ortaya çıkan sonuçlarda herhangi bir değişiklik yapmadığımı,
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bildirir, aksi bir durumda aleyhime doğabilecek tüm hak kayıplarını kabullendiğimi beyan ederim. ... / ... / 2020

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ÖZET

YABANCI DİL OLARAK İNGİLİZCE ÖĞRENEN TÜRK ÖĞRENCİLERİN BİRİNCİ VE İKİNCİ DİLLERİNDE DEVİNİM EYLEMLERİNİ KULLANIMLARI ÜZERİNE KARŞILAŞTIRMALI BİR ÇALIŞMA

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Son kırk yıldır araştırmacılar devinim olaylarına ve bu olayların tipolojik olarak farklı dillerdeki tanımlamalarına ilgi göstermişlerdir. Talmy (1985, 2000) ve sözcükleştirme örüntüsü bu ilginin temelini oluşturmuştur. Slobin'in (1996a) Konuşmak için Düşünme varsayımı, seçimleri ve sözdizimi yapıları tipolojik varyasyonlara göre değişebileceğinden sözcükleştirme örüntülerinin konuşmacıların devinim olaylarını ifade ettikleri şekiller üzerinde belli sonuçları olacağını önermiştir. Yabancı dil çalışmalarında özellikle de İngilizceyi yabancı dil olarak öğrenen Türk öğrenciler açısından kısmen daha az araştırma yapılırken, şimdiye kadar yapılan araştırmaların çoğu bu olayların ana dilde ifade edilmelerine odaklanmıştır. Bu boşluğu doldurmak için, bu çalışma, ölçeğini kavramsal çerçeve olarak Slobin'in konuşmak için düşünme varsayımı ve Talmy'nin eylem-çerçeve diller / uydu çerçeve diller dil sınıflandırması tarafından önerilen belirli bir dil tipolojisinde devinim anlamsal alanına sınırlayarak, yabancı dil edinimi sorununa bir açıklama getirmeyi amaçlamaktadır. Bu çalışma, İngilizce ve Türkçe olmak üzere iki dili sözcükleştirme örüntülerine göre sınıflandırarak ve özellikle dil üretimi ve dil kavrama verisi ortaya çıkarmak için tasarlanmış görevleri kullanarak, devinim eylemlerinin dilsel ifade farklılıklarını araştırmakta, devinim eylemlerinin bu iki dildeki dilsel kavramalarını karşılaştırmakta ve İngilizceden Türkçeye ve Türkçeden İngilizceye çevrildiklerinde devinim eylemlerinin dilsel ifadeleri üzerindeki diller arası etkilerini ortaya çıkarmaktadır. Çalışmanın bazı sonuçları Jackendoff'un evrensel yaklaşımıyla (1990, 1996) aynı doğrultuda iken, bazıları da Whorf'un dilsel görecelik varsayımının (1956) bir uzantısı olan Slobin'in

Konuřmak iin Düşünme (1996a) varsayımını desteklemektedir. Bu sonuçlar dil öğretmenleri tarafından öğrencilerinin dil üretimi ve kavramalarını değerlendirirken kullanabilecekleri, dil öğrenenlerin algıları ve dilsel ifadeleri açısından kendilerine özgü sözcükleştirme örüntüleri hakkında önemli çıkarımlar sunmaktadır.

Anahtar Kelimeler: devinim eylemleri, eylem-ereveli diller, uydu-ereveli diller, sözcükleştirme örüntüsü, dilsel kavrama.



ABSTRACT**A COMPARATIVE STUDY OF MOTION VERBS USED BY TURKISH EFL
LEARNERS IN THEIR L1 AND L2****Nebahat BADEM****Ph.D. Dissertation, English Language Teaching Department****Supervisor: Assoc. Prof. Dr. Cem CAN****July 2020, 185 pages**

For the last four decades, researchers have shown interest in motion events and their descriptions in typologically different languages. Talmy (1985, 2000) and his lexicalization patterns formed a ground for this interest. Slobin's (1996a) Thinking for Speaking hypothesis proposed that lexicalization patterns have certain consequences for the ways in which speakers express motion events as their choices and syntax structures might change by typological variations. Much of the research so far has focused on the expression of these events in first languages while less research has been conducted on foreign languages especially in terms of Turkish EFL learners. To fill this gap, this study aims to provide with an explanation to the problem of foreign language acquisition by limiting its scope to the semantic domain of motion within the definite language typology suggested by Talmy's verb-framed language vs. satellite-framed language typology and Slobin's thinking for speaking hypothesis as the theoretical framework. By classifying two languages namely English and Turkish according to their lexicalization patterns and making use of tasks that are specifically designed to elicit language production and language comprehension data, this study seeks the linguistic expression differences of motion verbs, compares the linguistic comprehension of motion verbs in these two languages and reveals the cross-linguistic effects on the linguistic expression of motion verbs when translated from English to Turkish and Turkish to English. While some results of the study are in line with Jackendoff's Universalist view (1990, 1996), some support Slobin's Thinking for Speaking hypothesis (1996a) as an extension of Whorf's linguistic relativity hypothesis (1956). These results present important implications about the perceptions and idiosyncratic lexicalization patterns of language learners in terms of their linguistic

expression which could be used by language teachers in evaluating their students' language production and comprehension.

Key Words: motion verbs, verb-framed languages, satellite-framed languages, lexicalization pattern, linguistic comprehension.



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ABBREVIATIONS

EFL:	English as a Foreign Language
L1:	First Language
L2:	Second Language
S-language:	Satellite Framed Language
V-language:	Verb Framed Language
SLA:	Second Language Acquisition
S-framed:	Satellite Framed Language
V-framed:	Verb Framed Language
CEC:	Cambridge English Corpus
PTE:	Pearson Test of English
SD1:	Semantic Density One
SD2:	Semantic Density Two
AOI:	Area of Interest
NA:	Not Acceptable
A:	Acceptable
E:	Expected

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CHAPTER I

INTRODUCTION

1.1. Introduction

This chapter of the dissertation makes a general introduction to the study. It firstly introduces the background of the study. Then the statement of the problem is given. After the aim and the scope of the study are explained, research questions are presented. Finally, the significance and implications of the study are mentioned.

1.2. Background of the Study

The ways of classifying world languages are varied. Linguistic typology studies and classifies languages according to certain features such as word order or how they mark grammatical functions. Another way in which world languages differ is how they indicate conceptual domains such as motion, space, temporality, and so on lexically and syntactically. One of these domains – motion – can lead to a classification among world languages. While it is possible to describe motion events according to one typology in one language, that typology may not apply for another language. Therefore, this may in return cause cross-linguistic transfer issues in the process of learning foreign languages. This phenomenon has attracted plenty of attention from linguists in the last four decades. Basing their proposals on the linguistic relativity hypothesis (Whorf, 1956), Lucy (1992 and 1996) and Slobin (1991, 1996a) advocated one strong and one weak version respectively. Slobin's so-called weak version of linguistic relativity hypothesis is named as "Thinking for Speaking Hypothesis" and it forms the theoretical background of the present study. The basic assumption of this hypothesis is that "in acquiring a native language, a child learns a particular way of thinking for speaking" (Slobin, 1991, p. 12). Once set, this particular way of thinking for speaking can be very difficult to change. Therefore, the before mentioned semantic domains, for instance, can be resilient to change in a second or a third language, for they have already been set to the features of a first language. This can be provided as an explanation to the ultimate language learning problem. In other words, one of the reasons why language learners constantly encounter obstacles during the process of learning a foreign language can stem from the typological features of their first language when they are different from the ones of the target language.

1.3. The Statement of the Problem

In general sense, it is argued by linguistic determinism hypothesis that a language that is acquired by its speakers affects their ways of thinking and in return their ways of speaking (Whorf, 1956, Slobin, 1996a). Speakers of a language acquire specific ways of linguistic expression in that particular language as early as three years of age (Özçalışkan and Slobin, 1999, Özyürek and Özçalışkan, 2000, Yelkenaç, 2006, Allen, Özyürek, Kita, Brown, Furman, Ishizuka and Fujii, 2007, and Durmuş, 2016). Particularly, the expressions of motion verbs in their native language are set according to the certain verbalization pattern of that language which may be either verb framed or satellite framed in Talmyan sense (Talmy, 1985). The effect of these linguistic patterns can be so strong in one's own native language that they can cause difficulty in speaking foreign languages. Namely, this difficulty of acquiring lexicalization patterns of a foreign language may simply stem from typological differences of the two languages in hand. Therefore, it should be kept in mind that the idiosyncratic lexicalization patterns of foreign language learners in the target language should not be considered as mistakes. Rather, they should be handled as variations of linguistic expressions which may be caused by a typologically different linguistic background. In other words, the linguistic productions of language learners should not be evaluated as correct or incorrect according to a prescriptive grammar. Rather, they should be evaluated on a continuum which has expected native-like usage at its one end.

1.4. Aim and Scope of the Study

This study aims to provide with an explanation to the problem of foreign language acquisition by limiting its scope to the semantic domain of motion within the definite language typology suggested by thinking for speaking hypothesis as the theoretical framework (Slobin, 1996a). By classifying two languages namely Turkish and English according to their lexicalization patterns as a verb-framed language and a satellite-framed language respectively, it will seek the usage differences for the linguistic comprehension and expression of motion events in these two languages in a cross-linguistic analysis. The linguistic comprehension and expression of motion events in these two languages will be elicited via two tasks such as video description in two languages and a two-way translation, both of which will be accompanied by eye-tracking methodology. In addition to these two tasks, an acceptability judgment task

will be implemented as the third data collection tool with the aim of eliciting data in regards to comprehension of motion events in both languages. By making use of canonical motion event verbalization patterns from a cross-linguistic perspective, the results of the study will be evaluated in terms of challenging or supporting linguistic relativity (Whorf, 1956) and, as its extension, thinking for speaking (Slobin, 1996a) hypotheses.

1.5. Research Questions

In line with the above mentioned aims, the study will be guided by the following research questions:

1. Do Turkish EFL learners perceive and express motion events in Turkish and English, two typologically different languages, in their oral expressions in a different way? If yes, do they conform to Talmy's S-language pattern in English and V-language pattern in Turkish in their productions?
2. Do Turkish EFL learners conceptualize language differently when given linguistic expressions of motion events in Turkish and English? If yes, do they differentiate S-language – V-language patterns in English and in Turkish respectively?
3. Do Turkish EFL learners perceive and reflect a two-way effect on their L1 (Turkish) and L2 (English) when orally translating motion events from Turkish to English and vice versa?

1.6. Significance of the Study

This study is significant for various reasons. Firstly, it is one of the few studies in the literature which analyzes the linguistic expression of motion events in Turkish and in English cross-linguistically in-depth. It seeks the expression of motion events in an L2 in comparison to L1 while majority of the studies in the literature have focused on first language productions only. In addition, even if there have been studies which investigated descriptions of motion events in L2 English, this study does this with a specific reference to multiple proficiency levels in L2. This study is also important in terms of its data collection tools since one of the tools will require the learners to provide data based on their comprehension while the related studies have mostly focused on the production data. Additionally, this study uses a methodology which

requires the participants to respond to real life stimuli in dynamic videos while most of the related literature has made use of picture description as the data collection tool. However, as Papafragou, Massey and Gleitman (2006) also highlighted, using pictures in motion event studies may not be enough to present dynamic motion events as they are not static in nature. Last but not least, the incorporation of eye-tracking methodology into the tasks in the first and third data collection stage adds to the online aspect of this study, providing simultaneous psycholinguistic insight into the participants' minds and adding to its cognitive side, which raises the reliability of the study. Flecken, Carroll, Weimar and Von Stutterheim (2015) also state that "eye tracking thus serves as a method for gaining insights into processing patterns during the planning of complex linguistic material, such as an event description" (p. 102).



CHAPTER II

REVIEW OF LITERATURE

2.1. Introduction

This chapter of the dissertation includes a general view of language and cognition link and analyzes two major disciplines in the area, namely universalism and relativism. After discussing the strong and weak versions of relativist approach briefly, it presents the thinking for speaking hypothesis as a branch of relativism in more details as it forms the theoretical framework of the study. Thirdly, motion and motion events are handled with regarding typologies in two headings. Finally, a review of the literature on motion verb studies summarized under their relevant headings such as studies on motion verbs, studies with Turkish EFL background, eye-tracking studies, and translation studies ends the chapter.

2.2. The Link between Language and Cognition

The relationship between language and cognition has been a discussion topic for scholars for decades. The ideas that these systems are independent from each other or that they affect each other have long been in the center of attention. If one affects the other, another question arises such as the extent it does so. The scenario where the language one speaks influences the way one perceives the world around themselves formed the Sapir-Whorf hypothesis, which was also termed as linguistic relativity hypothesis. Whorf (1956) advocated that the speakers of different languages have different ways of perceiving the world. A counter proposal came with the Universalist approach. Jackendoff (1990, 1996) advocated that human conceptualization has universal characteristics and it is language independent.

Taking this debate in hand, the scholars grouped into two schools of thought based on from which perspective they approach to the ultimate question “*Does language affect thought?*”. The Universalist approach – which argues that language does not affect thought – and relativist approach – which argues that thought is either entirely or partly constrained by language – are mentioned below along with thinking for speaking hypothesis as an extension of relativist approach.

2.2.1. Universality

The leading figure in this line of thought is Ray Jackendoff. In his work (1983, 1990, 1996) he argued that human conceptual system consists of universal characteristics and it is free of language effect. According to theory of language and cognition from Jackendoff's point of view, conceptual representation is the same in all languages. What differs is verbal categories and syntactic construction reflected in linguistic representations. This approach by Jackendoff was also supported by other Universalist scholars such as Bierwisch (1986), Pinker (1989, 1994), Greenberg (1986) and Comrie (1981). They also proposed the absence of a language-based representation as conceptual structures are identical.

Papafragou, Hulbert and Trueswell (2008) studied event perception to find an answer to the question if language has a role in it. Their study also showed that perceivers' native language did not affect attention allocation during event perception. Therefore, adding to Universalist view, they concluded that "when inspecting the world freely, people are alike in how they perceive events, regardless of the language they speak" (p. 179).

In his examination of linguistic relativity hypothesis, Tohidian (2009) suggests the translation of idiomatic phrases as an example to the *universality* of thought. He proposes that even if the literal translations of these phrases do not seem to be meaningful, the *intended meaning* from one language to the other can be translated in spite of the linguistic differences, which can be considered as evidence to universality (emphasis in original).

More recently, Feinmann also summarized that "according to the universalist position, non-verbal cognitive processes are impervious to linguistic influence; on this view, all humans share the same conceptual structure, but possess different rules mapping conceptual components onto lexical and syntactic frames" (2020, p. 23).

2.2.2. Relativity

On the contrary to what Universalist view defends, relativist view argues that human language system and human cognition has a bi-directional relationship in which language is affected by thought. Forming this idea as the starting point, relativist approach takes two directions such as the strong version and the weak version.

The strong version is called linguistic determinism and the weak version linguistic relativity. Linguistic determinism suggests that our cognition and thought processes are entirely determined by the structure of the language that we speak while linguistic relativity suggests that the structures of different languages have some influence on the thinking and categorization of speakers (Penn, 1972, p. 28-32 as cited in Robins, 1976).

The leading figures in this school of thought were Edward Sapir and Benjamin Lee Whorf. Robins (1976, p. 99-100) cites perhaps the best summary statement of the whole Sapir-Whorf hypothesis from Carroll (1956) as follows: “the principle of linguistic relativity, which states, at least as a hypothesis, that the structure of a human being's language influences the manner in which he understands reality and behaves with respect to it”. Elffers (2008) also state that linguistic relativism is not one single concept but a combination of a multitude of views with “... the common element: *language controls mental life*” (emphasis in original). Therefore, she suggests that the *variety* of linguistic relativism should be specified.

The followers of the relativist view were divided into two groups as the strong version and the weak version of linguistic relativity hypothesis. While Lucy (1992, 1996) proposed the strong version of the hypothesis which was called linguistic determinism, Slobin (1987, 1991, 1996a) suggested a weak version which was called thinking for speaking. Linguistic determinism held that the cognitive processes were entirely determined by the language. On the other hand, Slobin, with thinking for speaking, suggested that some areas of cognition were constrained by the language, yet this was not an entire constraint. They also carried this line of research to the second language acquisition. Slobin's (1996b) thinking for speaking hypothesis will be mentioned in detail.

As for the strong version, Yıldırım (2016) summarizes Lucy (1992) as follows: “Man is unaware of how the language he speaks organizes his perception of the outer world. Moreover, even when he is exploring another language, he utilizes the means of his very own language to dissect the new one” (p. 14).

Apart from these two general approaches to language and thought debate, Gennari, Sloman, Malt and Fitch (2002) also proposed another language-based view, which they named as *Language-as-Strategy View* (p. 3). As a new form of the weak version of linguistic relativity hypothesis, this view also holds that linguistic

characteristics should influence language speakers only during certain tasks in which they need to use the language to perform (Gennari et al., 2002).

2.2.2.1. The Thinking for Speaking Hypothesis

The basic assumption of linguistic relativity hypothesis is that languages dramatically shape their speakers' ways of thinking. This effect of the language on the speakers' ways of thinking is so strong that the cognition or world view of the speakers are entirely shaped by the language that they are exposed to during the initial first language acquisition process. Slobin states that "one cannot escape the influences of language while in the process of formulating or interpreting verbal messages" (2000, p. 107). The thinking for speaking hypothesis branched out from the linguistic relativity hypothesis. Slobin (1991) defines thinking for speaking as "a special kind of thinking that is called into play, on-line, in the process of speaking a particular language" (p. 7). The way Slobin puts it is that experiences need to be verbalized through language filter. Thus, this filter will be affected by a perspective taken by the speaker of the language in this process of event verbalizing using certain lexicalization patterns for their semantic domains. Therefore, when this process takes place in a second language, Slobin (2003) argues that speakers learning another language need to learn a second way of thinking for speaking to acquire this second language. However, the problem arising at this point is that the features of one's first language are acquired very early in life. Therefore, as Slobin (1996b) states "they are particularly resistant to restructure in adult SLA" (p. 89). Spring and Horie 2013 also state that "... transfer from the learner's first language tends to obstruct the learning of the second language's framing patterns and tendencies, making framing acquisition difficult when a learner's second language is of a different type than their first language" (p. 694).

In addition, Feinmann (2020) also argues that "... 'thinking for speaking' effects are hypothesized to arise under very specific conditions, that is, prior to the moment of speaking, when thoughts are believed to structure themselves according to the structure of the language to be spoken" (p. 3). This argument also adds to the view that thinking for speaking is limited to the speech unlike linguistic relativity which stands on the belief that "the habitual use of language can have *enduring* effects on cognition" (Feinmann, 2020, p. 2 – 3, emphasis in original).

2.3. Motion as a Notion

Even though this term was defined multiple times in several fields by various researchers, the very basic definition of the term by Collins Cobuild Dictionary¹ is given as “the activity or process of continually changing position or moving from one place to another”. Being one of the eight conceptual domains in human cognition, motion is considered indispensable from human experience. Similarly, Flipovic states that “...motion is one of the primary experiential domains in human life and therefore bound to be lexicalized in all languages” (2007, p. 1). However, even though we, as humans, universally perceive motion, we prefer different ways of talking about it. Soroli (2012) also states that “ ... for motion events, when communicating, people use language in very different ways, selecting to encode only some aspects of motion while ignoring others” (p. 333). This eventually led to different typologies to be formed. These typologies will be explained below.

Overall, in a general sense, motion events are situations “ ... containing movement or the maintenance of a stationary location” (Talmy, 2000, p. 25). This definition by Talmy is operational for this dissertation.

2.4. Talmyan Typology

Along with space and temporality, motion constitutes one important semantic domain of human cognition. Thus, the way how the act of motion or motion events are expressed is influenced by the language of the person. The leading scholar in the field, Talmy, defines a motion event as “a situation containing movement or the maintenance of a stationary location alike ...” (2000, p. 25). In his explanation, Talmy provides with six cognitive components (motion, figure, ground, and path as internal ones and manner and cause as external ones) which play a role in the conceptual structure of a motion event:

1. Motion: the presence per se of motion.
2. Figure: the moving entity.
3. Ground: the object with respect to which the Figure moves, which can potentially include the source, the medium, and the goal of movement.
4. Path: the course followed by the Figure with respect to the Ground.

¹ <https://www.collinsdictionary.com/dictionary/english>

5. Manner: the manner in which the motion takes place.
6. Cause: the cause of its occurrence. (Cadierno, 2004).

Following two examples are by Talmy (1985, p. 61) to illustrate each component:

The pencil	rolled	off	the table.
Figure	Motion	Path	Ground
	Manner		

The pencil	blew	off	the table.
Figure	Motion	Path	Ground
	Cause		

For path, which is the core semantic component of a motion event according to Talmyan typology, Aske (1989) proposes two types such as *telic path* and *atelic path*. Basically, the main difference between them is that telic path has an endpoint while atelic path does not have a specific endpoint. Toplu (2011, p. 7) gives two examples, Ex. 1 for telic and Ex. 2 for atelic path, as follows:

Ex. 1. The boy ran into the building.

Ex. 2. The boy ran along the park.

For manner, Pourcel (2004) suggests three types such as default, forced and instrumental manner. She explains that default type is the expected manner type such as walking for people or flying for birds. Forced type requires some sort of conscious effort such as kicking or hopping. Finally, instrumental type involves an extra element such as cycling. Pourcel (2004) discusses “a consistent correlation between neutrality of Manner (i.e. default) and low Manner scores on the one hand, and force and instrumentality features and higher Manner scores on the other hand” (p. 511) which can be attributed to the manner saliency discussions in the literature later.

In the use of these six cognitive components, cross-linguistic differences were suggested by Talmy (1985), which formed the base of Talmyan typology of languages according to the ways in which they express motion events. Demirtaş (2009) quotes

from Talmy that “languages can be grouped together on the basis of how they encode the core information of a specific semantic category into syntactical and lexical structures” (p. 1). This typology classified world languages into two categories such as satellite-framed languages (S-languages) and verb-framed languages (V-languages). The characteristics of these two different categories are provided below.

2.4.1. Satellite-framed Languages

Satellite-framed languages are the languages which encode Path information on a satellite such as a particle. An example is given below along with other components for clarification purposes:

She	ran	into	the hospital.
Subject	Verb	Satellite	Noun
	Motion / Manner	Path	Source / Goal

As can be understood from the example, the path is encoded on the satellite (*into*) while the main verb of the sentence, *run*, gives the manner information. The languages which lexicalize motion events with this pattern are called satellite-framed languages as satellites carry the core information, Path. Indo-European, Germanic and Slavic languages are known as satellite framed languages. Some examples are English, German, Dutch, and Russian.

An example from German, a highly studied satellite-framed language, is given below from İşler (2014, p. 8).

Derr Mann	rannte	ins	Haus.
	Motion+manner	Path	
(The man	runs	into	the house.)

The tendency to lexicalize manner information in the main verb and path information in a satellite leads the speakers of satellite-framed languages to develop a larger lexicon for manner verbs as well as attending to manner information more during the conceptualization process. Encoding the manner information in the main verb in return makes the manner information in this type of languages highly codable, therefore

more accessible for their speakers. The speakers of the other type, verb-framed languages, on the other hand, are bound to make an additional effort to provide manner information as the main verb slot in their languages has to carry the path information (Demirtaş, 2009). This will be discussed in more detail below.

The core element of motion events, Path, is conflated in a satellite in S-framed languages. This conflation takes place with the use of some particles. At this point, it is important to differentiate a particle from a preposition. Talmy (2000) also draws attention to this issue. His classification of satellites and prepositions will be explained below. This classification is also the one that was taken as a reference during the data coding of this particular study.

Talmy (2000) explains that a fully expressed Path includes a combination of a satellite and a preposition such as *out of*. Yet, it is also the general case that a satellite stands alone such as *out*. Talmy (2000) mentions the following as some path satellites in English: *in, out, on, off, across, along, through, past / by, over, up, down, above, below, aside, over, along, forth, around, together, away, around, apart, ahead about, back, loose (from), free (from), clear (of), stuck (to), fast (to), un- (from), over-, under-, full (of)* (p. 104-105). In addition to these, he mentions *together, apart, away, back* and *forth* as satellites that never act as prepositions and *of, at, from* and *toward* as prepositions that never act as satellites (p. 106). Finally, he also adds that *past, through, up, into* and *out of* are satellite prepositions, also referred as satpreps (p. 108). For a detailed reading about the differences in properties, see Talmy (2000, p. 107).

2.4.2. Verb-Framed Languages

Verb-framed languages are the languages which encode Path information on the main verb in a clause. An example is given below along with other components for clarification purposes:

Adam	odadan	koşarak	çıktı.
Subject	Noun(abl)	Verb	Verb
	Source / Goal	Manner	Motion / Path
(The man	out of the room	running	exited)

The example shows that a second verbal phrase is provided in the sentence to give manner information (*koşarak / running*) and the path is encoded in the main verb *çıkma* (*exit*). The languages which lexicalize motion events with this pattern are called verb-framed languages as verbs carry the core information, Path. Romance languages are in this category. Some examples are Turkish, Hebrew, French, Spanish, Italian, and Japanese.

An example from Spanish is given below from Slobin (2000, p. 112).

del agujero	salió	un buho.
	Verb	
	Path	
(from the hole	exited	an owl)

The example shows a canonical motion event verbalization pattern in Spanish. The speakers omit the manner information and encode the path information in the main verb (*salió / exited*), a use that is similar to Turkish.

This tendency of the speakers of verb-framed languages to omit manner information has been extensively studied. The general pattern shows an omission of manner information as it requires them to use an extra adjunct in the sentence which means extra cognitive load. Therefore, they focus on mainly conveying the path information as their way of thinking leads them. As an explanation to this tendency of speakers of V-framed languages, Toplu (2011, p. 10) suggests the following:

The reasons why V-language speakers tend to omit manner information in their motion verb usages could be interpreted as follows: (1) stating manner of motion additionally in a sentence requires extra cognitive load, (2) it causes syntactically complex sentences instead of simply putting the sentence together, and (3) manner can be inferable in these sentences so the speakers may not think that it is necessary to refer to it.

In terms of using adjuncts in a sentence to convey manner information in a verb-framed language such as Turkish, it should be clarified that the use of adverbials to refer to manner information is not a constraint. The speakers of these languages simply make use of whatever structures their language allows them to use in their lexicon. As the elements of a motion event, path and manner exist in all languages. The difference

emerges from their codability. Path is highly codable in all languages as it is always stated either in the main verb slot or in a satellite. Manner, on the other hand, can be omitted in V-framed languages, which in return makes it not as codable while it is still codable in S-framed languages since it is stated in the main verb slot.

2.5. Slobin Typology

Slobin (2004) takes Talmy's two-pole typology and he extends it in a way that it should be considered more of a continuum. In Strömquist and Verhoeven (2004), he mentions equipollently-languages for the first time upon seeing the gap in Talmy's typology. His studies with *The Frog* story revealed cross-linguistic results from various languages. Two of these languages were Thai and Mandarin Chinese which seemed to raise a problem for Talmy's classification. While Talmy placed Chinese in satellite-framed languages, Slobin argued that it should be treated differently as it has the features of both ends. Initially, Slobin and Hoiting (1994) proposed to treat these kinds of languages as '*complex verb-framed languages*'. Later, Slobin (2004) proposed a third type to be added, *equipollently-framed languages* "to include serial-verb languages and other types of languages in which both manner and path are expressed by "equipollent" elements – that is, elements that are equal in formal linguistic terms, and appear to be equal in force or significance" (p. 228).

As Turkish and English, the languages that will be studied in this dissertation, take place in verb-framed and satellite-framed language classifications in both Talmy's and Slobin's typologies, Slobin's typology will not be discussed further. Nevertheless, for operational definition purposes it should be stated that Talmy's typology (1985) is taken as a reference in this current study.

2.6. Studies on Motion Verbs

There have been numerous studies on motion verbs so far. It is possible to classify these studies into different categories based on their methodology or their language orientation. A general summary of studies on motion verbs will be given initially to set the background. These will include earlier studies on motion verbs with various methodologies. Then the studies that are considered as more related to the present study will be presented in detail under three sections such as studies on motion

events by Turkish EFL learners, studies on motion events with eye-tracking methodology and studies on motion events with translation methodology.

The studies that were conducted on motion verbs during the initial times of this research field mostly utilized a picture story book by Mayer (1969), "*Frog, Where Are You?*". Another commonality of these studies was that they were conducted on first languages. Some of these studies are Slobin (2000), Berman and Slobin (1994), Slobin (2003), Özçalışkan and Slobin (1999), and Papafragou et al. (2006). The results of all these studies suggest similar conclusions. They compared languages such as English, Turkish, Spanish, and Greek. Their results showed a more frequent use of manner verbs in English and path verbs in the other languages that are known as verb-framed languages while manner is either entirely omitted or much less frequently used. Some studies with various language backgrounds that later used a different methodology which did not include the frog story are mentioned for exemplary purposes below. The next heading will include studies with Turkish EFL learners only.

In her study on the acquisition and use of motion verbs in Turkish, Durmuş (2016) collected cartoon narrative data from 42 monolingual Turkish children aged between 2:6 and 6:0 and comparison data from 8 monolingual Turkish speaking adults aged between 23 and 35. She analyzed motion verbs under four categories such as path verbs, manner verbs, caused verbs, and general verbs of motion. After grouping the children at six month intervals, she investigated the emerging motion verbs in relation to their classes, and similarities and differences across age groups. The results of the study showed around 35 tokens of path verbs across age groups with an increasing type with the increasing age. Manner verbs yielded both more types and more tokens than path verbs, which was a result that was contradictory to the earlier studies in the literature. While the tokens of caused motion verbs did not differ across age groups, younger children used morphologically marked causative verbs while older ones mostly preferred lexical causatives. The two general motion verbs such as *gel-* and *git-* were used across all age groups while *git-* was used more often and earlier than *gel-*. Durmuş (2016) revealed that there was no dramatic difference between path and manner quantitatively as there was no special attention to path. Also, manner was not disregarded as expected. On the contrary, there was a tendency to use more manner verbs. She also stated that caused motion verbs occurred only after three and a half years of age. Overall, the study concluded that there was no effect of typology on discourse style.

Papafragou and Selimis (2009) looked into the cross-linguistic acquisition of motion verbs. The participants of their study were English- and Greek-speaking adults and 5-year-olds. In order to investigate verb lexicalization biases and how early they emerged, they made use of novel verb technique. Basing their argument on the ground that “novel verbs in transitive frames are predominantly interpreted as Result-oriented, rather than Means oriented” (p. 353), they expected to conclude if the bias was stronger in languages which did not lexicalize Means information in the main verb, Means information being the manner and result-oriented being the path information specifically. In other words, they hypothesized that manner (and means) in English speakers would be higher than Greek speakers in addition to lexical preferences interacting with the semantic implications of the syntactic frames (intransitive vs. transitive). They conducted two experiments. In the first experiment they investigated intransitive (spontaneous motion) verbs with two tasks such as verb learning and production. In the second experiment they investigated transitive (caused motion) verbs with the same tasks as in the first experiment. The production task of the first experiment resulted in the expected direction with higher manner verbs in English and higher path verbs in Greek by both adults and children. Verb learning task similarly revealed results that were in line with the way motion was expressed in these participants’ native languages. As for the second experiment, the results of both the production task and the verb learning task were in the same vein with Experiment 1. To sum up, the study concluded that verb lexicalization biases shaped motion verb learning on a cross-linguistic basis and these biases were present as early as 5 years of age.

In another study, Soroli (2012) explored visuo-spatial thinking and speaking cross-linguistically. In order to search for language-independent and language-specific factors on spatial representations, she tested three typologically different languages such as English (satellite-framed), French (verb-framed) and Greek (verb- and satellite-framed). Making use of three tasks such as production, non-verbal and verbal categorization, she tested three hypotheses such as universal, linguistic relativity and linguistic determinism. The participants of the study were 42 monolingual speakers of the three languages (14 participants for each language). Non-verbal categorization, verbal categorization and production tasks were held with each participant in this order. For the production task, the results were as expected with English having manner verbs along with path satellites and French having path verbs. Greek similarly yielded expected results such as a combination of both patterns. As for the categorization tasks,

while French participants selected path as their categorization criterion in both verbal and non-verbal tasks, English and Greek speakers selected manner as their categorization criterion in verbal tasks. For the non-verbal task, they did not have a preference. The results of the study contradicted the Universalist hypothesis. However, a formulation of a deeper investigation was reported as necessary to claim that the results supported linguistic relativity and linguistic determinism hypotheses.

Spring and Horie (2013) studied with Japanese and Chinese learners of English in order to see how cognitive typology affected second language acquisition. Taking an inter-typological comparison perspective, they compared and contrasted Mandarin Chinese (an equipollently-framed language), Japanese (a verb-framed language) and English (a satellite-framed language). They looked at learners' pattern preferences, manner of motion encoding preferences and deictic verb usages. 18 Japanese and 21 Chinese participants provided data in English L2 while 10 Japanese, 11 Chinese and 30 American participants voluntarily provided comparison data in their respective native languages. The learner participants were in two groups in terms of their proficiency levels in English such as mid-level and high-level. In terms of verb framing, the researchers had two hypotheses. Firstly, they hypothesized that the speakers of both equipollently-framed and verb-framed languages would use path verbs more frequently in their satellite-framed second language as it was the case in their native languages. Secondly, speakers of equipollently-framed language would use manner verbs more frequently in their satellite-framed target language compared to those speakers with a verb-framed native language background. Finally, in terms of verb usage, the researchers hypothesized that the learners of satellite-framed language would overuse the verb *go* along with a path satellite since they were taught that way even if the specific situation may not be appropriate for this usage. The data was collected through a written video description task. The result of the study showed clear differences between learners who had typologically different native languages from the target language in hand. In conclusion, all three hypotheses that were initially proposed were verified with the overall results of the study.

With a different approach, Stam (2015) conducted a 14-year-long longitudinal case study to investigate changes in thinking for speaking. She had one participant who was an L1 Spanish speaker with English L2. The study investigated co-speech gesture usage. As the data collection tool, the researcher used the cartoon *Canary Row* (Freleng, 1950) in all three data collection processes. The participant watched the cartoon and

narrated it in Spanish and English in all three collections. In terms of speech production, the participant's use of path verbs in Spanish did not change over time while she started to use path satellites in her English production. As for gesture, the learner's gestures of path changed in her L1 and L2 while her gesture of manner changed in her L2 over the course of the study. Stam concluded her research with results that were challenging Slobin's (1996), stating that manner, after all, may not be resistant to change and L2 thinking for speaking was not static with various aspects changing more or less than the others.

Comparing multiple languages, Hijazo-Gascón (2018) conducted a study on acquisition of motion events in L2 Spanish by German, French and Italian speakers. He based his argument on previous studies and stated that these languages still showed differences in their lexicalization patterns even if they were all Romance languages with the same typology except for German. For the analysis, he collected L2 Spanish oral narratives from each language background as well as from L1 Spanish through *The Frog Story*. There were 12 participants in each language group, namely 48 in total. All participants produced oral narratives both in their native languages and their Spanish L2 (with B2 proficiency levels). He compared the results of the native Spanish speakers and Spanish learners both from an intra-typological and from an inter-typological perspective. In terms of overall motion types, the results were unexpected since motion types by French and German speakers in their L2 outnumbered Spanish and Italian motion types. The researcher expected a closer number between Italian and Spanish as these two languages are genetically close to each other. However, Italian speakers of L2 Spanish produced the least number of motion types. In terms of manner verb usage, German speakers of L2 Spanish produced the most manner verbs in their L2 narratives even if Spanish is a low-Manner-salient language (Slobin, 2004 as cited in Hijazo-Gascón, 2018). This was regarded as an L1 transfer. Yet, compared with their German L1 narratives, these speakers lowered their manner verb usage in their L2 Spanish, which was considered as a tendency to produce L2 like lexicalization patterns. As expected, the study revealed inter-typological differences between German and Spanish and intra-typological differences between Italian and French.

Feinmann (2020) studied the language and thought interface through the motion domain and investigated the relation between how motion is linguistically expressed and how it is conceptualized. The participants of his study were 18 monolingual speakers of English and 18 monolingual speakers of Spanish who took part in two

experiments such as a non-verbal experiment with a verbal interference manipulation and a verbal experiment. They did a similarity rating task and a verbal elicitation task in this order through video clips as the stimuli. The results of the study presented evidence against linguistic relativity and in line with cognitive universalism as the conceptualization of motion events did not follow language-congruent patterns.

2.7. Studies on Motion Events by Turkish EFL Learners

For her master of arts thesis as a partial replication of Yu's Ph.D. dissertation (1996) on the role of cross-linguistic lexical similarity in the use of motion verbs in English by Chinese and Japanese learners, Demirtaş (2009) conducted a study on motion event descriptions in English by Turkish EFL instructors to see how the typological differences between languages presented themselves in second language acquisition. The descriptions of motion events by a group of 30 EFL instructors with high level proficiency in English (considered as bilinguals in the study) were collected. In addition, so as to form a base data, 30 mono-lingual Turkish students and 5 British instructors provided comparison data in their respective L1s. Data collection procedure was held via three data collection tools such as a picture description task (10 target verbs), a narration task (13 target verbs) and a translation task (13 target verbs), all adapted from Yu (1996). The text in the translation task was the one from the story in the narration task. The results of the study showed more manner verbs in the instructors' English descriptions while showing more path verbs in their Turkish descriptions. The same applies for native English data in terms of manner verb usage. In addition, the instructors preferred path verbs in the main verb slot and subordinate structures to convey manner information in Turkish descriptions while they resorted to satellites to encode path information in English reserving the main verb slot for manner verbs which showed that these instructors with a high level of proficiency in their L2 were able to use the target lexicalization patterns in their productions without the influence of their L1. Nevertheless, they differed from the native English group in terms of the frequency results of their manner verb usage. As for translation task results, the data differed from that of narration task as the instructors preferred to use path verbs in Turkish to translate a manner verb in English.

Another study on EFL learners' use of path elements in motion event descriptions was conducted by İşler (2014) for her MA thesis, which was the only study

until then that considered proficiency levels in English L2 in Turkish L1 context. She compared two proficiency levels such as Pre-intermediate and Upper-intermediate through written and spoken path of motion use by Turkish university students in order to examine if Talmy's typology applied for EFL learners. 62 students (31 pre-intermediate level, 31 upper-intermediate level) took part in the written production task. 43 students (22 pre-intermediate level, 21 upper-intermediate level) took part in the spoken production task. 3 of them were eliminated later and data from 40 students were analyzed. For written production task, the participants needed to complete missing words (path elements) in four paragraphs. For spoken production task, they needed to describe the particular motion event in 10 videos to the other participants so that they could draw the motion event displayed by an animated character. The results of the written task supported Talmy's typology eliciting significant language proficiency level effect on the learners' performances. While pre-intermediate level learners' performances were limited, upper-intermediate level learners performed better with a higher ratio of expected path elements. The results of the spoken task similarly yielded L1 effect on all learners' performances while it did not elicit a significant proficiency level effect. The results also revealed gesture use (higher in pre-intermediate level) by the participants which was evaluated by İşler (2014) as follows: the participants were cognitively ready to use a path element in their L2 but they did not use them verbally as their proficiency level did not allow them.

In her 2015 paper, Duruk investigated the naming of motion events by Turkish EFL learners in English. With her one research question as to how Turkish EFL learners express motion events in English, she conducted the study with 40 prospective English teachers whose proficiency levels in English were deemed to be high. She used two data collections tools with which she elicited comprehension and production data. According to the results, Turkish EFL learners seemed to use motion verbs along with their satellites more than they used path verbs only and manner verbs only. Therefore, their productions were evaluated as similar to those of native English speakers due to their high proficiency levels. Nevertheless, they were not entirely parallel to those of native English speakers', for the use of satellites or prepositions to express path by Turkish EFL learners was not consistently very high. Therefore, Duruk (2015) concluded some similarities and differences between Turkish EFL learners and native speakers of English about the expression of motion events in English.

Yıldırım (2016) investigated the conceptual transfer of event frames through motion verbs in the L2. With Turkish and English pairing, she analyzed the effect of L1 (Turkish) conceptualization on L2 (English). 50 Turkish learners of EFL with various proficiency levels and 12 native speakers of English took part in the study in which they described 29 pictures from the picture book *'Frog, where are you?'* (Mayer, 1969) in their written narratives. The results revealed that L2 users resorted to their L1 ways of event conceptualization regardless of their proficiency levels in their L2. Conceptual transfer from L1 to L2 was proven to be evident even in the descriptions of advanced level learners.

Kilimci (2017) designed a pre-test post-test quasi-experimental study in order to evaluate the impact of explicit instruction and metalinguistic awareness on the learners' understanding of typological differences between their L1 and L2 and on their expressions of motion events in their L2. With 46 students in two groups such as a control group (23 students) and a treatment group (23 students), he conducted a two-week implementation with a focus on explicit instruction on the usage of motion verbs in the treatment group along with the aim of increasing their meta-linguistic awareness about the typological differences between the languages. He conducted a pre-test and a post-test to measure the within group differences as well as the between group differences. The results of his study indicated a statistically significant difference both within and between groups.

For a relatively recent study, Babanoğlu (2018) examined motion verbs in learner corpora. She used corpus as a tool to compare motion verb usage by Turkish and German EFL learners with the aim of revealing the differences between these languages, Turkish being a verb-framed and German being a satellite-framed language. Through learners' written productions, she concluded that German EFL learners used more motion verbs in their argumentative essays than Turkish EFL learners did. Also, German EFL learners' usage of motion verbs was lexically more diverse, which can be attributed to the typological similarity between German and English and typological difference between Turkish and English.

2.8. Studies on Motion Events with Eye-tracking Methodology

Papafragou et al. (2008) sought an answer to the question if language guided event perception. Taking motion as the testing ground, they looked into Greek and

English speakers' eye movements as they were preparing verbal descriptions and memorizing the events. They expected that English speakers would allocate their attention more on manner during both linguistic and nonlinguistic tasks if cross-linguistic differences affected attention allocation. In the case of no such effect, the differences were expected during linguistic task whereas speakers of the languages in hand were expected to behave similarly during nonlinguistic task. 34 participants in total (17 Greek and 17 English) took part in the experiment. All participants watched a series of video clips and linguistic group described the videos after they ended while nonlinguistic group studied the videos to memorize. Both groups had a memory test at the end of the experiment. The linguistic data yielded expected results. Namely, English speakers produced more manner verbs while Greek speakers produced fewer manner verbs compared to English speakers. As for the eye-movement data, they found that speakers with different L1 backgrounds allocated their attention to motion event regions differently. More specifically, the order of their attention allocation to specific regions differed. However, this result was found only in the linguistic task for bounded events while they were preparing to talk. In the nonlinguistic task, on the other hand, the eye movements of both language groups were almost identical, which was a remarkable result. In conclusion, Papafragou et al. (2008) concluded that perceivers' native language did not affect attention allocation during event perception. Such an effect, on the other hand, arose when linguistic forms were at play.

Soroli and Hickmann (2010) investigated spatial language and cognition in French and English as two typologically distinct languages with the use of eye-tracking methodology. They based their study on universality – relativity debate. Universal view suggests that spatial cognition is free from language-specific properties as it is formed on universal perceptual and cognitive processes while relativist view suggests that languages affect their speakers' construction of spatial representation. Setting these views as their theoretical background, Soroli and Hickmann conducted four tasks which they designed as production, eye-tracking, non-verbal categorization and verbal categorization. Through these tasks, they sought the answers to the questions whether the speakers' linguistic performance differed in production task and if so, whether this difference affected other tasks. With two groups consisting of 14 participants each, they collected English and French L1 data. Out of four tasks, their production task yielded results that were in line with relativity hypothesis as it elicited higher manner information in English data and higher path information in French data, which was an

expected result as the languages were typologically different. Their second data, which came from the eye-tracking task, revealed contradictory results between the two tools. Therefore, they concluded partial language effect in the eye-movements data. The non-verbal categorization task also yielded partially-in line results with the languages with a nonsignificant difference. Finally, their verbal categorization task showed a strong language effect as the participants followed the verbalization patterns of their own languages. Overall, their results supported the *moderate* version of the relativity hypothesis (emphasis in original), which foresaw language effects on both verbal and non-verbal responses.

Similar to Soroli and Hickmann (2010), for her Ph.D. dissertation, Toplu (2011) conducted an experimental study on linguistic expression and conceptual representation of motion events in Turkish, English and French, which was also the study that inspired this current one. In her study, Toplu worked with three groups of adult subjects who had Turkish, English and French L1 backgrounds. With the utilization of five different experiments, she combined psycholinguistic and cognitive methodologies. At the end of her experiments, she reached two conclusions. One of them was that Talmyan typology (Talmy, 1985) was verified according to her results which showed that the speakers of typologically different languages produced different language utterances while the speakers of typologically similar languages produced utterances with remarkable similarities. Therefore, this first conclusion supported the Talmyan typology at the production level. The second conclusion was that linguistic relativity hypothesis (Whorf, 1956) was not verified as the conceptual event representation results that were elicited from the participants showed a uniform pattern even if their L1 backgrounds were from typologically different languages. Therefore, this second conclusion supported the Universalist view (Jackendoff, 1990, 1996) at the conceptual level.

Flecken et al. (2015) investigated the conceptualization of the path of motion in a motion event in detail. Analyzing pre-articulatory patterns of attention allocation as well as the time course of eye movement patterns before utterance onset through an event description task, the researchers tried to reveal the differences in spatial conceptualization in the French and German languages. For these attention allocation patterns, Flecken et al. (2015) hypothesized that the speakers would follow principles of conceptualization in line with those of their L1. 60 participants took part in the study. Using dynamic videos as the stimuli, the researchers collected verbal data (event descriptions) from the participants. In terms of language data, the results showed that all

three groups used a comparable number of manner of motion verbs. While L1 French speakers used entity based and entity + ground-based verbs, L1 German speakers used adjuncts and particles to encode endpoints or ground information. L2 German speakers were able to use manner verbs but they also displayed some usages that were particular to L1 French, which showed that they reflected their native language in their target language usages. In terms of eye-tracking data (from 57 participants at this point due to eye-tracking data loss), the results showed that L1 French speakers allocated their attention more on entities in motion and endpoints than German L1 speakers did. As for L2, L2 German speakers showed parallelism with L1 German speakers in terms of manner. In terms of path, on the other hand, they showed parallelism with speakers of L1 French, which supported the idea of L1-based processing patterns and spatial frames of reference in speech preparation for L2.

Making use of categorization tasks and eye-tracking methodology, Soroli (2018) investigated focal versus global ways of motion event processing along with the role of language. She searched for the question if English, French and Greek L1 speakers presented variations in categorization and visual processing of motion events. Basing her study on holistic (associated with East-Asian cultures) versus analytic (associated with Western cultures) cognition (Nisbett et al., 2001 and Hohstein, 2017 as cited in Soroli, 2018), she compared these Indo-European languages. She paraphrased Talmy (2000) and stated that the fact that S-framed languages mainly focus on manner of motion and pay more attention to how an action is happening while V-framed languages mainly focus on path of motion and pay more attention to the end result of an action while ignoring how it happens eventually affects how speakers of a language process their environment and events. To answer the questions if cognitive processes were part of an innate system and thus universal or if they were affected by cultures and language backgrounds, the researcher worked with 20 speakers from each language, 60 in total. The participants took part in three tasks such as a non-verbal categorization task, a verbal categorization task and a production task. All three tasks were accompanied by eye-tracking methodology. In terms of production results, all participants followed the lexicalization patterns of their particular languages. In terms of eye-tracking results, French participants were more attentive to path component with ballistic global ways of exploration while English participants were more focal in their attention allocation observing the events in a linear way. As expected, Greek participants' ways of attending alternated. In conclusion, Soroli (2018) revealed that participants were affected by the

typological features of their languages even if they shared the same cultural background. Therefore, holistic ways of thinking and ambient processing were not exclusive to Eastern cultures as the impact of focality was also observable in Indo-European languages such as English (more focal) and French (more global) to some extent.

2.9. Studies on Motion Events with Translation Methodology

Translation is one of the methods that can help researchers investigate the typological differences between different languages. Being cross-linguistic in nature, translation helps researchers observe the similar or distinctive elements in languages which translators need during their translation processes so that they can make appropriate choices between the lexicalization patterns of the source and target languages. Slobin (2005) also states that “the translation task gives us a window into the maximum possibilities of a language, as it strives to adapt to the demands of a source language” (p. 128). Taking this perspective into consideration, summarizing some of the studies that were conducted with translation task methodology in particular was thought to be necessary both for the background of the study and for its specific translation task.

Slobin (2005) set out to compare the encoding of motion events across languages. In doing so he focused on the translations of one single English text into other languages. Having chosen *The hobbit* (Tolkien, 1937 as cited in Slobin 2005), he analyzed and compared the translations into Dutch, German, Russian, and Serbo-Croatian as satellite-framed languages and French, Portuguese, Italian, Spanish, Hebrew, and Turkish as verb-framed languages. In terms of path translation, Slobin (2005) presented one sentence and compared the translations. The sentence included one manner verb with three path satellites. While satellite-framed languages followed this pattern and had very similar translations, verb-framed languages differed in their patterns such as adding additional path verbs for each path satellite, omitting the manner verb and providing a path verb instead, and reducing path information due to elimination of one of the path satellites. In terms of manner information in the translations, only the chapter 6 of the book was analyzed. The original text in English had 26 different types of manner. The average of manner verb types in satellite-framed languages was 25,6 which was a very close number whereas the average of manner verb types in verb-framed languages was 17,2. Referring to Slobin (2004), Slobin (2005)

inferred these comparisons as evidence of the differing degrees of manner salience. Overall, he concluded that verb-framed languages were less concerned with manner than satellite-framed languages and they broke paths up into different segments.

Alonso (2011) studied translation of motion events from Spanish to English from a cross-linguistic perspective. Having based her study on the theoretical framework of conceptual transfer on Talmyan typology, she investigated the relationship between conceptual transfer and thinking for speaking through the translation of motion events. The hypotheses were two-fold: (a) conceptual transfer hypothesis would be supported because conceptualization patterns would be evident in the translations and (b) Spanish L1 speakers would use their L1 lexicalization patterns in their English L2. The participants in the study were 20 Spanish EFL learners who were studying at a translation department. Their proficiency levels were noted as advanced. 10 translation sentences (7 target sentences, 3 distractors) were used to collect data. The results of the study showed that the participants resorted to their L1 lexicalization patterns in their Spanish to English translations in which they coded path in the main verb slot and manner in a constituent, which was an example of conceptual transfer. In conclusion, Alonso (2011) stated that both hypotheses of the study were confirmed.

In their review on translation of English and Chinese motion events, Deng and Chen (2012) mentioned a typological approach. Taking into consideration that English and Chinese are both satellite framed languages, they investigated as to how the Path and Manner in the English and Chinese languages were translated based on typological properties. In terms of path, they observed that the translators tended to translate Chinese path satellites as English path verbs in their Chinese to English translations. As for English to Chinese translations, they similarly had English path verbs as Chinese path satellites in accordance with the narrative styles of the two languages in hand. In terms of manner, they found that adverbial addition in English to Chinese translations was a common trend to compensate for the lack of manner information since English has more manner verbs than Chinese does. For their Chinese to English translations, they either translated the adverbial structure or replaced the manner verb as English provided them with a larger repertoire. In conclusion, they found several lexicalization patterns in the translations in terms of manner and path. In general, they concluded that translation of motion events between English and Chinese was “a process of re-

lexicalization” (p. 75). They also reminded that narrative styles and conceptualization of time and space in both languages should be kept in mind during translation.

Cifuentes-Férez and Rojo (2015) sought an answer to the question if translators’ decisions were influenced by typological differences between languages or if other experience- or task-related factors were at play during their translations. After they figured that research on translation of motion until then had focused on translation strategies that had been used by the translators and the degree of manner and path information rendered in the target versus source texts, they searched for the factors that shaped translators’ decisions when they were translating manner of motion verbs from English to Spanish which are two typologically different languages. They had five professional translators and five students from a translation department with no professional experience as their participants. With the use of a think aloud protocol during which the researchers examined the participants’ translation process, the participants provided data through three tasks, each of which included the translation of a different type of text such as a children’s book, a novel and instructions of a video game. At the first stage they looked at the task related factors regardless of the participants’ levels of experience. At the second stage they analyzed the role of level of expertise. At the end of their process-oriented study Cifuentes-Férez and Rojo (2015) concluded that the decisions that the translators made during their translation process were mainly affected by the typological differences between the two languages even if the task type and level of expertise also played a role to some extent.

In another translation study, Moura and Badaracco (2019) investigated the use of motion verbs in basketball broadcasts in English and Brazilian Portuguese and their translations. They analyzed two National Basketball Association games and found a total of 104 motion verbs in total, 51 in English (S-framed language) and 53 in Brazilian Portuguese (V-framed language). Even if the numbers of motion verbs seemed to be similar, they were divergent in their variety (46 verb types in English and 26 in Brazilian Portuguese) and style. They revealed two factors such as preferences in grammatical composition and morphological patterns, both of which distinguished motion verbs in English and Brazilian Portuguese. These factors were argued to have affected the translation choices from one language to the other. Referring to Unique Items Hypothesis (Cappelle, 2012 in Moura and Badaracco, 2019), the researchers concluded that the distinct repertoires of grammatical construction in two languages,

more so than typological differences, caused difficulties in translations of motion verbs from English to Brazilian Portuguese.



CHAPTER III

METHODOLOGY

3.1. Introduction

This chapter includes information about the methodology of this dissertation. It presents participants and the tasks and the stimuli that were used to collect data. It explains each task in detail. Then it mentions procedure of the data collection and a brief summary of data analysis. Detailed data analysis is handled in chapter four along with findings.

3.2. Research Design

The main purpose of the present dissertation is to reveal and describe the usage differences of the linguistic comprehension and expressions of motion verbs by Turkish EFL learners in their L1 and L2. Thus, the planned research design for this study was a comparative design as the study requires a cross-linguistic analysis of this usage in Turkish and English.

The collected data was analyzed in a comparative fashion by making use of quantitative data analysis and the results are presented accordingly. Quantitative data analysis deals with numerical data. “Put simplistically, quantitative research employs a positivistic perspective that assumes that truth is knowable, and that through accurate measurement and analysis, the truth about a given construct can be discovered” (Loewen and Plonsky, 2016, p. 154).

The data collection tools in this study collect both numerical and verbal data. The verbal data was later coded by the researcher and converted into numerical form for the analyses. This process is presented in detail in Section 4.3. Throughout the study, the data is analyzed and presented in two ways such as descriptive analysis – in the form of figures – and inferential analysis – in the form of tables. Bhattacharjee (2012) defines these two types of analysis as follows: “Descriptive analysis refers to statistically describing, aggregating, and presenting the constructs of interest or associations between these constructs. Inferential analysis refers to the statistical testing of hypotheses (theory testing)” (p. 119).

Thus, the present study is designed as a comparative study which makes use of quantitative data analysis and presents its results in a cross-linguistic fashion.

3.2.1. Setting

The setting of the present study was a state university in Turkey. The entire process of data collection including the two pilot studies and the main data collection of the study took place at the School of Foreign Languages at Adana Alparslan Türkeş Science and Technology University, Adana, Turkey over the first two months of spring semester of 2018 – 2019 academic year.

3.2.2. Sampling

The initial sampling method that was used in this study was convenience sampling. Cohen, Manion and Morrison (2007) explain that convenience sampling “... involves choosing the nearest individuals to serve as respondents and continuing that process until the required sample size has been obtained or those who happen to be available and accessible at the time” (p. 113 – 114). Therefore, before the beginning of the data collection process, the researcher worked with around 80 students who were attending their university education during the course of this study. More information about the students will be given below in Section 3.2.2.1. Later, the sampling method was set as purposive sampling as the researcher grouped these students in accordance with their proficiency levels in English. In purposive sampling “researchers handpick the cases to be included in the sample on the basis of their judgement of their typicality or possession of the particular characteristics being sought” (Cohen et al., 2007, p. 114 – 115). As some of the participants did not meet the prerequisites in terms of the proficiency criteria and two participants were Turkish – English bilinguals, all these participants were later excluded from the study. Therefore, the final sampling method that was utilized in this study remained purposive.

3.2.2.1. Participants

The participants of this study are university students at various departments of Adana Alparslan Türkeş Science and Technology University. All of the participants either studied or were studying at School of Foreign Languages at the time of data collection. While most of the participants were students at Department of Translation and Interpreting Studies, the remaining were students from preparation class at School

of Foreign Languages and at various departments of Faculty of Engineering. 78 participants (63 students, 11 EFL Instructors, 4 native speakers of the English language) (38 females and 40 males) voluntarily took part in the tasks that were used to collect data in order to have an understanding of their linguistic comprehension and expressions of motion verbs in their native language, i.e. Turkish and in their foreign language, i.e. English. The participants were each given a small gift after their individual implementation sessions. The reason why this group of students was chosen as participants to collect data for this study is that all students either studied or were studying at School of Foreign Languages and they received a similar language education. At the time of data collection, they had different levels of English proficiency (A2 – B2) which was tested and defined by the Versant Test.² All participants individually took this test prior to data collection and their results from the test formed their classifications according to their proficiency levels. Three levels emerged, namely A2, B1 and B2 as defined in Common European Framework of Reference. The 11 EFL Instructors who participated in the study did not take the Versant Test and their levels were considered as C1 based on their results which they received from YDS or KPDS exams which are standardized language proficiency exams in Turkey. The aim of incorporating different levels into the study was to see the differences in the comprehension and expression of motion events at various proficiency levels. While there are studies which argue that the proficiency level of the students does not have a direct effect on their motion verb usage, their participants still have relatively high level of proficiency such as intermediate or upper-intermediate (Yıldırım, 2016, Stam, 2006). More studies are required with participants with lower level of language proficiency to compare their usage to those of high level of language proficiency since it is thought that the usage of motion verbs requires a certain level of proficiency in the target language as motion verbs do not appear in the language productions of lower levels as frequently as they do in higher levels due to their complex structures in their verbalization patterns. In addition to students and instructors as EFL learners in this study, four native speakers of the English language also took part. This group formed the native speaker group and the data collected from them through the first and second tasks was resorted to as control group data only and was not analyzed unlike learner data. As the third task included translating sentences from

² <https://www.pearson.com/english/versant.html>

Turkish to English and from English to Turkish, these participants did not perform this specific task. The data which came from native speakers of English language was coded separately and used as control data in order to evaluate the data which came from all the participants in terms of its relation and closeness to native likeness.

All participants shared a similar educational background. The schools that they had attended and the examinations that they had taken until the time when data was collected were relatively similar to one another. The ages of all participants varied between 18 and 44 ($M = 22,79$). The average of student participants' ages was $M = 20,20$. Almost all of them started to learn English at around age of 10 as part of their primary school education and had similar interests in foreign language learning as they either study in the Department of Translation and Interpreting Studies or study at preparation class at School of Foreign Languages or at a department in the Faculty of Engineering which is English medium. After the participants signed an informed consent form (See Appendix A), a demographic information form was filled by the researcher herself for each participant before they started to perform the tasks in the data collection procedure (See Appendix B). The researcher asked the questions orally and took notes before the tasks.

3.2.3. Tasks and Stimuli

The present study was aimed at making a cross-linguistic analysis between the languages Turkish and English through the use of motion verbs by analyzing their linguistic expressions in oral description and translation tasks which were accompanied by eye-tracking technology and their comprehension in an acceptability judgment task by Turkish EFL learners. The three tasks which were developed and designed particularly for this study are explained in detail below. The stimuli are also mentioned individually within each task.

3.2.3.1. Task 1 – Video Description

The first task of this study was an oral task which was named as video description. It aimed to elicit language production data from the participants in both languages, namely Turkish and English, to compare the motion verb usage in this production from a cross-linguistic point of view. It also aimed to reveal the psycholinguistic data from the participants via the eye-tracking data results which showed the areas where the participants focused their attention on the videos while they

were watching them during the task. The task included watching a short video which displayed a motion verb and verbalizing the event in the video after it ended. There was a 12-second-interval in between the videos so that the participants could have enough time in order to comprehend, formulate and verbalize what was happening in the video that they had just seen. During the interval in between the videos, there was one question on the screen asking what the woman was doing in the video. After this interval, the next video started automatically. During this task, the participants' eye movements were recorded by the eye-tracking device in order to have an understanding about the components of motion activity such as manner information or path information to which they allocated their attention. Also, the entire data collection process was voice-recorded so that the researcher would be able to transcribe their oral descriptions for later analysis. The participants' eye-movement patterns which came from the eye-tracking device and the transcriptions of their oral descriptions of the motion verbs in the videos formed the data to be analyzed for this present task.

The fact that the analysis was going to be conducted cross-linguistically required the participants to produce oral descriptions in both languages. Therefore, this task actually included two consecutive parts. In the first part, they were told that they were going to watch 17 videos (2 videos were used as distractors at the beginning without the participants' knowledge.) and they needed to describe these videos in Turkish preferably with one single sentence after the video ended. After this section was completed, without a break, the same procedure continued with the difference of watching another set of 17 videos (2 as distractors at the beginning without participants' knowledge) and describing them in English this time. All the instructions had been given before the implementation started. Thus, there was no pause or break in between languages. The reason why the researcher started the implementation with Turkish instead of English was because it is the native language of the participants. Therefore, it was assumed that they would feel more comfortable with their performances at the beginning of a new implementation. Later, it would be easier for them to continue in English after they familiarized themselves with the task.

The stimuli for this task included videos that were specifically designed and filmed for this particular study. There were 56 videos in total, 50 of them for the target motion verbs of this study (which are mentioned in Table 1) and 6 of them as distractors. Two of the distractor videos were used in the first set of 15 videos and another two in the second set in this task. The remaining two distractor videos were

used in the second task. The duration of videos varied between 3,73 seconds and 29,77 seconds based on the nature of the verb that was being displayed as some of them (e.g. run) took shorter time to display while some of them (e.g. crawl) took longer. All videos were recorded by the researcher herself with a video camera attached to a tripod. Three different locations were used for the filming of the videos. A female actor performed the motion verbs in the videos. In order to have the necessary homogeneity of the videos so that the participants would not be distracted by factors that were not related to the motion itself and that could distract them from focusing on the actions, the same actor took part in the videos with the same clothing in all three locations. The locations were the entrance of an apartment building, a flight of stairs in the building and a small street outdoors. The aim which was considered in choosing these locations was to create stimuli which would trigger the participants' comprehension and linguistic expression of the target motion verbs whilst not distracting them with other related factors such as a colorful background which may have too many objects to pay attention. Additionally, the researcher paid attention in order not to have any scripts or numbers in the videos which would lead the participants into additional cognitive processes upon reading them and cause extra cognitive load while risking missing the motion event. After the videos were recorded by the actor and the researcher at mentioned locations, the researcher edited the videos according to the aim of the data collection procedure so that they could run smoothly including the instructions and description intervals as well as video transitions during the implementations of the tasks. The software that was utilized for the editing of the raw videos was Windows Movie Maker Version 2012.

The above mentioned target motion verbs for the present study are given on Table 1 along with their satellites. Ten motion verbs with five satellites formed the motion activities for this study. Verbs such as creep and crawl which have a similar meaning in Turkish when translated from English were put in separate sets. The target motion verbs were decided upon a search on Cambridge English Corpus (CEC). The most frequent top 50 motion verbs were listed and 10 among those were decided as the target motion verbs to be investigated in this study. While deciding on the verbs, the variables such as satellites to be used with the verbs and the convenience of filming of the verbs were taken into consideration as well as students' production potential. The students were not informed about the aim of the study or the specific verbs that were being sought prior to the study so that their production would not be manipulated. Additionally, as one of the aims of the study was to reveal the usage differences of these

particular verbs by learners with different proficiency levels, it was aimed to see whether students with low or high levels of proficiency were able to produce the target verbs in English in their respective linguistic expressions.

Table 1

Target Motion Verbs

VERBS	VERBS	SATELLITES
walk	run	into
march	dance	out of
crawl	creep	up
limp	tiptoe	down
zigzag	hop	across

The initial reason why there were two sets of 15 videos which included 3 different verbs along with their 5 satellites for two sets of participants was to eliminate the item effect. While noting the demographic information of the participants before their individual sessions, the researcher randomly assigned them in the 1st or 2nd set on the software and recorded their data and information accordingly as it would cause differences during the analysis later. Secondly, it was aimed that the participants would watch the first set of 15 videos and describe them in Turkish and then watch the second set of 15 videos and describe them in English. As the task required the participants to produce oral descriptions in both languages, it was considered that it would be better if they did not have an immediate translation effect in their minds by describing the exact same motion verbs in both languages. Therefore, they described different actions in different languages. The two remaining motion verbs were used in 20 videos as two sets of 10 in the second task. The aim of separating the verbs in this way was to provide the participants with different actions in each task so that they would be alert while they were watching the videos as they changed and not lower their attention. Also, same videos might have led the participants to automatically produce similar verbalization patterns in the tasks, which would not be desirable as it would have affected the elicited data and in return data analysis.

3.2.3.2. Task 2 – Acceptability Judgment

The second task of this study was a nonoral one which was called as acceptability judgment task whose aim was to investigate language comprehension of the participants in both languages to compare their understanding of acceptability of motion verb usage in given sentences from a cross-linguistic point of view. The task included watching a short video which displayed a motion verb and deciding on the most natural way of verbalizing that particular event in Turkish and in English. Unlike producing language in the first task, this task required the participants to comprehend the given language. As this specific task did not include an eye-tracking addition, the researcher was with the participants during the implementation to help them with playing and pausing the video. Yet, she did not talk to them during or after the implementation in order not to affect their judgment in any possible way such as providing leading linguistic stimulus.

Similar to the first task, this task also included two parts as it was held in both languages. After the researcher gave the participants necessary instructions for the task, they started with the Turkish part and then continued with the English one. After a participant finished watching a target motion verb, the researcher paused the video and gave the participant a piece of paper with four sentences on (See Appendix C for acceptability judgment task sentences). Out of these four sentences, one of them was syntactically, semantically and/or pragmatically incorrect and was provided only for distractive purposes. One of them had the most natural canonical motion verb verbalization pattern in each language. The remaining two were somewhere in between in terms of naturalness or native likeness. However, they sounded incorrect or syntactically confusing. Therefore, they were still not correct and preferable as acceptable expressions. Appendix C presents these four sets of sentences for each motion verb in a repetitive order. Yet, the sentences were jumbled within each set during the implementation of the task with the aim of avoiding the item effect and preventing the participants from figuring out the pattern and ranking the sentences automatically in the next set. The verbs and their satellites were not written at the beginning on the papers that were given to the participants during the implementations. They are shown on the Appendix C here for explanatory purposes. Before the actual implementation of the task, English sentences were checked and ranked by a native speaker of English. Therefore, this ranking was considered as the base of ranking that

should be done in English. Also, the data which came from the participants who were native speakers of the English language formed the control data for the data which came from EFL learners. The same procedure of ranking Turkish sentences by a native speaker of the Turkish language prior to the data collection was not applied as it was the native language of the participants. Yet, one instructor whose native language is Turkish checked the Turkish sentences for proofreading purposes to see if there were any possible mistakes. Based on the motion verb which they had watched, the participants needed to rank these four sentences on a scale of 1 to 4 according to their acceptability in Turkish and in English, 1 being the most natural and acceptable, and 4 being the least favored. Each paper which had four sentences with small boxes to put the numbers in besides them also had the sentence “This is the way I would put it in the most natural way” / “En doğal olarak şu şekilde söylerim” at the top. After a participant ranked one set of sentences for a single motion verb, they continued with the next one on another paper until they completed the task for 10 actions in Turkish and 10 actions in English (The videos included two motion verbs along with five satellites). These twenty videos as the stimuli came from the before mentioned video pool that was prepared for this study. Similar to the first task, this task also had two distractor videos at the beginning, one for each set of videos. Unlike the first task, this task of the study was not audio recorded or accompanied by the eye-tracking device. The individual papers for each motion verb with the ranking by the participants formed the data to be analyzed for this task.

3.2.3.3. Task 3 – Translation

The last task of this dissertation was another oral one which was comprised of a translation activity. It aimed to investigate both language comprehension and language production of the participants in both languages cross-linguistically as it required them to read a sentence in one of the languages and orally translate it into the other. Similar to the first task, this task was also oral and made use of eye-tracking technology in order to have an understanding of the participants’ attention allocation on the parts of the sentences which they read on the screen. It was aimed to elicit on which part of a sentence such as manner information or path information they focused their attention while reading the sentence in Turkish or English with the aim of orally translating it right after reading. Besides the observed manner or path information of motion verbs in sentences which would provide the researcher with the information of the participants’

attention allocation, their fixation points were targeted to analyze to elicit data for semantic effects of languages when translated into each other.

The stimuli for this specific task came from 24 sentences (12 in each language, two of them as distractors at the beginning of each set) that were randomly chosen from two fiction novels, one originally written in the English language and one originally written in the Turkish language. This is a method that was used in some of the studies on motion verb usage which provided comparable data from different languages (Özçalışkan, 2002, Slobin, 1997a, Slobin, 2003, Slobin 2004a). The English novel was *Harry Potter and the Half-Blood Prince* by J. K. Rowling. The rationale behind the selection of this particular novel came from the fact that it includes numerous motion events with the author's vivid descriptions of particular scenes. Additionally, it was thought that the participants would be more interested in this book as it is one of the most popular books in the world with a wide range of audience. The Turkish novel was *Fi* by Azra Kohen. The reason why this particular novel in Turkish language was chosen was because it also includes several descriptions of motion activities which were used in some action scenes similar to the above mentioned English novel. Additionally, it is one of the most popular books in Turkey in which participants of this study were thought to be interested. It was considered that the participants could be tired at this point as this was the last task and their attention was not as focused as the first task even if there was a break in between tasks. Therefore, this particular task could be cognitively challenging for the participants to perform within the given time limit. With these reasons in mind, the selection of sentences to be translated was kept at a level where they were simple and short. The sentences which were not syntactically confusing were specifically considered. Additionally, in the case that the selected sentences were thought to be long, confusing or they could cause difficulty for the participants, those sentences were simplified by the researcher and checked by another instructor later on. Appendix D presents the sentences for the translation task in the original order in which they were presented for the task during the data collection process.

The task required the participants to read one single sentence on the screen which was accompanied by eye-tracking device and then orally translate this particular sentence into the other language within the given time period before the next sentence appeared on the screen. The implementation started with translating 12 sentences from Turkish to English. Later, in the second part without giving a break the participants

continued to translate 12 sentences from English to Turkish. As the participants knew that they were going to orally translate the sentence as soon as it disappeared from the screen, they were already at a stage of utterance preparation while reading the sentence on the screen. They were given 12,5 seconds to read the sentence. At the end of this duration, the sentence disappeared from the screen and they had 10 seconds to verbalize the translated sentence. This pattern continued until they finished all 24 sentences. The entire implementation was audio recorded for later analysis. The eye movements of the participants and their oral translations which were transcribed later formed the data to be analyzed for this task. All transcriptions in this study which came from the first and third tasks were done manually by the researcher herself.

3.2.4. Data Collection Procedure

The present study was aimed at making a cross-linguistic analysis between the languages Turkish and English through the usage of motion verbs by analyzing their linguistic expressions and comprehension in three tasks that were specifically designed for this dissertation. The tasks and a general view of the data collection procedure for a single participant were given on Table 2 for illustrative purposes. All participants regardless of their proficiency levels followed the same procedure with the same timing and order during the entire data collection process.

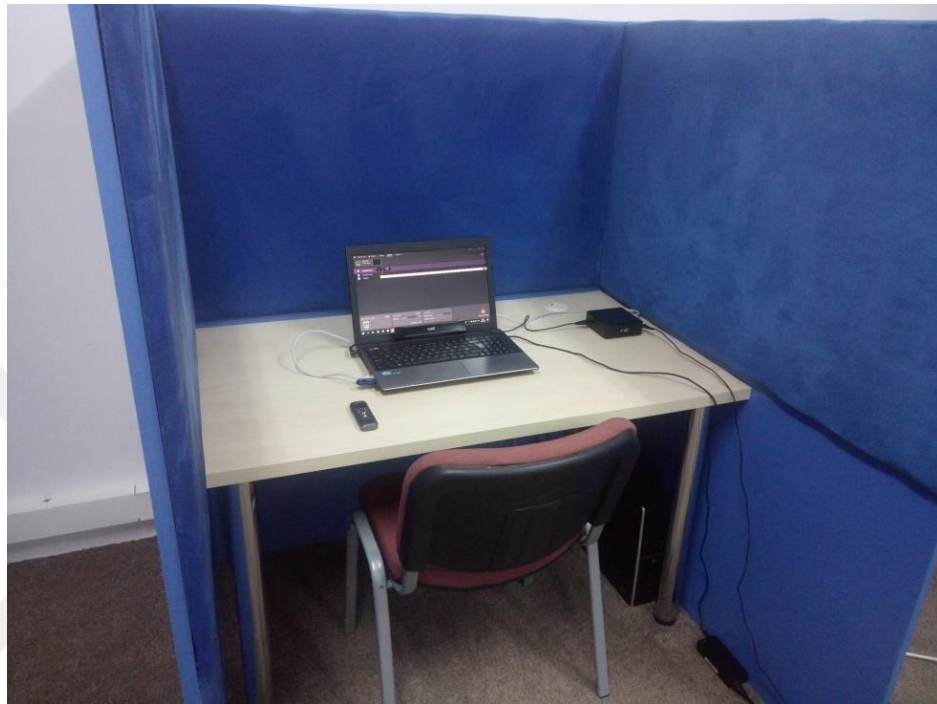
Table 2

Data Collection Procedure

TASKS	DESCRIPTION		TIME ALLOCATION
Informed Consent Form			Approximately 2 min.
Short interview for demographic information			Approximately 2 min.
Video Description	Oral	Eye-tracking	Approximately 15 min.
Break			5 minutes
Acceptability Judgment	Nonoral	Sentence ordering	Approximately 8 min.
Translation	Oral	Eye-tracking	Approximately 15 min.
Post participation information			Approximately 3 min.
Total Time			Approximately 50 min.

The main data collection took place at Pearson Test of English (PTE) exam center at School of Foreign Languages, Adana Alparslan Türkeş Science and Technology University, Adana, Turkey between 11.02.2019 and 08.03.2019 (The data collection for the pilot study will be mentioned at the end of this chapter). All participants took part in the study at the same location under the exact same circumstances. PTE exam center was chosen as the data collection location as it was a suitable place for the aim of this dissertation to have participants in the exam room while the researcher could observe them. The exam room has 8 computer desks and the walls of the exam center are soundproof. There are video cameras above each computer desk which are again eight in number. Also, there is one ceiling microphone. There is an examiner room which is separated from the exam room with a door. However, the researcher did not use the examiner room and stayed in the exam room during the implementation. One computer desk was allocated for the data collection in the exam

center. The researcher quietly sat at another computer desk while the participants were performing the tasks. The reason behind this was to be able to intervene if needed or answer if the participants asked a question during their implementation. Picture 1 and Picture 2 show the setting for the data collection. Photos of the two of the participants during their data collections were given for exemplary purposes in Picture 3 and 4.



Picture 1. Data Collection Setting



Picture 2. Tobii X2-60 Eye Tracker Attached to a Laptop



Picture 3. Sample Data Collection Process



Picture 4. Sample Data Collection Process

One-hour-sessions were arranged and the participants were informed about their session dates and times by the researcher beforehand. The data collection procedure started with the researcher meeting each participant at the exam center individually. Before going into the exam room, each participant was individually asked to sign an informed consent form (See Appendix A) at the very beginning of the meeting. Then a brief interview was held to have demographic information about the participant (See Appendix B) by the researcher. Later, the main part of the data collection procedure

started. Each participant conducted the tasks on their own (except for the second task) and the entire procedure took approximately 50 minutes per participant. There were occasions where, for instance, a certain participant did not want to take a break in between tasks and it took shorter for that participant while there were occasions where it took longer for certain participants as there were some timing problems or technical issues regarding the eye-tracker losing connection with the laptop in between sessions. Nonetheless, the sessions did not exceed one hour for any of the participants.

Table 2 presents a general view of the flow of tasks and the process. The main data collection part started with the first task which was explained above. After signing the informed consent form and providing the researcher with their demographic information, each participant went into the exam room and sat at the allocated desk which was prepared by the researcher prior to the implementation. Before the task started, the researcher gave the participant some general instructions as to how the task would proceed and what they needed to do. None of the participants had information about the purpose of the study with the aim of keeping their language production and comprehension free off any effects. As the first task included the use of eye-tracking technology, the researcher did the necessary adjustments for the participants before they started the task. This process is needed for any study which utilizes eye-tracking technology as the eye-tracker requires the individual to be seated in a specific position at a specific distance from the screen and calibrating the eye pupils of the individual with the device in order to provide the desired data. All the participants were sat at a 65-cm-distance from the screen under the exact same physical conditions with the same lighting so that the data to be collected would not differ from one participant to the other. The participants were warned regarding the possibility of eye-tracking data getting affected by variables such as make up, glasses, contact lenses or piercings. The specific eye-tracking device that was used in this present study was a Tobii X2-60 eye tracker which was attached to a 15'' laptop (1336 x 768 pixels). The eye-tracker device collects eye-movements and fixations at a rate of 60 Hertz (Hz). It was rented from a private company in Ankara for one month and it was shipped to Adana for the data collection process. After the above mentioned adjustments were completed for each participant and the calibration settings were done, the researcher played the video with a mouse click and the participant started the implementation with the first task. As explained before, it was a video description task which elicited language production data from the participants in both languages to be compared cross-linguistically as well

as the eye-tracking data. The participants started to watch the videos and describe them within the period of time that was allocated for the description. Then the next video came on the screen automatically. Thus, the participant did not have to do anything until the very end of the implementation. In the first set, there was a screen after each video with the question “Kadın ne yapıyor?” on the screen. In the second set, the question appeared on the screen as “What is she doing?”. At the beginning of each set of videos there was a screen which instructed the participants to describe the videos which they were about to watch in Turkish and English respectively so that they would not forget to switch languages when they went on to the 18th video, which was the first video of the second set. After this part of the task was completed, the recording screen of the eye-tracker changed automatically and the researcher ended the implementation with another mouse click. Then the participant was offered a 10-minute-break.

After the break, the second task of the study started. The second task was a nonoral acceptability judgment task which investigated language comprehension in both languages to compare the participants’ understanding of acceptability of motion verb usage in given sentences from a cross-linguistic point of view. This task included watching a short video which displayed a motion verb and deciding on the most natural way of verbalizing that particular verb in Turkish and in English. The researcher was with the participant in the exam room. Yet, she did not talk to them during or after the implementation in order not to affect their judgment in any possible way. The flow of the task was as follows: The participants were given the necessary instructions about the task and told that the researcher would not talk to them during the time in which they would watch the video or after while they were ranking the sentences from 1 to 4 on a scale of acceptability. Then the researcher played the video and the participant watched it. The researcher paused before the next video came on and gave the participant a piece of paper on which there were four sentences with small boxes next to them. The participant read the sentences and ranked them from 1 to 4 and gave the paper back to the researcher. Then the researcher resumed the video and the same procedure continued until they finished all 12 videos and ranked sentences in Turkish. Later, the second part of the task started with the same procedure without giving any break with the difference of ranking English sentences. After they finished this part, the researcher collected the papers that she numbered according to the flow of the videos for later analysis.

The third task was started with the same procedure as in the first task. Since the third task also included the use of the eye-tracking device, the necessary adjustments that were done for the first task were applied again. The specific order of the tasks in this study was arranged in a way that the participants started with an oral task, continued with a nonoral one and finished with an oral one. The reasons why the nonoral task was placed in between two oral tasks was to give the participants to have some time off producing language as it could be cognitively demanding to go from one oral task (video description) to another (translation). In same line with the first task, after the calibration setting, the researcher started the implementation with a mouse click and the sentences to be translated which were mentioned above in Section 3.2.3.3. started to appear on the screen. The fixations and the movements of the participants' eyes were recorded by the eye-tracking device. This part provided the researcher with the data to be analyzed in terms of the attention allocation patterns of these eye movements. At the end of 12,5 seconds, the sentence disappeared from the screen. During the transitions between the screens, the participants fixated their eyes on a plus icon on the screen which was purposefully incorporated in between the sentences and instructions as a necessity of eye-tracking analysis. Then when the instruction sentence (either "Lütfen cümleyi çeviriniz." or "Please translate the sentence.") was on the screen, the participants orally translated the sentence which they had just read into the other language in 10 seconds. The oral translations were audio recorded so that the researcher could transcribe them later and analyze the semantic effects of language translations in terms of motion verb usage specifically. The reason why the participants needed to fixate their eyes on a given spot during the transitions of the screens during this task was to provide the eye-tracker's recording of the data with intervals so that the researcher would know at which point of the recorded data the participants stopped reading the sentences and started to get ready to verbalize the sentence in the other language. As oral translation is a task which includes language comprehension and production at the same time, more complex cognitive processes come into play at this point which may mean that there are no clear cut stages that a researcher could possibly know when the speaker passes from comprehension to production as they may already be at a stage of utterance preparation while reading the sentence which means that the two processes take place at the same time. This complicated simultaneous nature of human cognitive system may cause difficulty at the statistical analysis process which requires a more clear cut and simpler data configuration to handle.

At the end of the third task, the researcher stopped the implementation after each participant finished translating the sentences. The researcher had a short time with the participants to thank them and give them information about the aim of the study if they asked for it. After this whole process was completed for three tasks with one single participant, the next participant was invited to the PTE exam center and the exact same process started from the beginning.

3.3. Pilot Studies

Prior to the main data collection of this study, two pilot studies were conducted. The details about these pilot studies are given below.

3.3.1. Pilot Study 1

The first pilot study for this present dissertation was conducted with 6 participants (4 females, 2 males). After being provided with the necessary information, they voluntarily took part in the pilot study and were given a small gift after their individual implementations. All the circumstances were kept as similar as possible to the main data collection. The only difference in the first pilot study was the absence of the eye-tracker device. Since the device that was used for this study was rented from a private company for one month, the researcher did not have access to the eye-tracker at the time when the first pilot study was conducted. Moreover, as the aim of the initial pilot study was solely to see whether the videos would elicit the expected language production or not, the eye-tracker was not actually needed at the time since it would provide a different kind of data. The researcher's aim at this point was to evaluate the effectiveness of the stimuli to see if it was triggering or not in terms of revealing the expected language comprehension and production. Therefore, the first pilot study was conducted with 6 students with the proficiency levels of A2, B2 and C2. Two of the participants were bilingual speakers of Turkish and English. The reason why the researcher included them in the study stemmed from the purpose of having students with high level proficiency as well as students with low level proficiency. Additionally, these students were going to be excluded from the main data collection as they were Turkish – English bilinguals, which was another reason they were included in the pilot study with the aim of reserving the other participants for the main data collection.

After the data was collected from the abovementioned students and manually transcribed by the researcher, some adjustments were made in the materials and stimuli

based on the results of the pilot study and the feedback from the participants. These adjustments are presented below.

First of all, the durations of the videos in which the motion verbs were displayed were shortened. All of them were cropped from the beginning and the end so that the relevant part of the video which actually displayed the motion verb only remained. They were still meaningful and long enough for the participants to understand the actions. The duration of the edited video was 16 minutes 15 seconds in the pilot study while it was 13 minutes 52 seconds in the main data collection. As the first and third tasks would be accompanied by the eye-tracker device later, fully focused attention of the participants was needed so that the device could collect accurate data. Therefore, the researcher aimed at keeping the videos as short as possible since the longer the participants had to sit and look at the screen, the more they were distracted, which in return increased the possibility of them losing their attention.

Secondly, one of the ten target motion verbs which were included in the first task, *zigzag*, did not yield the expected results from the participants in the pilot study. The possible reasons why the participants did not produce language data with this particular verb could be varied. As mentioned before, the circumstances were kept as similar as possible to the main data collection. Therefore, three of the students were grouped into the first set and three in the second set similar to the actual study with the aim of avoiding item effect. This means that three of the students needed to describe the video which displayed the verb *zigzag* in Turkish and the remaining three in English. On the contrary to what was expected, the students did not produce the verb in English. Therefore, the verb *zigzag* was replaced with another verb, *jump*. Had the number of the participants in the pilot study been higher, the verb might have been produced. Nevertheless, the researcher changed the verb in order not to risk losing data. The verb *jump* already existed in the video pool that was prepared and filmed for the purposes of this study. Thus, it was thought that it would be an easier verb for the students from different levels and they would not experience problems producing it. As expected, the verb *jump* yielded the desired results during the second pilot study and the actual data collection.

Apart from these two adjustments, another alteration was made in the implementation of the second task. During the implementation in the pilot study, the sentences which described the motion events in the videos were given to the participants on the same paper even if they were still asked to cover the next set of sentences on the

paper before they watched the related video. However, it was inconvenient for the participants and there were occasions where they saw the next set of sentences while they were searching for the current one on the paper. As this might have affected their judgment on the task or lead them to having a general idea about the patterns of the sets of sentences, it was decided that it would serve better for the purposes of the study if the sentences were provided on separate sheets. Therefore, during the actual data collection, cut-out papers were given the participants one by one as they watched the videos and they ranked the related sentences according to the motion verb video at play without seeing the upcoming ones. After ranking the sentences for one video, they gave the paper back to the researcher and the same procedure started for the next motion verb video until all the videos were watched and their sentences were ranked.

One last adjustment was made in the sentences which were in the last task, namely translation. The participants stated that they did not have any problems with the timing of the sentences. They mentioned that they even found the timing a little too long as they had to wait for a while to consecutively translate a sentence after they had read it. Therefore, the duration in which the sentence to be translated appeared on the screen was decreased from 15 seconds to 12,5 seconds to shorten the duration both for each sentence and for the entire recording. Similarly, the duration in which the instruction sentence appeared on the screen was decreased from 12,5 seconds to 10 seconds with the same purpose. In addition to this, as 4 of the participants mentioned that two of the sentences were too long in the part where they needed to translate from Turkish to English, those sentences were then decided to be used as distractor sentences, for they were not to be included in the data analysis. Therefore, the order of the sentences in the translation task was also rearranged.

To sum up, four adjustments were made in the stimuli and materials of the present study upon feedback from the participants during the first pilot study. After the changes were revised and implementation was renewed, a second pilot study was conducted whose details are explained below.

3.3.2. Pilot Study 2

The second pilot study was conducted under the exact same conditions after the arrival of the eye-tracker device. There were 2 participants in the second pilot study whose proficiency levels were B1 as revealed by the Versant Test. Since the videos for the first and second tasks and sentences for the third tasks were proven to elicit the

targeted language comprehension and production data by students from various proficiency levels during the first pilot study, the aim of the researcher in the second pilot study was to test the eye-tracker device only. Variables such as the physical conditions, the seating, and the lighting of the exam room where the data was to be collected and the entire timing of the procedure were tested in the second pilot study. After these conditions were checked, the distance of the participants from the laptop screen with the eye-tracker attached was decided to be kept at 65 cm after several trials. Two sessions were run for each participant under exactly the same conditions as the actual data collection sessions. It was concluded that the materials, the stimuli and the apparatus were working without any problems and were ready to be used in the actual data collection.

Detailed analysis of the data provided by these 8 participants in total was not conducted. Necessary changes were made in the tasks as mentioned above. However, the statistical analysis as in the main data analysis was not run as it was not thought to be necessary.

A brief summary of data analysis is given next before the fourth chapter which uncovers all stages of data analysis along with findings in detail.

3.4. Brief Summary of Data Analysis

The data that was collected for this study was comprised of five layers. Eye-tracking and oral descriptions data answered the first research question while second research question was answered by acceptability judgment data. Finally, similar to the first research question, the third research question was answered by two pieces of data such as eye-tracking and oral translations.

For the analysis of the data from the eye-tracker device, the analysis tool which was provided with the device was utilized (explained in detail in Section 4.4. Data Analysis). The data was extracted from the software in an Excel sheet. For the oral descriptions and oral translations, the researcher herself transcribed the entire data manually. Then, coding was also done manually by the researcher. After all the transcriptions and coding were done, they were double checked by the researcher. Later, a native speaker of English also checked the data in its coded form. After agreement was reached on some sentences, the analysis process started. Overall, for all analyses, IBM SPSS Statistics 23 was used. Two kinds of analysis such as Paired-samples t-test

and One-way ANOVA were utilized in various data analysis stages whose details are explained in Chapter 4.



CHAPTER IV

FINDINGS

4.1. Introduction

This chapter includes information about the data analysis of this dissertation. After giving information about coding, it unfolds all the stages of the data analysis for each task in detail. Then it presents the findings of each task by referring to the research and sub-research questions.

4.2. Research Questions

As the present study was aimed at making a cross-linguistic analysis between the languages Turkish and English via the usage of motion verbs by analyzing their linguistic expression and comprehension with the purpose of eliciting data which would either support or challenge linguistic relativity (Whorf, 1956) and thinking for speaking (Slobin, 1996a) hypotheses, three tasks which were called video description and oral translation accompanied by eye-tracking technology and an acceptability judgment task were specifically designed and developed. Each task served to answer each specific research question of this study. The research questions are given below once again.

1. Do Turkish EFL learners perceive and express motion events in Turkish and English, two typologically different languages, in their oral expressions in a different way? If yes, do they conform to Talmy's S-language pattern in English and V-language pattern in Turkish in their productions?
2. Do Turkish EFL learners conceptualize language differently when given linguistic expressions of motion events in Turkish and English? If yes, do they differentiate S-language – V-language patterns in English and in Turkish respectively?
3. Do Turkish EFL learners perceive and reflect a two-way effect on their L1 (Turkish) and L2 (English) when orally translating motion events from Turkish to English and vice versa?

4.3. Coding

The coding of the data collected for the study was manually done by the researcher herself and double checked later. The coding was conducted for the Turkish and English oral descriptions of the videos in the first task and oral translations in the third task. An example for each will be given below.

Two types of coding were done to tag the data. The initial coding was a detailed one which was aimed to be purposeful for semantic analyses. However, this type of coding did not serve the quantitative purposes of the study when it was to be analyzed in SPSS. In order to make the coding more suitable for an SPSS analysis, a simplified version was preferred. Initial detailed coding and secondary simplified coding are presented respectively below along with some examples.

4.3.1. Detailed Coding

1. Manner Verb + Path Satellite (e.g. *jump down, crawl across*)
2. Path Verb + Manner Satellite (e.g. *cross the street jumping, enter the building crawling*)
3. Manner Verb Only (e.g. *walk, run*)
4. Path Verb Only (e.g. *pass, enter*)
5. Neutral Verb (Manner or Path Satellite) (e.g. *get, go, come, leave*)
6. Other (incorrect usage of any verb or description and translation)

This initial coding was used to tag all the data. After all the oral descriptions and oral translations by all the participants were tagged, the coding was simplified as below.

4.3.2. Simplified Coding

1. Manner Verb (Included 1 and 3 from the detailed coding)
2. Path Verb (Included 2 and 4 from the detailed coding)
3. Neutral Verb (Included 5 from the detailed coding)
4. Other (Included 6 from the detailed coding)

Apart from these tags, SD1 and SD2 tags were used for semantic density information. When a participant had a description or translation with path information only, that description or translation was tagged as SD1. However, when a participant

had a description or translation with manner and path information or manner information only, that description or translation was tagged as SD2. This form of semantic density analysis was done according to Soroli and Hickmann (2010).

A final tagging was done for the additional analyses with the aim of categorizing the participants' oral descriptions and oral translations as correct and incorrect and not acceptable, acceptable and expected. A "+" sign was used for correct sentences while a "-" sign was used for incorrect sentences. At this stage, (+) meant the sentence was correct grammatically and pragmatically in addition to having a meaning. (-) meant that the specific sentence either lacked a grammatical structure or it did not have a meaning. *NA*, *A*, and *E* tags were used for not acceptable, acceptable and expected sentences respectively. At this stage, *NA* meant the sentence was entirely incorrect. *A* meant the sentence may not have been grammatically correct but it had a meaning or it was pragmatically appropriate. Finally, *E* meant that the sentence was produced as exactly the same as the version that had the canonical motion verb expression for the oral description sentences or the expected version as in the reference book or reference translation for the translation sentences.

During the coding of the data, Talmy (2000) was resorted to as reference with the aim of differentiating satellites from prepositions. The list of motion verbs that was extracted from CEC before to decide on the ten motion verbs for the study was used again when another motion was uttered by the participants with the aim of checking if it was in the list as a manner verb or a path verb.

With all these coding details, a sample coding table for a single participant was as below.

Table 3

Sample Coding Sheet for One Single Participant

Frequency information of the first task (oral description)							
	Manner (1)	Path (2)	Neutral (3)	Other (4)	SD1	SD2	
Turkish		15			1	14	
English	13	2				15	
Coding of oral descriptions							
			Detailed	Simplified	SD	C/InC	Acc.
1	Apartmana koşarak giriyor.		2	2	2		
2	Sürünerek apartmandan çıkıyor.		2	2	2		
3	Dans ederek karşıdan karşıya geçiyor.		2	2	2		
4	Koşarak karşıdan karşıya geçiyor.		2	2	2		
5	Sürünerek merdivenlerden çıkıyor.		2	2	2		
6	Dans ederek apartmana giriyor.		2	2	2		
7	Koşarak merdivenleri çıkıyor.		2	2	2		
8	Dans ederek merdivenlerden iniyor.		2	2	2		
9	Sürünerek apartmana giriyor.		2	2	2		
10	Koşarak apartmandan çıkıyor.		2	2	2		
11	Dans ederek merdivenleri çıkıyor.		2	2	2		
12	Sürünerek karşıdan karşıya geçiyor.		2	2	2		
13	Hızlı adımlarla merdivenden iniyor.		4	2	1		
14	Dans ederek apartmandan çıkıyor.		2	2	2		
15	Sürünerek merdivenlerden iniyor.		2	2	2		
16	She is walking into the building.		1	1	2	+	E
17	She is crawling out of the building.		1	1	2	+	E
18	She is crossing the street jumping.		2	2	2	+	A
19	She is walking across the road.		1	1	2	+	E
20	She is climbing up the stairs		1	1	2	-	A

	crawling.					
21	She is entering the building	2	2	2	+	E
	jumping.					
22	She is climbing the stairs.	3	1	2	-	NA
23	She is jumping down the stairs	1	1	2	+	E
	step by step.					
24	She is crawling back to the	1	1	2	+	A
	building.					
25	She is walking out of the building.	1	1	2	+	E
26	She is climbing the stairs by	3	1	2	-	NA
	jumping step by step.					
27	She is crawling across the road.	1	1	2	+	E
28	She is walking down the stairs –	1	1	2	+	E
	on the stairs.					
29	She is jumping out of the building.	1	1	2	+	E
30	She is crawling down the stairs.	1	1	2	+	E

Frequency information of the third task (oral translation)

	Manner (1)	Path (2)	Neutral (3)	Other (4)	SD1	SD2
Tur2Eng	8	1		1	2	8
Eng2Tur	2	6	1	1	7	3

Coding of oral translation sentences

		Detailed	Simplified	SD	C/InC	Acc.
1	Duru just rushed inside.	1	1	2	+	E
2	Aylin stumbled and fall – fell down the stairs.	1	1	2	-	A
3	Can has just left as turning his back to us.	5	3	1	-	A
4	Duru ran away from Deniz.	1	1	2	+	E
5	Duru walked the wall – door. Duru walked through the door.	1	1	2	+	E
6	Kaya walked away turning his back.	1	1	2	+	E
7	Bilge quickly jumped out of her bed.	1	1	2	+	E
8	Bilge run up the stairs when she got	1	1	2	+	E

	home.					
9	Özge moved away from the window a little.	1	1	2	+	E
10	There were glimpses of sunlight in the room.	6	4	1	-	NA
11	Harry merdivenleri ikişer ikişer koşar adımda indi.	4	2	1	-	A
12	Teleskoplar ve eğitim verenler – laboratuvarındaki eğitim verenler yerde yuvarlandı.	3	1	2	-	A
13	Dumbledore oturma odasına girdi.	4	2	1	+	E
14	Harry alçak bir sehpanın üstünden atladı.	3	1	2	-	A
15	Kulağına bir şeyler fısıldadılar.	6	4	1	-	NA
16	Barmen uzaklaştı – uzaklaşıp gitti.	5	3	1	-	A
17	Riddle’ın aşağı indiğini hayal ettim.	4	2	1	+	E
18	Harry dikkatli bir şekilde bota bindi.	4	2	1	+	E
19	Hastanenin kapıları tekrar açıldı ve Hagrid içeriye girdi.	4	2	1	+	E
20	Ve sonra hiçbir şey demeden aksayarak gitti.	2	2	2	-	A

Correct/incorrect and not acceptable/acceptable/expected sentence frequencies						
	Correct	Incorrect	NA	A	E	Empty
English	12	3	2	3	10	
Tur2Eng	7	3	1	2	7	
Eng2Tur	4	6	1	5	4	

Table 3 presents the five-part-coding such as the coding of the first task (oral description) along with its frequencies, actual coding of oral descriptions, the coding of the third task (oral translation) along with its frequencies, actual coding of oral translation sentences and correct/incorrect and NA/A/E sentence frequencies respectively.

After the initial detailed and later simplified coding was done for each participant’s transcription, all the coding was double checked for any erroneous coding.

After necessary corrections had been made in coding, the data analysis process whose details are explained in the section below started.

4.4. Data Analysis

The first task of this study which was an oral task called as video description aimed to answer the first research question. As mentioned in the explanation of the task, what formed the data to be analyzed were the participants' eye-movement patterns which came from the eye-tracking device and their oral descriptions of the motion verbs in the videos. The analysis of this piece of data, which had four stages in total, started with the analysis of the participants' eye movement patterns which were analyzed with the software³ that was already provided with the eye-tracker device. The software documented the eye movements of the participants according to the fixation areas in the videos which showed the parts of the video on which the participants focused their attention while they were watching the video. If a participant watched the actor moving during the video, it was thought that the participant paid attention to the manner information. If a participant watched the background in the video and looked at the areas where the actor was moving, it was thought that the participant paid more attention to the path information. The areas which were considered as manner information areas and path information areas in the videos were manually defined as dynamic areas of interests (AOIs) by the researcher with the software. Later analysis revealed the numerical data in regards to the seconds during which the actor was watched or the background was watched by the participants. As the participants knew that they would orally describe the action in the video after the video ended in Turkish or English, it was assumed that their attention allocations may have differed accordingly. It was expected of them to pay more attention to manner information in the video if the language in which they were going to describe the video was English. Similarly, they were expected to pay more attention to the path information in the video when the language in which they were to describe the video was Turkish. All the statistical analyses were run with the eye-tracker software at this point. The duration and fixation calculations were provided by the eye-tracker in the first stage. The software allows the numerical data to be extracted in the format of an Excel file. Then with the help of IBM SPSS Statistics 23 this specific numerical data was analyzed by

³ <https://www.tobii.com/product-listing/tobii-pro-lab/>

using Paired-samples t-test by specifying manner or path looks as the dependent variable and the language as the independent variable. The same analysis was run four times as there were the 1st Set and 2nd Set groups in order to avoid item effect and both manner and path results were analyzed for both sets due to the changes in the durations of the videos in different sets. Then in the second stage of data analysis at this point, as the participants at first were asked to describe the action in the video preferably with one sentence at the beginning of the implementation, the transcriptions were manually done by the researcher. Later encoding of the oral descriptions of the participants in both languages was conducted. Their 30 sentences (the descriptions of the distractor videos were not included in the analysis) were analyzed separately as Turkish sentences and English sentences. All sentences were encoded using the coding explained above. After the transcription and encoding of the data, it was again statistically analyzed by Paired-samples t-test by specifying the manner and path descriptions as dependent variable and the language as independent variable. Similar to the analysis above, this one was also conducted twice, one for each language. The researcher had two sets of data (one set from the eye-tracker software, one set from the oral descriptions) with two sets of analysis (one from the eye-tracker software initially and then two Paired-samples t-tests) so far at this point. Then in the third stage of data analysis, the data was analyzed to see if manner and path descriptions are statistically different across proficiency levels in English. Using the same encoding from the previous stage of the data analysis, the data was analyzed with One-way ANOVA by specifying manner and path descriptions as dependent variable and proficiency levels – A2, B1, B2, C1 – as independent variable. This particular analysis was conducted only for English descriptions of the participants as their proficiency levels may affect their descriptions in English. Their Turkish data was not used for this analysis as it was their L1. Finally, in the fourth stage of data analysis of Task 1 for the first research question, a semantic density (SD) analysis was conducted. In the same fashion as Soroili and Hickmann (2010) and Toplu (2011), descriptions were coded as SD1 if they lacked manner information and SD2 if they had it. This coding was analyzed with Paired-samples t-test by specifying the manner (SD2) and path (SD1) information as dependent variable.

The second task of this study which was a nonoral task called as acceptability judgment aimed to provide an answer to the second research question. As this was a comprehension task, it required the participants to watch a video and then read four sentences as descriptions of the motion event in the video with the aim of ranking these

sentences from 1 to 4 as 1 being the most acceptable and the most natural and 4 being the least favored or incorrect. It was stated before that the individual papers for each motion verb with the ranking by the participants formed the data to be analyzed for this task. Since the ranking was already on a numerical basis, the statistical analysis of this specific task did not require any coding. Initially the answers of all 74 participants were checked and they were counted as correct or incorrect ordering by taking the orders that had been done by the researcher for Turkish sentences and a native speaker of English of English sentences as reference. The numbers of the participants' correct ordering in Turkish and English were compared to see the differences between two languages. For this first analysis Paired-samples t-test was utilized by defining Turkish and English correct ordering as the dependent variable. At the beginning of the analysis, the answers were counted as correct if a participant defined a correct ordering for all four sentences. However, after checking all the data, the incorrect order of the sentences in between (namely sentences 2 and 3) were ignored and sentences 1 and 4 only were taken into consideration as they were the final ends. In the second phase of the analysis for this second task, correct orderings of the English sentences according to their acceptability were compared according to the proficiency levels. For this specific analysis, One-way ANOVA was run by specifying English correct ordering number as the dependent variable and the proficiency levels from A2 to C1 as the independent variable.

The last task of this study which was an oral task called as translation aimed to answer the third research question. As this was a translation task, it required the participants to read a sentence in either one of the languages and then orally translate it into the other. Unlike the first two tasks, this task did not include any videos. The participants needed to read one sentence on the screen and translate it into the other language within the allocated time period which was 10 seconds for translation. The two-folded data for this part of the study came from the recordings of the participants' eye movements on the sentences on the screen and their oral translations of these sentences. Similar to the first task, the statistical software of the eye-tracker was used to analyze the first part of the data in terms of the participants' attention allocation patterns. As the participants started the implementation by reading the sentence to be translated, their eye movements were initially shaped in a linear way unlike the first task where they watched a dynamic video. Later, they had some random eye movements while they were waiting for the screen to change to the next one. Yet, these random saccades were ignored and they were not taken as a part of the analysis. While they

were reading the sentence to be translated, it was expected that they would pay more attention to the path satellite in English sentences as it was the part which gave the specific meaning to the sentence along with the manner verb. Similarly, it was thought that they would pay more attention to the path verb while reading the Turkish sentences as it would be the main meaning for them. The analysis of this final task was run in four stages. Firstly, similar to the first task, the eye-tracker software was utilized for the attention allocation pattern analysis. All 20 sentences were manually tagged and specific AOIs were defined for each constituent of each sentence so as to get the numerical data from attention allocations in the recordings of the participants. After getting the numerical data in the form of an Excel sheet, the constituents of the sentences which were manner verbs and path satellites for English sentences and path verbs and manner satellites in Turkish sentences were extracted. The other AOIs were ignored at this point as they did not provide relevant information to the research question. Later, by defining manner and path allocations as the dependent variable, Paired-samples t-test was conducted. Similar to the first task, at the second stage of the data analysis of this task, oral translations of the participants were analyzed in order to reveal if their oral translations from one language to the other had an effect on their manner and path utterances. Another Paired-samples t-test was run by defining manner and path as the dependent variable. For the third stage of the translation task analysis, the differences across proficiency levels were analyzed with One-way ANOVA. The aim of this analysis was to reveal the effect of English proficiency levels on translation. Manner and path translations were the dependent variables while the proficiency levels – A2, B1, B2, and C1 – were independent variables. In the final stage, semantic density analysis was conducted in the translated sentences to see if semantic density information differed in Turkish and English sentences when they were translated. One final Paired-samples t-test was conducted with SD1 and SD2 being the dependent variables. For all analyses of this final task, the evaluation of the English sentences that were translated into Turkish was done by comparing them to the published translation of the book as the base data. As the book was already successfully translated and published in Turkey, the exact sentences were found in the Turkish translation of the book and the participants' translations which were transcribed manually by the researcher were evaluated by taking the base data into consideration. The participants' sentences were not evaluated in terms of being correct or incorrect initially but being close or far from the accepted translation in terms of native likeness. As for the Turkish

book, another procedure had to be followed as it was not translated into the English language. Therefore, the researcher asked four trained translators to translate the target sentences into English. Their four translations were compared and a common base data was formed among them. Finally, the researcher asked a native speaker of English to check the translated sentences in terms of their grammaticality and pragmatic acceptability to make them sound the most natural in the English language with the aim of forming a solid base for the data. Later, as mentioned above, the participants' translations were evaluated in comparison to this base.

Data analysis that has been presented so far formed the main body of the analysis for this dissertation. Apart from these three sets of analyses (four for the first, two for the second and four for the third task), two more sets of analyses were additionally conducted. In this later stage, two additional analyses were done for the first task and another two for the third. During the coding of the data, the researcher coded the English oral descriptions of the participants for the first task as being correct and incorrect. The same analysis was not conducted for Turkish descriptions of the participants as it was their native language. The rationale behind this coding and analysis afterward was to see the effect of English proficiency levels on the descriptions of the participants. Later, as one of the aims of this present study was to form a ground for the language learners' productions to be evaluated not as correct or incorrect but as not acceptable, acceptable and expected, a second coding was done. This time their descriptions were tagged as "NA", "A", and "E" and they were checked across proficiency levels. Similarly, for the third task, their oral translations from Turkish to English and English to Turkish were initially coded as being correct and incorrect and later as not acceptable, acceptable and expected to see if their proficiency levels in English had an effect on their translation performances. For all four of these final analyses, four different sets of One-way ANOVA were conducted by defining the proficiency levels – A2, B1, B2, and C1 – as independent variables. Correct and incorrect oral descriptions and oral translations along with not acceptable, acceptable and expected oral descriptions and oral translations were dependent variables.

One final analysis of the data was conducted for the third task. For this analysis, no statistical data or program was used. For the translation task, it was considered necessary to check whether or not participants' attention allocation patterns and their translation performance were related. For this analysis, two random participants' eye-tracking recordings for the translation task and their oral translations from each

proficiency level were manually checked and compared. The rationale behind this analysis was to reveal the reasons why a particular participant might have allocated their attention to a specific word on the screen. The possible explanations were provided at the end.

On Table 4 and 5, the entire process of data analysis along with additional analyses was shown for illustrative purposes as a summary. The findings are presented next.



Table 4

Data Analysis Stages

RQ	SUB-RQ	QUESTION	VARIABLES	ANALYSIS
RQ1	1a	Are manner and path looks different when they watch the videos to describe in Turkish and English?	One group of 74 participants Manner and path → dependent	Paired-samples t-test
	1b	Are manner and path descriptions different in Turkish and English?	One group of 74 participants Manner, path → dependent	Paired-samples t-test
	1c	Are manner and path descriptions different across levels in English?	A2, B1, B2, C1 → independent Manner, path → dependent	One-way ANOVA
	1d	Are SD1 and SD2 different in Turkish and English descriptions?	One group of 74 participants Manner and path → dependent	Paired-samples t-test
RQ2	2a	Are acceptability orders different in Turkish and English?	One group of 74 participants Turkish and English correct ordering → dependent	Paired-samples t-test
	2b	Are acceptability orders different across levels in English?	A2, B1, B2, C1 → independent English correct ordering → dependent	One-way ANOVA
RQ3	3a	Are attention allocations different in Turkish and English sentences?	One group of 74 participants Manner and path allocation → dependent	Paired-samples t-test
	3b	Are manner and path information different in Turkish and English oral translations?	One group of 74 participants Manner, path → dependent	Paired-samples t-test
	3c	Are manner and path	A2, B1, B2, C1 →	One-way

	information different across levels in Turkish and English oral translations?	independent Manner, path → dependent	ANOVA
3d	Are SD1 and SD2 different in Turkish and English oral translations?	One group of 74 participants Manner and path → dependent	Paired-samples t-test

Table 5

Additional Data Analysis Stages

RQ	SUB-RQ	QUESTION	VARIABLES	ANALYSIS
RQ1	1e	Is there a relationship between correct and incorrect oral descriptions in English across levels?	A2, B1, B2, C1 → independent Correct, incorrect → dependent	One-way ANOVA
	1f	Is there a relationship between not acceptable, acceptable, and expected oral descriptions in English across levels?	A2, B1, B2, C1 → independent not acceptable, acceptable, expected → dependent	One-way ANOVA
RQ3	3e	Is there a relationship between correct and incorrect oral translations in Turkish and English?	A2, B1, B2, C1 → independent Correct, incorrect → dependent	One-way ANOVA
	3f	Is there a relationship between not acceptable, acceptable, and expected oral translations in Turkish and English across levels?	A2, B1, B2, C1 → independent not acceptable, acceptable, expected → dependent	One-way ANOVA

4.5. Findings

This study had three main research questions in the beginning. However, as these questions were guiding questions in general, they were considered as umbrella questions and later on during the analyses, multiple layers were unfolded. Due to this reason, the final analyses will be presented in multiple stages. Each research question will first be subdivided and then the related findings of each will follow.

4.5.1. Research Question 1

- Do Turkish EFL learners perceive and express motion events in Turkish and English, two typologically different languages, in their oral expressions in a different way? If yes, do they conform to Talmy's S-language pattern in English and V-language pattern in Turkish in their productions?

As it can be seen, the first research question had two aims. The perceptions and expression of motion events in Turkish and English were searched simultaneously. This resulted in various analyses. In return, the following sub-research questions emerged. The summary can be seen in Table 4.

1a. Are manner and path looks different when they watch the videos to consecutively describe in Turkish and English?

1b. Are manner and path descriptions different in Turkish and English?

1c. Are manner and path descriptions different across proficiency levels in English?

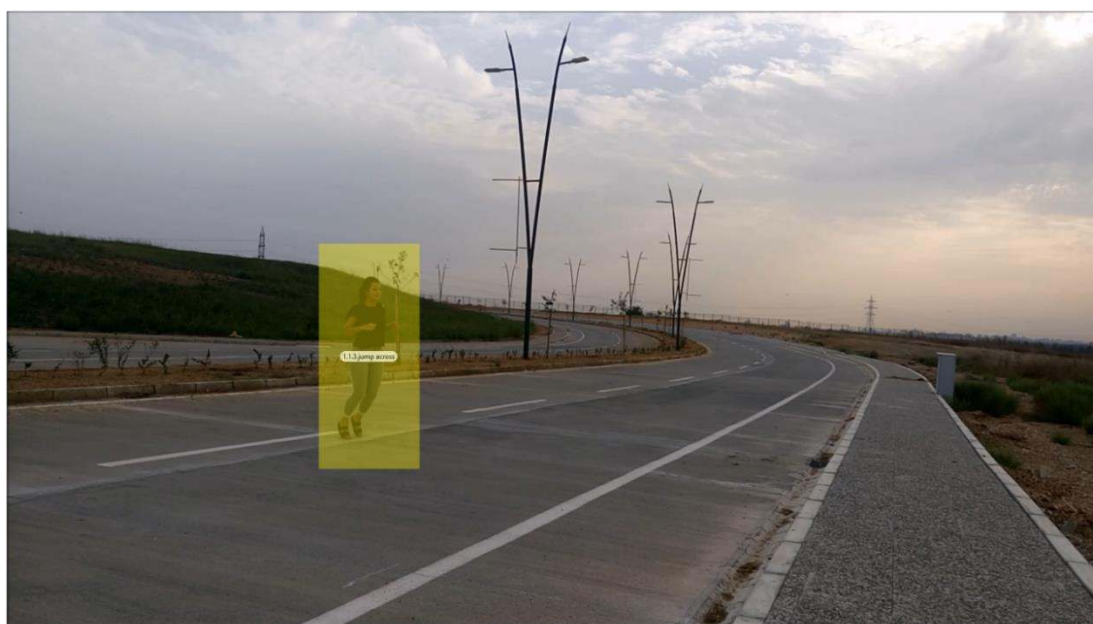
1d. Are SD1 and SD2 different in Turkish and English descriptions?

While data from eye-tracking results dealt with question 1a, data from oral descriptions in the Turkish and English languages by the participants dealt with question 1b. The levels of the participants had the answer to question 1c while their semantic density information in their descriptions answered question 1d. This format of sub-questions was also followed for the next two research questions.

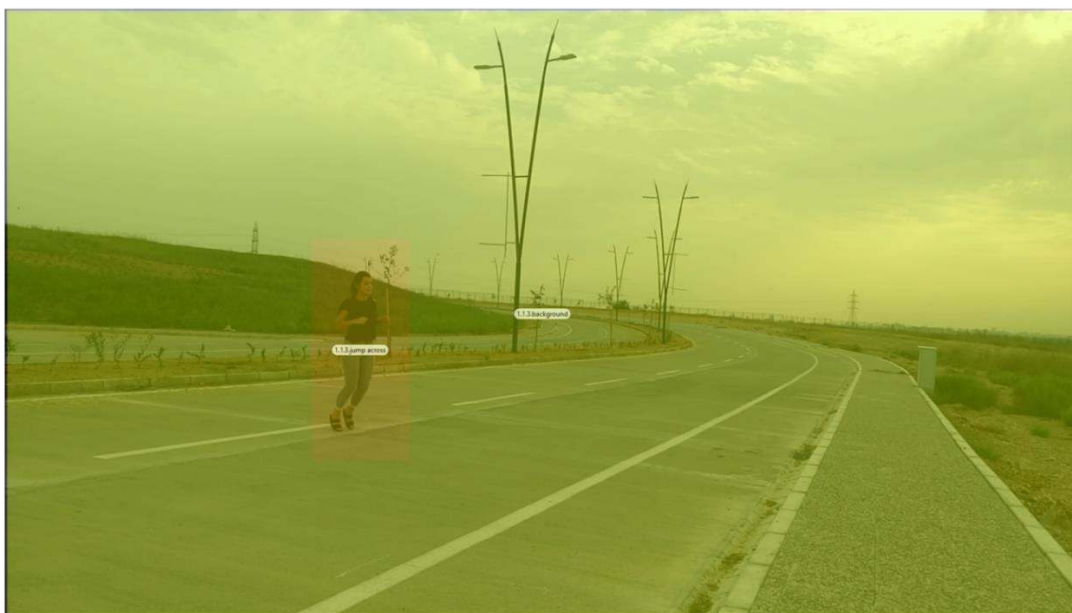
4.5.1.1. 1a. Manner Looks to Describe the Videos in Turkish and English

As stated, sub-research question 1a was related to the data which came from the eye-tracking analysis. For this part of the task, all the participants watched the videos and orally described them later. The recordings of their eye movements were later

analyzed by the researcher with Tobii Pro Lab software. Initially, as the data was dynamic, dynamic AOIs were defined manually by the researcher using the software. While defining these AOIs, the actor's whole body was considered as the manner area while the background was defined as the path area. The specific area of interest was defined for each 30 verbs and their analyses were run separately. Two examples with their manner information and path information respectively are given below for illustrative purposes. Picture 5 shows manner area of the verb *jump across* while Picture 6 shows path information along with manner. As another example, Picture 7 shows manner information of the verb *run out of* while Picture 8 shows its path information.



Picture 5. Manner Area of the Verb jump across



Picture 6. Path Area of the Verb jump across



Picture 7. Manner Area of the Verb run out of



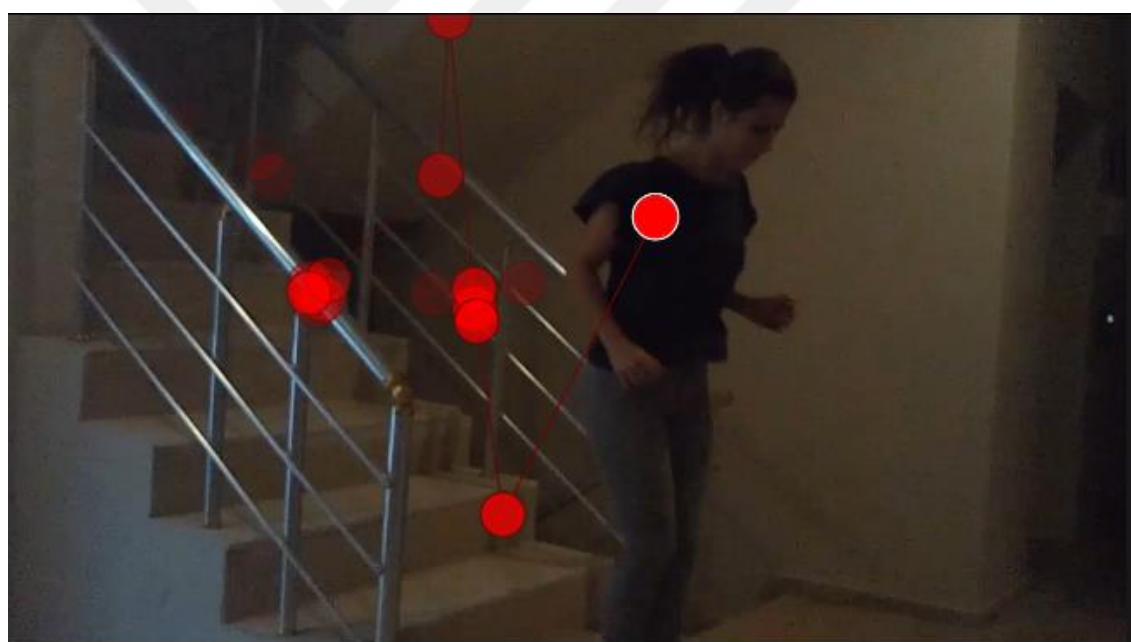
Picture 8. Path Area of the Verb run out of

As can be seen from the pictures, the dynamic manner areas move along with the actor during the analysis. The gazes of the participants which were recorded within this frame were considered as manner looks. The remaining looks which fell on the background outside of the manner frame were considered as the path looks for statistical analysis. Manner areas were tagged with the verb they represented and path information was simply tagged as background for convenience. The numbers in front of the verb *jump across* – 1.1.3. – meant 1st task, 1st set, 3rd verb respectively. Similarly, for the verb *run out of*, the numbers – 1.2.10. – meant 1st task, 2nd set, 10th verb respectively.

Samples of participants' eye movements from their individual recordings for the verbs *walk into* and *jump down* were also provided in Picture 9 and 10.



Picture 9. Gaze Plots of the Verb walk into



Picture 10. Gaze Plots of the Verb jump down

As explained, the dynamic AOIs were initially defined for each 30 motion verbs in both sets. Then, as all of the participants in Set 1 and in Set 2 watched the motion events in the form of one edited video, these AOIs were applied to the recordings of all participants. Later, two different sets of analyses were extracted from the software in the form of an Excel sheet. The spreadsheet showed the durations of participants' manner looks which fell onto the manner frame and path looks which fell onto the entire screen. At this point, the researcher checked each participant's numerical data and manually

extracted manner looks from path looks. This is a setback of eye-tracking technology as it is not possible to know if the participant was looking at the actor or something in the background at the same level. This inevitable overlapping was compensated and its effects were kept to a minimum by defining manner frames as accurately as possible and separating the gaze plots as mentioned. Finally, the remaining numerical data were entered into an SPSS sheet and the results were reached for sub-question 1a.

The same analysis on SPSS was run four times at this first stage as there were two sets in order to avoid item effect and two different looks, namely manner and path. Therefore, firstly manner looks in Turkish and English were analyzed and compared. Secondly, path looks in Turkish and English were similarly analyzed and compared for the 1st set and 2nd set.

At this stage, it is important to present some information about the participant number in each task and in each set of the first task. As the first and third tasks required the company of an eye-tracker in this study, the participant number varied from task to task even if data was collected from all of them for all tasks. However, some of the data of some participants was lost during the collection process and their screen recordings did not have enough data to be analyzed, which can be thought as another setback of eye-tracking methodology. The eye-tracking recordings of these participants were excluded from the analysis. Therefore, the overall numbers of the participants of each task were given in Table 6.

Table 6

Participant Numbers

LEVEL	TASK 1				TASK 2	TASK 3	
	Eye-Tracking		Oral Description			Eye-	Oral
	1 st Set	2 nd Set	1 st Set	2 nd Set		Tracking	Translation
A2	6	7	10	7	17	15	17
B1	12	13	15	14	29	28	29
B2	6	8	8	9	17	12	17
C1	5	5	6	5	11	11	11
Total	29	33	39	35	74	66	74

As can be seen from Table 6, even if there are 17 participants in A2, 29 in B1, 17 in B2 and 11 in C1 level in total, the data of 13 of them in A2, 25 in B1, 14 in B2 and 10 in C1 could be used for analysis. For the 1st set in eye-tracking part of Task 1, there were 29 participants. As for the 2nd set, there were 33 participants. In total 62 participants' data was analyzed for the sub-question 1a whose results are given below.

The very first data analysis was conducted with the aim of seeing whether manner looks are statistically different when the participants watched motion verbs with the purpose of describing them in Turkish and in English afterward. As English is a satellite framed language, it was hypothesized that the participants would allocate their attention to the manner information in the videos. On the contrary, they were expected to pay more attention to path information and less to manner information in the videos while they were watching them to describe in Turkish, which is a verb framed language. To reveal this difference and to see if this difference is statistically significant or not, a Paired-samples t-test was conducted by defining manner looks as the dependent variable and the languages as the independent variable. Before running a Paired-samples t-test, a test of normality was done for the group. The result showed a normal distribution ($p = ,572$). Thus, Paired-samples t-test was run. The manner looks results of the 1st set in Task 1 are as follows:

Table 7

Manner Looks in English and Turkish for the 1st Set

	N	$\bar{x}$	SD	t	df	p
English Manner	29	108,22	17,62	5,830	28	,000
Turkish Manner	29	94,63	13,31			

Table 7 shows the manner looks of the participants in the 1st set for Task 1 for the Turkish and English languages. As can be read, a paired-samples t-test was used to reveal whether there was a statistically significant mean difference between the manner looks of the participants when they were to describe the videos they had watched in Turkish compared to their English descriptions. The assumption of normality was not violated, as assessed by Shapiro-Wilk's test ($p = ,572$). Participants had higher number

of looks at manner information when watching the videos to describe in English ($M = 108,22$, $SD = 17,62$) as opposed to the number of looks at manner information with the aim of describing them in Turkish ($M = 94,63$, $SD = 13,31$), which presents a statistically significant difference of $t(28) = 5,830$, $p = ,000$.

The analysis results that are presented are related to the 1st Set. The exact same analysis with the same purpose was repeated under the same circumstances for the 2nd set and its results are given in Table 8.

Table 8

Manner Looks in English and Turkish for the 2nd Set

	N	$\bar{x}$	SD	t	df	p
English Manner	32	91,26	17,98	- 8,279	31	,000
Turkish Manner	32	106,68	18,03			

Table 8 shows the manner looks of the participants in the 2nd set of Task 1 for Turkish and English. A paired-samples t-test was used to see if there was a statistically significant mean difference between the manner looks of the participants when they were watching the videos to describe them in Turkish compared to describing them in English. The assumption of normality was not violated, as assessed by Shapiro-Wilk's test ($p = ,292$). Unlike the results of the 1st set, participants had higher number of looks at manner information when watching the videos to describe in Turkish ($M = 106,68$, $SD = 18,03$) as opposed to the number of looks at manner information with the aim of describing them in English ($M = 91,26$, $SD = 17,98$). This difference may have caused due to the change in the number of participants which is 32 in the 2nd set as opposed to 29 in the 1st set. The number of the participants was actually 33 for the 2nd set in Task 1. However, one outlier must have been excluded from the analysis due to extreme values. Another possible explanation could be given in terms of item effect. Even if having two different sets was aimed to avoid item effect, the items in the second set may have led the participants to pay more attention to manner areas while path areas were attained

less. Nonetheless, the results present a statistically significant difference of $t(31) = -8,279$, $p = ,000$.

4.5.1.2. 1a. Path Looks to Describe the Videos in Turkish and English

After analyzing the manner looks, another data analysis was conducted with the aim of seeing whether path looks are statistically different when the participants watched motion verbs with the purpose of consecutively describing them in Turkish and in English. As Turkish is a verb framed language, it was hypothesized that the participants would allocate more of their attention to the path information in the videos. On the contrary, they were expected to attend less to path information in the videos while they were watching them to describe in English, which is a satellite framed language. To reveal this difference between the looks for different languages and to see if this difference is statistically significant or not, a Paired-samples t-test was conducted by defining path looks as the dependent variable and the languages as the independent variable. The results of the path looks for the 1st set of Task 1 are given in Table 9.

Table 9

Path Looks in English and Turkish for the 1st Set

	N	$\bar{x}$	SD	t	df	p
English Path	29	33,01	7,94	12,112	28	,000
Turkish Path	29	49,25	8,96			

Table 9 presents the path looks of the participants in the 1st set for Task 1 for Turkish and English. As can be seen, a paired-samples t-test was used to see whether there was a statistically significant mean difference between the path looks of the participants when they were going to describe the videos in Turkish and in English. The assumption of normality was not violated, as assessed by Shapiro-Wilk's test ($p = ,366$). Participants had higher number of looks at path information when watching the videos to describe in Turkish ($M = 49,25$, $SD = 8,96$) as opposed to the number of looks at path information with the aim of describing them in English ($M = 33,01$, $SD = 7,94$), which presents a statistically significant difference of $t(28) = 12,112$, $p = ,000$.

Similar to the manner analysis, path analysis was repeated for the 2nd set. The normality test for the path looks of the participants in the 2nd set did not present a normal distribution, $p = ,023$. Therefore, a non-parametric test was conducted instead of a paired-samples t-test. The results of the non-parametric test are given in Table 10.

Table 10

Path Looks in English and Turkish for the 2nd Set

		N	MEAN RANK	SUM OF RANKS	Z	p
Turkish	Negative	17 ^a	17,29	294,00	- ,561 ^b	,575
Path –	Ranks					
English	Positive	15 ^b	15,60	234,00		
Path	Ranks					
	Ties	0 ^c				
	Total	32				
Legend:		a. Turkish Path < English Path				
		b. Turkish Path > English Path				
		c. Turkish Path = English Path				

Table 10 shows the path looks of the participants in the 2nd set for Task 1 for Turkish and English. A Wilcoxon signed-rank test was conducted to determine the difference between path looks for Turkish descriptions and English descriptions. There was no statistically significant difference between participants' path looks, $z = - ,561^b$, $p = ,575$. The reason why the difference is not statistically significant could be due to item effect in the 2nd set.

4.5.1.3. 1b. Manner Descriptions in Turkish and English

The second data analysis was run with the aim of seeing whether manner information in participants' descriptions is statistically different in Turkish and in English. As English is a satellite framed language, it was hypothesized that the participants would describe the videos with a manner verb and path satellite as the canonical motion event verbalization pattern requires in English. On the contrary, they

were expected to form their Turkish sentences in their descriptions with a path verb and manner satellite or with a path verb only while ignoring manner information as Turkish is a verb framed language. To reveal this difference and to see if this difference is statistically significant or not, a Paired-samples t-test was conducted by defining manner and path as the dependent variables and the languages as the independent variables.

It is noteworthy to remind at this point that all participants' descriptions were included in the analysis at this stage and no data was lost as the data for this stage came from the transcriptions of the participants' voice recordings, which were manually done by the researcher. Therefore, for the 1st set in oral description part of Task 1, there were 39 participants. As for the 2nd set, there were 35 participants. In total 74 participants' data was analyzed for the sub-question 1b whose results are given below.

Before the inferential statistics of the sub-question 1b, descriptive statistics are provided below for illustrative purposes. Additionally, it is aimed to give information about the neutral verbs and other usages by the participants as those were not included in the analyses. Therefore, they could be mentioned here. Figure 1 shows the entire data related to manner, path and neutral verbs and other usages by all participants in their oral descriptions in both languages.

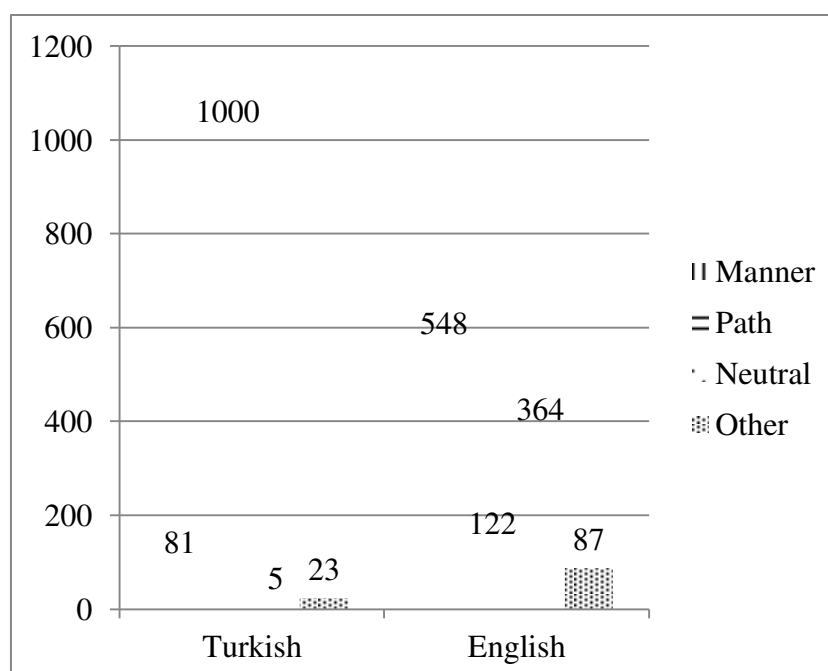


Figure 1. Verb Distribution in Turkish and English

Figure 1 shows the manner, path, neutral and other verbs that were used in their oral descriptions of motion events by the participants in Turkish and English. The participants produced 81 manner, 1000 path, 5 neutral, and 23 other verbs in their Turkish oral descriptions of motion events while they produced 548 manner, 122 path, 364 neutral and 87 other verbs in their English oral descriptions of motion events. The numbers of Turkish path verbs and English manner verbs are noteworthy at this point.

Similar to 1a, for 1b the same inferential analysis was run four times, for there were two sets in order to avoid item effect and two different descriptions, namely manner and path. Thus, firstly manner information in Turkish and English descriptions was analyzed and compared. Secondly, path information in Turkish and English descriptions was similarly analyzed and compared and the results are presented.

Table 11

Manner Verbs in English and Turkish Oral Descriptions for the 1st Set

	N	$\bar{x}$	SD	t	df	p
English Manner Verbs	39	7,1282	4,13	9,763	38	,000
Turkish Manner Verbs	39	,9487	1,57			

Table 11 shows manner verbs in English and Turkish oral descriptions for the 1st set of participants. A paired-samples t-test was used to see if there was a statistically significant mean difference between the numbers of manner verbs of the participants when they were orally describing the videos in Turkish compared to English. The assumption of normality was not violated, as assessed by Shapiro-Wilk's test ($p = ,102$). A paired-samples t-test was run to reveal whether there was a statistically significant mean difference between the manner verbs of the participants when they orally described the videos they had watched in Turkish and in English. Participants had higher number of manner verbs when they orally described the videos in English ($M = 7,12$ $SD = 4,13$) as opposed to the number of manner verbs in Turkish oral descriptions

($M = ,94$, $SD = 1,57$), which presents a statistically significant difference of $t(38) = 9,763$, $p = ,000$.

Examples of manner verb usages by participants in the 1st set in their L1 and L2 are provided below. One example is given from each level in English oral descriptions. Manner verbs are written in bold. The coding provided for the examples here (1 – 3 as manner verbs) can be followed from Table 3.

Examples from Turkish oral descriptions:

Ex. 1. Kadın **zıplayor**.

Ex. 2. Kadın **emekliyor**.

Ex. 3. **Yürüyor**.

Ex. 4. Kadın basamaklara paralel bir şekilde merdivenden aşağıya doğru **emekliyor**.

Examples from English oral descriptions:

Ex. 1. She is **running** on the road. (A2 level)

Ex. 2. She is **dancing** on the road. (B1 level)

Ex. 3. She is **crawling**. (B2 level)

Ex. 4. She is **running** down the stairs. (C1 level)

The analysis results that are presented in Table 11 are from the 1st set of participants. The same analysis with the same purpose was repeated under the same circumstances for the 2nd set and its results are given in Table 12. The normality test for the manner verbs in participants' oral descriptions in the 2nd set did not reveal a normal distribution, $p = ,019$. Therefore, a non-parametric test was conducted instead of paired-samples t-test. The results of the non-parametric test are given in Table 12.

Table 12

Manner Verbs in English and Turkish Oral Descriptions for the 2nd Set

		N	MEAN RANK	SUM OF RANKS	Z	p
English	Negative	0 ^a	,00	,00	- 5,019 ^b	,000
Manner	Ranks					
Verbs –	Positive	33 ^b	17,00	561,00		
Turkish	Ranks					
Manner	Ties	2 ^c				
Verbs	Total	35				

Legend: a. English Manner < Turkish Manner

b. English Manner > Turkish Manner

c. English Manner = Turkish Manner

Table 12 shows the manner verbs in the oral descriptions of the participants in the 2nd set for Task 1 for Turkish and English. A Wilcoxon signed-rank test was conducted to see if the difference between the numbers of manner verbs in English and in Turkish oral descriptions is statistically significant. 35 participants' data was analyzed and while 33 of the participants produced more manner verbs in their English oral descriptions, 2 of them produced the same amount of manner verbs in both languages. This result shows a statistically significant difference, $z = - 5,019^b$, $p = ,000$.

Examples of manner verb usages by participants in the 2nd set in their L1 and L2 are presented below. One example is given from each level in English oral descriptions. Manner verbs are written in bold. The coding provided for the examples here (1 – 3 as manner verbs) can be followed from Table 3.

Examples from Turkish oral descriptions:

Ex. 1. **Dans ediyor.**

Ex. 2. **Koşuyor.**

Ex. 3. Dışarıya doğru **sürünüyor.**

Ex. 4. Yolun ortasında **dans ediyor**.

Examples from English oral descriptions:

Ex. 1. The woman is **jumping** upstairs. (A2 level)

Ex. 2. She is **walking**. (B1 level)

Ex. 3. She **walked** slowly. (B2 level)

Ex. 4. She is **jumping** downstairs. (C1 level)

4.5.1.4. 1b. Path Descriptions in Turkish and English

The equivalent data analysis of manner verb usage in Turkish and English oral descriptions was run for path verb usage with the aim of seeing whether this usage in participants' oral descriptions is statistically significant in Turkish and English. As Turkish is a verb framed language, it was hypothesized that the participants would orally describe the videos with a path verb and manner satellite as the canonical motion event verbalization pattern necessitates in Turkish. On the other hand, they were expected to form their English sentences in their oral descriptions with a manner verb and a path satellite as English is a satellite framed language. To reveal this difference and to see if it is statistically significant or not, a Paired-samples t-test was conducted by defining path as the dependent variable and the languages as the independent variables.

The normality test for the path verbs in participants' oral descriptions in the 1st set did not yield a normal distribution, $p = ,002$. Therefore, a non-parametric test was conducted instead of paired-samples t-test. The results of the non-parametric test are given in Table 13.

Table 13

Path Verbs in English and Turkish Oral Descriptions for the 1st Set

		N	MEAN RANK	SUM OF RANKS	Z	p
Turkish	Negative	0 ^a	,00	,00	- 5,461 ^b	,000
Path	Ranks					
Verbs –	Positive	39 ^b	20,00	780,00		
English	Ranks					
Path	Ties	0 ^c				
Verbs	Total	39				
Legend:						
	a. Turkish Path < English Path					
	b. Turkish Path > English Path					
	c. Turkish Path = English Path					

Table 13 presents the path verbs in the oral descriptions of the participants in the 1st set for Task 1 in Turkish and English. A Wilcoxon signed-rank test was conducted to see if the difference between the numbers of path verbs in English and in Turkish oral descriptions is statistically significant. 39 participants' data was analyzed and all participants produced more path verbs in their Turkish oral descriptions than in their English oral descriptions. This result shows a statistically significant difference, $z = -5,461^b$, $p = ,000$.

Examples of path verb usages by participants in the 1st set in their L1 and L2 are provided below. One example is given from each level in English oral descriptions. Path verbs are written in bold. The coding provided for the examples here (2 – 4 as path verbs) can be followed from Table 3.

Examples from Turkish oral descriptions:

Ex. 1. Kadın merdivenlerden yukarıya **çıktı**.

Ex. 2. Merdivenden **iniyor**.

Ex. 3. Apartmana **giriyor**.

Ex. 4. Bir binadan dışarı **çıkıyor**.

Examples from English oral descriptions:

Ex. 1. She is **crossing** the way running. (A2 level)

Ex. 2. She is **entering** a building while dancing. (B1 level)

Ex. 3. She is trying to **cross** the street on the ground. (B2 level)

Ex. 4. She is **entering** her apartment. (C1 level)

The analysis results that are presented in Table 13 are from the 1st set of participants. The same analysis with the same purpose was repeated under the same circumstances for the 2nd set and its results are given in Table 14. The normality test for the path verbs in participants' oral descriptions in the 2nd set did not have a normal distribution, $p = ,002$. Therefore, a non-parametric test was conducted instead of paired-samples t-test. The results of the non-parametric test are given in Table 14.

Table 14

Path Verbs in English and Turkish Oral Descriptions for the 2nd Set

		N	MEAN RANK	SUM OF RANKS	Z	p
Turkish	Negative	0 ^a	,00	,00	- 5,179 ^b	,000
Path	Ranks					
Verbs –	Positive	35 ^b	18,00	630,00		
English	Ranks					
Path	Ties	0 ^c				
Verbs	Total	35				

Legend: a. Turkish Path < English Path

b. Turkish Path > English Path

c. Turkish Path = English Path

Table 14 displays the path verbs in the oral descriptions of the participants in the 2nd set for Task 1 in Turkish and English. A Wilcoxon signed-rank test was conducted to see if the difference between the numbers of path verbs in Turkish and English oral

descriptions is statistically significant. 35 participants' data was analyzed and all participants produced more path verbs in their Turkish oral descriptions than they did in their English oral descriptions. This result shows a statistically significant difference, $z = -5,179^b$, $p = ,000$.

Examples of path verb usages by the participants in the 2nd set in their L1 and L2 are provided below. One example is given from each level in English oral descriptions. Path verbs are written in bold. The coding provided for the examples here (2 – 4 as path verbs) can be followed from Table 3.

Examples from Turkish oral descriptions:

Ex. 1. Hızlıca merdivenleri **iniyor**.

Ex. 2. Binaya **girdi**.

Ex. 3. Kadın aceleyle içeriye **giriyor**.

Ex. 4. Apartmana **giriyor**.

Examples from English oral descriptions:

Ex. 1. She **entered** the building with jumping. (A2 level)

Ex. 2. She is **exiting** the building. (B1 level)

Ex. 3. She is **crossing** the road. (B2 level)

Ex. 4. She **crosses** the street on her knees. (C1 level)

4.5.1.5. 1c. Manner and Path Descriptions across Proficiency Levels in English

The third sub-question of the first research question was related to the effect of English proficiency levels of the participants on their manner and path verb usages in oral descriptions. Based on their performance on the Versant Test, three proficiency levels were defined at the beginning of this study during sampling. While student participants were categorized according to their Versant Test results into three groups, the group of EFL instructors was defined as C1 level. As they had the highest proficiency level in English, their proficiency was defined in accordance with their KPDS or YDS exam results.

The initial hypothesis was that participants with a lower level of proficiency would produce fewer motion verbs while participants with a higher level of proficiency would produce more motion verbs. In parallel, it was thought that the utterances of participants with a lower level of proficiency would be more erroneous while the utterances of those participants with a higher level of proficiency would be closer to native likeness if not entirely error free. This analysis was conducted only for the English language as Turkish is the L1 of all participants.

Before the inferential statistics, descriptive statistics for the results of this particular sub-question is given in Figure 2.

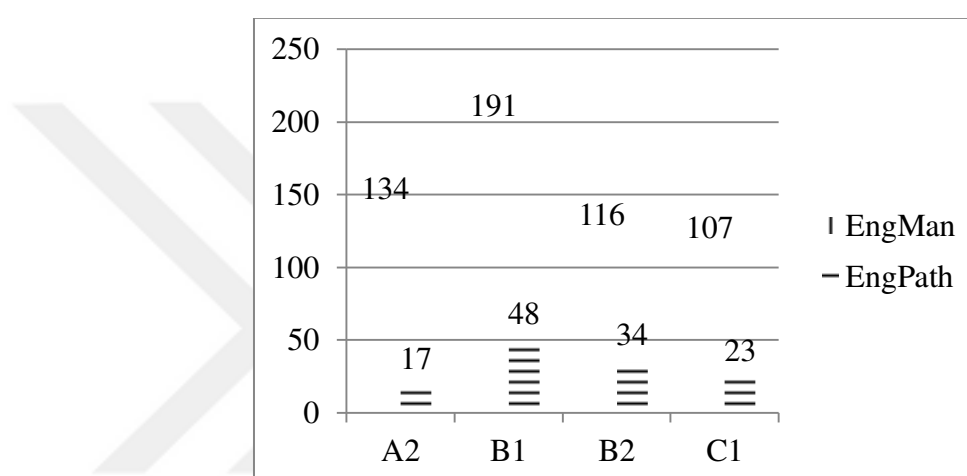


Figure 2. Verb Distribution in English across Proficiency Levels

Figure 2 shows that all participants produced more manner verbs in English than path verbs regardless of their proficiency levels. While A2 level participants produced 134 manner verbs, they produced 17 path verbs. B1 level participants produced 191 manner verbs in comparison to their 48 path verbs. B2 level participants showed a parallel result with 116 manner and 34 path verbs. Finally, C1 level participants had 107 manner verbs and 23 path verbs in their English oral descriptions of motion events. The results show that the highest number of verbs that were produced belonged to B1 level. The explanation for this rate is the number of the participants whose proficiency levels were B1. As they were the group with the highest number, it is foreseeable that they have the highest verb production. What is important here is that the frequencies of manner verbs are higher than the frequencies of path verbs regardless of proficiency levels.

As the aim of the sub-question 1c was to reveal whether or not manner and path verb usages in oral descriptions are different across proficiency levels in English, a

One-way ANOVA was utilized by defining manner and path verbs as the dependent variable and the proficiency levels (A2, B1, B2, C1) as the independent variables. Similar to the analyses that have been presented so far, this analysis was also held at two stages. Firstly, manner results were analyzed and presented. Then, path results are given. Table 15 presents the descriptive results of manner verb usage across four proficiency levels in English.

Table 15

The Descriptive Values of Proficiency Levels

Level	N	$\bar{x}$	SD
A2	17	6,11	3,68
B1	29	6,58	3,94
B2	17	6,82	4,27
C1	11	9,72	4,19
Total	74	7,00	4,09

As can be seen in Table 15, there were 17 participants in levels A2 and B2, 29 participants in B1 level and 11 participants in C1 level. Table 16 shows the results of One-way ANOVA as inferential analysis.

Table 16

One-way ANOVA Results for Manner Verbs across Proficiency Levels

MANNER	SUM OF SQUARES	df	MEAN SQUARE	F	p
Between Groups	100,54	3	33,51	2,092	,109
Within Groups	1121,45	70	16,02		
Total	1222,00	73			

Table 16 presents the results of the analysis that was conducted to see if the manner verb usages in English oral descriptions of the participants were statistically

significant when compared across proficiency levels. A one-way ANOVA was run. Participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). Data was normally distributed for each group, as assessed by Shapiro-Wilk test ($p = ,950$ for A2, $p = ,403$ for B1, $p = ,206$ for B2, $p = ,385$ for C1); and there was homogeneity of variances, as assessed by Levene's test of homogeneity of variances ($p = ,815$). Manner verb frequency was similar for A2 ($\bar{x} = 6,11$, $SD = 3,68$), for B1 ($\bar{x} = 6,58$, $SD = 3,94$), for B2 ($\bar{x} = 6,82$, $SD = 4,27$) and for C1 ($\bar{x} = 9,72$, $SD = 4,19$). Thus, the differences between these proficiency levels were not statistically significant, $F(3,70) = 2,092$, $p = ,109$.

After manner verbs across levels analysis, in line with the aim of the sub-question 1c, a One-way ANOVA was utilized to see whether or not path verb usages in oral descriptions are different across proficiency levels in English, by defining path verb usage as the dependent variable and the proficiency levels (A2, B1, B2, C1) as the independent variables. Similar to the manner verb usage analysis, participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). However, data was not normally distributed for each group, as assessed by Shapiro-Wilk test ($p = ,000$ for A2, $p = ,000$ for B1, $p = ,083$ for B2, $p = ,276$ for C1). Therefore, a non-parametric test was resorted to and a Kruskal-Wallis Test was conducted. The results are given in Table 17.

Table 17

Path Verb Usage Results across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	29,18	5,931	3	,115
B1	29	35,90			
B2	17	44,38			
C1	11	43,95			
Total	74				

Table 17 presents the results of the analysis that was conducted to see if the path verb usages in English oral descriptions of the participants were statistically significant

when compared across proficiency levels. As the normality criterion was not met initially, a non-parametric test was conducted. A Kruskal-Wallis test showed that there was not a statistically significant difference in path verb usages in the oral descriptions of the participants, $\chi^2(3) = 5,931$, $p = ,115$, with a mean rank path verb usage of 29,18 for A2, 35,90 for B1, 44,38 for B2, and 43,95 for C1.

4.5.1.6. 1d. SD1 and SD2 in Turkish and English Oral Descriptions

The final sub-question of the first research question was to reveal if SD1 and SD2 were different in Turkish and English oral descriptions of the participants. As explained in the data analysis section, SD stands for semantic density. For this analysis, the coding that was suggested by Soroli and Hickmann (2010) was used. Table 3 presents the sample coding. SD1 meant that the participant formed a sentence with a path verb only and there was no manner information in the sentence whatsoever. SD2 meant that the participant formed a sentence either with a manner verb or with a path verb with additional manner information as the satellite. The neutral verbs that were not included in the analyses so far were included in this semantic density analysis. When a participant used a neutral verb (e.g. go, get, come, leave) with a manner satellite (e.g. “The woman gets across crawling” B2 level), the sentence was tagged as SD2. Overall, SD2 means higher semantic density as it provides with more detail about the verb while SD1 means low semantic density.

It was assumed in the literature so far (Slobin, 1996a, 1997, Özyürek, 2000) that Turkish speakers omit manner information as Turkish is a verb framed language and they would use a path verb to describe a motion event while English speakers would resort to manner verbs with path satellites, which, in return, would cause their sentences to have a naturally higher semantic density. In order to test this claim, two oral descriptions of the same participants in Turkish and English were analyzed and compared. Firstly, their SD1 sentences and later their SD2 sentences were compared in Turkish and English so as to reveal if they have an understanding of the fact that two languages have two separate tendencies in terms of providing or omitting manner information semantically.

Before the inferential analysis results are given, some descriptive results are shown in Figure 3.



Figure 3. Semantic Density Results for Turkish and English Oral Descriptions

Figure 3 shows the descriptive results of semantic density analysis. It is understood that the participants produced more SD1 sentences in English than in Turkish, $n = 335$ and $n = 203$, respectively. For SD2, they had the opposite pattern by producing more SD2 sentences in Turkish than in English, $n = 907$ and $n = 756$, respectively. The inferential analysis results are presented next.

Table 18 presents the results of a Paired-samples t-test. SD1 and SD2 were the dependent variables while the languages were independent variables. SD1 results are given first. Before the analysis, the assumption of normality was not violated, as assessed by Kolmogorov-Smirnov's test ($p = ,064$).

Table 18

SD1 Comparison in Turkish and English Descriptions

	N	$\bar{x}$	SD	t	df	p
Turkish SD1	74	2,74	2,17	- 3,839	73	,000
English SD1	74	4,52	3,12			

Table 18 shows the SD1 comparison in Turkish and English oral descriptions of motion verbs by Turkish EFL learners. As can be inferred from the table, participants had a higher SD1 result when orally describing the videos in English ($M = 4,52$, $SD =$

3,12) as opposed to Turkish ($M = 2,74$, $SD = 2,17$), which presents a statistically significant difference of $t(73) = -3,839$, $p = ,000$.

The same analysis was conducted for SD2 information in the oral descriptions of the participants in their L1 and L2. The results are given in Table 19. For SD2 analysis, another Paired-samples t-test was conducted after it was seen that the assumption of normality was not violated, as assessed by Kolmogorov-Smirnov's test ($p = ,071$).

Table 19

SD2 Comparison in Turkish and English Descriptions

	N	$\bar{X}$	SD	t	df	p
English SD2	74	10,21	3,13	- 4,429	73	,000
Turkish SD2	74	12,25	2,17			

Table 19 shows the comparison of SD2 information in Turkish and English oral descriptions of motion verbs by Turkish EFL learners. As can be understood from the table, participants had a higher SD2 result when orally describing the videos in Turkish ($M = 12,25$, $SD = 2,17$) as opposed to English ($M = 10,21$, $SD = 3,13$), which presents a statistically significant difference of $t(73) = -4,429$, $p = ,000$.

Examples of SD1 and SD2 information in the oral descriptions of Turkish EFL learners in their L1 and L2 are provided below. Semantic density information is given in brackets. English proficiency levels of the participants are also provided in brackets. The coding provided for the examples here (SD1 and SD2) can be followed from Table 3.

Examples from Turkish oral descriptions:

Ex. 1. Kadın kapıdan içeri giriyor. (SD1)

Ex. 2. Kadın dans ederek yolun karşısına geçiyor. (SD2)

Ex. 3. Merdivenlerden yukarı emekliyor. (SD2)

Examples from English oral descriptions:

Ex. 1. She is going inside. (A2 level) (SD1)

Ex. 2. She is going outside by running. (A2 level) (SD2)

Ex. 3. She is going upstairs on his hands and feet. (B1 level) (SD1)

Ex. 4. She is running upstairs. (B1 level) (SD2)

Ex. 5. She is crawling out of the building. (B2 level) (SD2)

4.5.2. Research Question 2

- Do Turkish EFL learners conceptualize language differently when given linguistic expressions of motion events in Turkish and English? If yes, do they differentiate S-language – V-language patterns in English and in Turkish respectively?

The second task was the only task which was not accompanied by the eye-tracker device. Therefore, it had its data come only from the sentence orderings by the participants in both languages. The two emerging sub-questions for the second research question are as follows. The summary is in Table 4.

2a. Are acceptability orders different in Turkish and English?

2b. Are acceptability orders different across proficiency levels in English?

For this particular research question, sub-question 2a dealt with the participants' ordering of the sentences according to their acceptability in Turkish and English. Sub-question 2b, on the other hand, dealt with English sentence orderings only with a reference to participants' proficiency levels.

4.5.2.1. 2a. Acceptability Orders in Turkish and English Sentences

Sub-question 2a aimed to answer if acceptability orders by the participants were different in Turkish and English. Unlike research question 1 which analyzed both receptive and productive data, this second research question was related to the participants' conceptualization of motion verbs only. The differences in their understanding of canonical motion verb lexicalization patterns were compared and analyzed with the aim of uncovering if they were able to differentiate two separate patterns in two languages. Therefore, the data that was collected for this task came from

their receptive knowledge and they did not produce any sentences. After watching one video which displayed a motion verb, they ordered the sentences that were provided for them. For the acceptability judgment task sentences that were given to the participants to rank from 1 to 4, 1 being the most natural and acceptable, and 4 being the least favored, see Appendix C. The order of the sentences in Appendix C was jumbled for each language during the implementation of the task with the aim of avoiding the item effect and preventing the participants from figuring out the pattern and ranking the sentences automatically for the next video. Two sample sets of sentences (one in Turkish and one in English) for one motion verb are given below with the expected ranking next to the sentences in Picture 11 and Picture 12.

6. En doğal şekliyle şu sıralamada söylerim:

3	Kadın binaya giriyor.
1	Kadın binaya sekerek giriyor.
4	Kadın binayı giriyor.
2	Kadın sekiyor ve binaya giriyor.

Picture 11. Sample Set of Sentences of a Motion Verb in Turkish with Its Expected Ranking

3. This is the order I would put it in the most natural way:

1	She is limping across the street.
3	She is crossing the street by limping.
4	She is limping of the street.
2	She is limping and crossing the street.

Picture 12. Sample Set of Sentences of a Motion Verb in English with Its Expected Ranking

The pictures show how a piece of paper that was provided for the participants for each motion verb in the second task looked. The ranking boxes on the left were empty for the participants to fill in during the implementation. In order to prepare the data for the analysis, initially an expected ranking was created to be taken as a reference for the participants' answers. Later, all rankings were checked and counted as being correct or incorrect in comparison to the expected version. However, at this point, the criterion was modified as the number of correct rankings by the participants in English was too low to analyze when all four rankings were checked. Therefore, the ranks 2 and 3 were later ignored in their answers and excluded from the analyses. Ranks 1 and 4 only were counted as being correct or incorrect as they were the extreme ends. For this specific sub-question, it was hypothesized that the participants would perceive the distinctive canonical motion event verbalization patterns of the two languages and would rank English ones according to their natural patterns without having an effect of their L1 on their L2, and in return have a high number of correct ranking in English. Their rankings in Turkish were already expected to be high as it is their native language. With this in mind, a Paired-samples t-test was run by defining correct ranking as the dependent and the languages as the independent variables and the participants' rankings in both languages were analyzed comparatively. Table 20 presents the results. The normality test for the rankings by the participants did not result in a normal distribution, $p = ,000$, as assessed by Kolmogorov-Smirnov's test. Therefore, a non-parametric test was conducted. The results of the non-parametric test are given in Table 20.

Table 20

Correct Acceptability Rankings in Turkish and English

		N	MEAN RANK	SUM OF RANKS	Z	p
Turkish Correct Ranking – English Correct Ranking	Negative Ranks Positive Ranks Ties Total	2 ^a 61 ^b 11 ^c 74	3,00 32,95	6 2010,00	- 6,882 ^b	,000

Legend: a. Turkish Correct < English Correct

b. Turkish Correct > English Correct

c. Turkish Correct = English Correct

Table 20 presents the correct acceptability rankings by the participants in Turkish and English sentences that were given to them. A Wilcoxon signed-rank test was conducted to see if the difference between the numbers of correct acceptability rankings in Turkish and in English was statistically significant. 74 participants' data was analyzed and while 2 of the participants had higher correct ranking results in their English sentence rankings than in their Turkish sentence rankings, 61 of the participants had higher correct rankings in their Turkish sentence rankings than in their English sentence rankings. Finally, 11 of the participants had equal correct rankings in their Turkish and English sentence rankings. This result shows a statistically significant difference, $z = - 6,882^b$, $p = ,000$.

4.5.2.2. 2b. Acceptability Orders across Proficiency Levels in English

The second part of the analyses that were conducted for the second research question aimed to answer the sub-question whether acceptability judgment rankings were different across proficiency levels in English. This analysis was not conducted for Turkish sentences as Turkish is participants' native language. The aim was to reveal the effect of proficiency levels on participants' acceptability judgments. It was hypothesized that the participants would have a higher correct ranking as their

proficiency level increased. In other words, participants whose English proficiency levels were A2 were expected to have the lowest correct ranking and participants whose English proficiency levels were C1 were expected to have the highest correct ranking. In order to find the answer to this particular question, a One-way ANOVA was utilized by defining correct acceptability ranking as the dependent variable and the proficiency levels (A2, B1, B2, and C1) as the independent variables. The participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). However, data was proved to violate the normality, as assessed by Shapiro-Wilk test ($p = ,000$ for A2, $p = ,000$ for B1, $p = ,002$ for B2, $p = ,019$ for C1). Therefore, a non-parametric test was resorted to and a Kruskal-Wallis Test was conducted. The results are given in Table 21.

Table 21

Acceptability Judgment Rankings across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	31,85	1,930	3	,587
B1	29	38,12			
B2	17	41,47			
C1	11	38,45			
Total	74				

Table 21 presents the results of the analysis that was conducted to see if the acceptability judgment rankings of English motion verb verbalization patterns by the participants were statistically significant when compared across their proficiency levels. As the normality criterion was violated initially, a non-parametric test was conducted. A Kruskal-Wallis test showed that there was not a statistically significant difference in acceptability judgment rankings of English motion verb verbalization patterns by the participants with different proficiency levels, $\chi^2(3) = 1,930$, $p = ,587$, with a mean rank acceptability ranking of 31,85 for A2, 38,12 for B1, 41,47 for B2, and 38,45 for C1.

4.5.3. Research Question 3

- Do Turkish EFL learners perceive and reflect a two-way effect on their L1 (Turkish) and L2 (English) when orally translating motion events from Turkish to English and vice versa?

As it can be seen, similar to the first research question, the third research question also had two aims. The perceptions and oral translations of motion verbs from Turkish to English and from English to Turkish were investigated simultaneously. Similarly, this led to various analyses. The following sub-research questions were sought. The summary can be seen in Table 4.

3a. Are attention allocations different in Turkish and English sentences?

3b. Are manner and path information different in Turkish and English oral translations?

3c. Are manner and path information different across proficiency levels in Turkish and English oral translations?

3d. Are SD1 and SD2 different in Turkish and English oral translations?

Whereas data from eye-tracking software results dealt with sub-question 3a, data from oral translation from Turkish to English and from English to Turkish dealt with sub-question 3b. The proficiency levels of the participants had the answer to sub-question 3c while their semantic density information in their oral translations answered sub-question 3d.

4.5.3.1. 3a. Attention Allocations in Turkish and English Sentences

As stated above, sub-research question 3a was related to the data which came from the eye-tracking analysis for the translation sentences. For this first part of the task, all the participants read 24 sentences on the screen and orally translated them consecutively. The recordings of the screen with their eye movements were later analyzed by the researcher with the use of Tobii Pro Lab software. First of all, unlike the dynamic data in Task 1, data in this task was static. Therefore, static AOIs were defined manually by the researcher using the software. While defining these AOIs, each word in each sentence was defined separately with the aim of calculating their attention allocations as seconds. The software allows an Excel spreadsheet to be extracted with the durations of each area of interest of each participant separately. However, during the

analysis only those AOIs which were considered as manner information or path information were extracted from the entire duration for each participant and analyzed comparatively for each language. Some examples of initial AOIs are given below with their specific explanations.

It is important to clarify at this point that the AOIs were defined twice. The first AOIs were defined as a frame around each word and the height of these frames were kept at a moderate distance from the word in the center of the area of interest. Picture 13 and Picture 14 show the initial AOIs as samples.



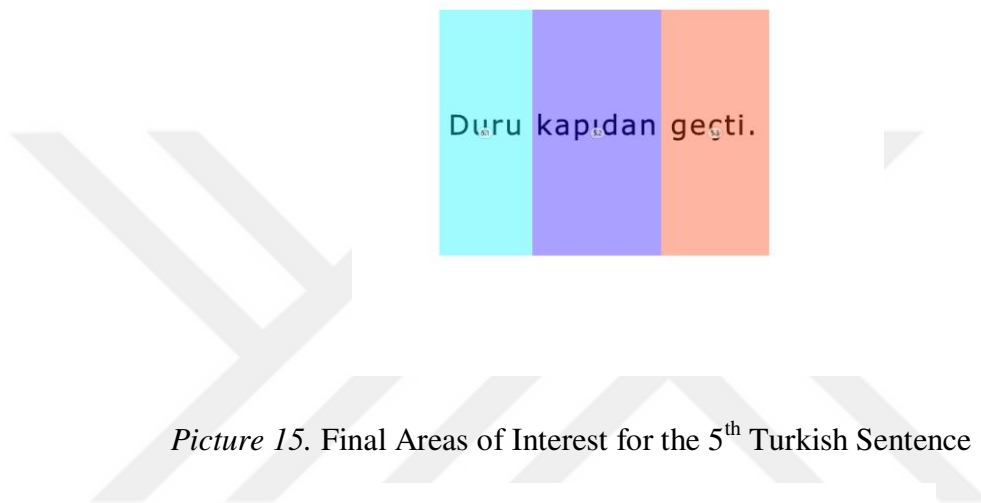
Picture 13. Initial Areas of Interest for the 5th Turkish Sentence



Picture 14. Initial Areas of Interest for the 4th English Sentence

With these first AOIs, an initial analysis was run and the durations of each participant's looks on these areas were extracted. At this point it was noticed that a remarkable amount of the participants' data was lost as their gaze plots were recorded as either above or below the boundaries of AOIs. As this was caused due to the fovea area of each participant's eye structure, which is quite individual and cannot be controlled, the researcher later adjusted the AOIs changing their heights. In regards to

this issue, Holmqvist, Nyström and Mulvey (2012, p. 48) explain that it is not possible to know where a human is looking. As the center of the fovea can be misaligned, where a participant says she looks at may not be accurate. Therefore, what the most of eye trackers measure is the impression of a gaze when gaze is mentioned. Therefore, the second and final versions of AOIs with which the results were extracted are given in Picture 15 and 16.



Picture 15. Final Areas of Interest for the 5th Turkish Sentence



Picture 16. Final Areas of Interest for the 4th English Sentence

With these final AOIs defined, sample screen recordings in the form of heat maps for individual participants are given in Pictures 17 to 20 as examples. The same sentences from above pictures are given for comparison and two other examples are given additionally.



Duru kapıdan geçti.

A heat map visualization for the Turkish sentence "Duru kapıdan geçti." The text is centered on a white background. The words "kapıdan" and "geçti" are highlighted with a yellow-to-red gradient, indicating higher attention or importance. The word "Duru" is in black. There are several green circular markers of varying sizes scattered around the text, particularly above and to the right of the highlighted words.

Picture 17. Sample Heat Map for the 5th Turkish Sentence



Harry leapt over a low table.

A heat map visualization for the English sentence "Harry leapt over a low table." The text is centered on a white background. The words "Harry", "leapt", "over", "a", and "table" are highlighted with a yellow-to-red gradient, indicating higher attention or importance. The words "low" and "table" are in black. There are several green circular markers of varying sizes scattered around the text, particularly above and to the right of the highlighted words.

Picture 18. Sample Heat Map for the 4th English Sentence



Bilge eve vardığında koşarak yukarı çıktı.

Picture 19. Sample Heat Map for the 8th Turkish Sentence



Then he limped away without another word.

Picture 20. Sample Heat Map for the 10th English Sentence

The pictures show the heat maps of four of the translation sentences as examples. Picture 17 shows the 5th Turkish sentence “*Duru kapıdan geçti*”. The heat map shows the AOIs which received the highest attention allocation from a single participant as the red areas. When the numerical data from the software for this specific participant was analyzed to compare with the heat map, it was seen that the participant looked at these three words for 0,00, 3,82 and 1,87 seconds respectively. As can be

understood, the word “*kapıdan*” has the most attention allocation with 3,82 seconds. The total duration during which a sentence was on the screen was 12 seconds. For Picture 18 which displays the 4th English sentence “*Harry leapt over a low table*”, it is seen that the words *leapt* and *over* have the highest attention allocations. This specific participant looked at the word *Harry* for 2,20 seconds, *leapt* for 3,20, *over* for 2,15, *a* for 0,22, *low* for 1,17 and *table* for 1,28 seconds. For Picture 19 which displays the 8th Turkish sentence “*Bilge eve vardığında koşarak yukarı çıktı*”, it seems that the heat map shows *koşarak* as the word with the highest attention allocation. The numerical data showed that the participant looked at the word *Bilge* for 0,48 seconds, *eve* for 0,5, *vardığında* for 1,92, *koşarak* for 4,90, *yukarı* for 2,10 and *çıktı* for 0,28 seconds, which proves to be in line with the heat map. The final sample sentence which is shown in Picture 20 is the 10th English sentence, “*Then he limped away without another word*” with *limped* and *away* seemed to have received the highest attention allocations. The participant whose data was extracted looked at the word *then* for 1,03 seconds, *he* for 0,80, *limped* for 3,60, *away* for 2,27, *without* for 0,80, *another* for 0,95 and *word* for 1,08 seconds. The highest seconds are allocated to the words *limped* and *away*.

Before the inferential analysis that was conducted for this specific sub-research question, it is necessary to remind the number of participants for this final task. Similar to the first task, because this final task was also accompanied by the eye-tracking technology, some of the data that was collected from the participants was lost during the collection as it was not recorded by the device. Therefore, the number of participants whose data was included in the analysis was $n = 15$ for A2 level, $n = 28$ for B1 level, $n = 12$ for B2 level and $n = 11$ for C1 level even if the participant numbers were $n = 17$ for A2 level, $n = 29$ for B1 level and $n = 17$ for B2 level. No data was lost in C1 level. Therefore, all 11 participants’ data was included in the analysis. Overall, the data of 66 out of 74 participants in total was analyzed for sub-question 3a.

The data analysis that was conducted for this sub-question aimed to reveal whether attention durations that were allocated to the manner and path information in sentences are statistically different when the participants read the sentences in Turkish to translate them into English and in English to translate them into Turkish. As Turkish is a verb framed language and English is a satellite framed language, it was hypothesized that the participants would allocate their attention to the sentences differently. When they read Turkish sentences, they were expected to pay more attention to path information to understand the meaning of the sentence while they were

expected to pay more attention to manner information in English sentences. At this point, the analysis that was extracted from the software for 20 sentences (10 from each language, see Appendix D) was checked and only the numerical data of the words that were tagged as manner information and path information was included in the SPSS analysis. As they had the necessary comparable data, they were kept and the other words in the sentences were ignored, for their numerical data was not relevant.

The sentences that were given in the pictures above are copied here with their manner and path information in order to present them as examples of how the abovementioned tagging was done for all sentences.

Ex. 1. Tagging for the 5th Turkish sentence:

Duru	kapıdan	geçti.
5.1	5.2	5.3
		(path)

Ex. 2. Tagging for the 4th English sentence

Harry	leapt	over	a	low	table.
4.1	4.2	4.3	4.4	4.5	4.6
					(manner) (path)

Ex. 3. Tagging for the 8th Turkish sentence

Bilge eve vardığında koşarak yukarı çıktı.

8.1	8.2	8.3	8.4	8.5	8.6
					(manner) (path)

Ex. 4. Tagging for the 10th English sentence

Then	he	limped	away	without	another	word.
10.1	10.2	10.3	10.4	10.5	10.6	10.7
						(manner) (path)

As explained, for these particular sentences, the words tagged as 5.3, 4.2 and 4.3, 8.4 and 8.6, and 10.3 and 10.4 were included in the data as the constituents which had the manner and path information. All other words were ignored.

Similar to the analysis in 1a, this analysis was also run twice, one for manner comparison and one for path comparison. To reveal the difference between the languages and to see if this difference is statistically significant or not, a Paired-samples t-test was conducted by defining manner and path information as the dependent variable and the languages as the independent variable. Before running a Paired-samples t-test, a test of normality was done for the group. It was seen that the assumption of normality was not violated, as assessed by Kolmogorov-Smirnov's test ($p = ,200$). Table 22 presents the results of the manner information comparison between Turkish to English and English to Turkish oral translations.

Table 22

Manner Information Comparison between Turkish to English and English to Turkish Translations

	N	$\bar{X}$	SD	t	df	p
English to Turkish Manner	66	21,30	5,62	- 4,960	65	,000
Turkish to English Manner	66	24,87	7,61			

Table 22 shows the manner information comparison between Turkish to English and English to Turkish oral translations by Turkish EFL learners. As can be inferred from the table, participants had a higher attention allocation to manner information when orally translating the sentences from Turkish to English ($M = 24,87$, $SD = 7,61$) as opposed to their attention allocation to manner information in English to Turkish translation sentences ($M = 21,30$, $SD = 5,62$), which presents a statistically significant difference of $t(65) = - 4,960$, $p = ,000$.

The exact same analysis was repeated for path information analysis in the sentences to be translated from one language to the other. Before running a Paired-samples t-test, a test of normality was run. It was seen that the assumption of normality was violated, as assessed by Kolmogorov-Smirnov's test ($p = ,001$). Therefore, a non-parametric test was resorted to and a Wilcoxon signed-rank test was conducted whose results are given in Table 23 to present the path information comparison between Turkish to English and English to Turkish oral translations.

Table 23

Path Information Comparison between Turkish to English and English to Turkish Oral Translations

		N	MEAN RANK	SUM OF RANKS	Z	p
Turkish to English Path –	Negative Ranks	4 ^a	13,00	52,00	- 6,730 ^b	,000
English to Turkish Path	Positive Ranks	62 ^b	34,82	2159,00		
	Ties	0 ^c				
	Total	66				

Legend: a. Turkish to English Path < English to Turkish Path

b. Turkish to English Path > English to Turkish Path

c. Turkish to English Path = English to Turkish Path

Table 23 presents the path information comparison between Turkish to English and English to Turkish oral translations by Turkish EFL learners. A Wilcoxon signed-rank test was conducted to determine the difference between path information in Turkish to English and English to Turkish oral translations. As can be seen in the table, 4 of the participants had a higher attention allocation duration of the path information in English to Turkish translation sentences while the rest 62 had a higher attention allocation duration of the path information in Turkish to English sentences. The test resulted in a statistically significant difference between participants' attention allocation durations of path information, $z = - 6,730^b$, $p = ,000$.

4.5.3.2. 3b. Manner and Path Information in Turkish and English Oral

Translations

The second part of the data analysis that was run for the third research question aimed to uncover whether manner and path information in participants' oral translations are statistically significantly different in their L1 (Turkish) and L2 (English). As Turkish is a verb framed language and English is a satellite framed language, it was expected from the participants that they would perceive the distinctive canonical motion event verbalization patterns in these two languages and they would translate the path verbs in Turkish as manner verbs in English and manner verbs in English as path verbs in Turkish as this is the pattern that is naturally required by the languages. In return, the number of path verbs in the oral translations that were done from English to Turkish would be higher whereas the number of manner verbs in the oral translations that were done from Turkish to English would be higher. To reveal this difference and to see if this difference is statistically significant or not, a Paired-samples t-test was conducted by defining manner and path as the dependent variables and the languages as the independent variables.

It is important to remember here that the data from all participants' oral translations were included in the analysis at this stage and no data was lost as it came from the transcriptions of the participants' voice recordings, which were manually done by the researcher. Therefore, 74 participants' data in total was analyzed for sub-question 3b and the results are given below.

Before the inferential statistics of the sub-question 3b, descriptive statistics are provided below. Additionally, it is aimed to give descriptive information about the neutral verbs and other usages by the participants as those were not included in the analyses. Therefore, they could be mentioned here. Figure 4 shows the entire data related to manner, path and neutral verbs and other usages by all participants in their oral translations from Turkish to English and from English to Turkish.

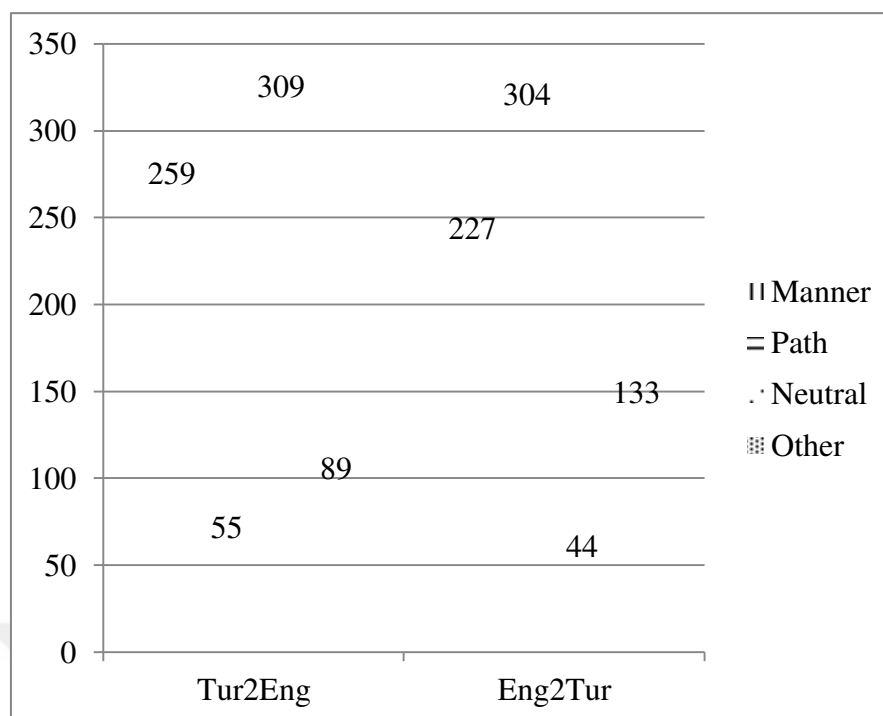


Figure 4. Verb Distribution in Turkish and English Oral Translations

Figure 4 shows the manner, path, neutral and other verbs that were used in their oral translations of motion events by the participants from Turkish to English and from English to Turkish. The participants produced 259 manner, 55 path, 309 neutral, and 89 other verbs in their from Turkish to English oral translations of motion events while they produced 227 manner, 304 path, 44 neutral and 133 other verbs in their from English to Turkish oral translations of motion events.

As mentioned, the aim of the sub-question 3b was to see if manner and path information were different in Turkish and English oral translations. Thus, firstly manner information in Turkish to English and English to Turkish oral translations was analyzed and compared. Secondly, path information in Turkish to English and English to Turkish oral translations was similarly analyzed and compared and the results are presented.

4.5.3.2.1. 3b. Manner Information in Turkish and English Oral Translations

Before running a Paired-samples t-test, a test of normality was run. It was seen that the assumption of normality was violated, as assessed by Kolmogorov-Smirnov's test ($p = ,017$). Therefore, a non-parametric test was resorted to and a Wilcoxon signed-rank test was conducted whose results are given in Table 24 to present the manner information comparison between Turkish to English and English to Turkish oral translations.

Table 24

Manner Information Comparison between Turkish to English and English to Turkish Oral Translations

		N	MEAN RANK	SUM OF RANKS	Z	p
Turkish to English Manner – English to Turkish Manner	Negative Ranks	25 ^a	32,16	804,00	- 1,411 ^b	,158
	Positive Ranks	38 ^b	31,89	1212,00		
	Ties	11 ^c				
	Total	74				

Legend: a. Turkish to English Manner < English to Turkish Manner

b. Turkish to English Manner > English to Turkish Manner

c. Turkish to English Manner = English to Turkish Manner

Table 24 presents the manner information comparison between Turkish to English and English to Turkish oral translations by Turkish EFL learners. A Wilcoxon signed-rank test was conducted to determine if the difference between manner information in Turkish to English and English to Turkish oral translations was statistically significant. As can be seen in the table, 25 of the participants had higher manner information in their English to Turkish oral translations while 38 of the participants had higher manner information in their Turkish to English oral translations. Remaining 11 participants had an equal number of manner information in both their oral translations. With these numbers, the test did not yield a statistically significant difference between participants' manner information, $z = - 1,411^b$, $p = ,158$.

4.5.3.2.2. 3b. Path Information in Turkish and English Oral Translations

The equivalent data analysis of manner information between Turkish to English and English to Turkish oral translations was also conducted for path information with the aim of revealing if this information in participants' oral translations was statistically significant in their oral translations. Before running a Paired-samples t-test, a test of normality was run. It was seen that the assumption of normality was violated, as

assessed by Kolmogorov-Smirnov's test ($p = ,013$). Therefore, a non-parametric test was used and a Wilcoxon signed-rank test was conducted. The results are given in Table 25 to present the path information comparison between Turkish to English and English to Turkish oral translations.

Table 25

Path Information Comparison between English to Turkish and Turkish to English Oral Translations

		N	MEAN RANK	SUM OF RANKS	Z	p
English to Turkish Path – Turkish to English Path	Negative Ranks	1 ^a	15,50	15,50	- 7,209 ^b	,000
	Positive Ranks	69 ^b	35,79	2469,50		
	Ties	4 ^c				
	Total	74				
Legend:		a. English to Turkish Path < Turkish to English Path				
		b. English to Turkish Path > Turkish to English Path				
		c. English to Turkish Path = Turkish to English Path				

Table 25 shows the path information comparison between English to Turkish and Turkish to English oral translations by Turkish EFL learners. A Wilcoxon signed-rank test was conducted to determine if the difference between path information in English to Turkish and Turkish to English oral translations was statistically significant. As can be seen in the table, 1 participant had higher path information in their Turkish to English oral translations while 69 of the participants had higher path information in their English to Turkish oral translations. Remaining 4 participants had an equal number of path information in both of their oral translations. The test resulted in a statistically significant difference between participants' path information, $z = - 7,209^b$, $p = ,000$.

Examples of manner and path information in Turkish to English and English to Turkish oral translations by the participants are presented below. Examples are given in an order so that one example from each proficiency level can be provided.

Examples from Turkish to English oral translations:

Ex. 1.

Original sentence: Duru koşarak Deniz'den uzaklaştı.

Sample oral translations into English:

Duru went away from the Deniz by running. (A2 level)

Duru go from the Deniz with running. (B1 level)

Duru – Duru got away from Deniz by running. (B2 level)

Duru ran away from Deniz. (C1 level)

Ex. 2.

Original sentence: Duru aceleyle içeri girdi.

Sample oral translations into English:

Duru go into immediately. (A2 level)

Duru entered in hurry. (B1 level)

Duru come inside suddenly. (B2 level)

Duru rushed in. (C1 level)

4.5.3.3. 3c. Manner and Path Information across English Proficiency Levels in

Turkish and English Oral Translations

The third sub-question of the third research question investigated the effect of English proficiency levels of the participants on their oral translations taking the manner and path information as the comparison point. The same level categorization that has been used so far was also applied to this analysis. Namely, there were four levels such as A2, B1, B2 and C1.

The initial hypothesis was that participants would orally translate the sentences from one language to the other in accordance with the canonical motion event verbalization pattern of the target language. In other words, it was expected that the higher their proficiency levels were, the further their oral translations were from the

source language and the closer to the target language. This required fewer manner verbs and more path verbs in the Turkish to English oral translations in lower proficiency levels and more manner verbs and fewer path verbs in higher proficiency levels. On the contrary, English to Turkish oral translations were expected to have fewer path verbs and more manner verbs in lower proficiency levels and more path verbs and fewer manner verbs in higher proficiency levels.

Before the inferential statistics, descriptive statistics for the results of this particular sub-question is given in Figure 5.

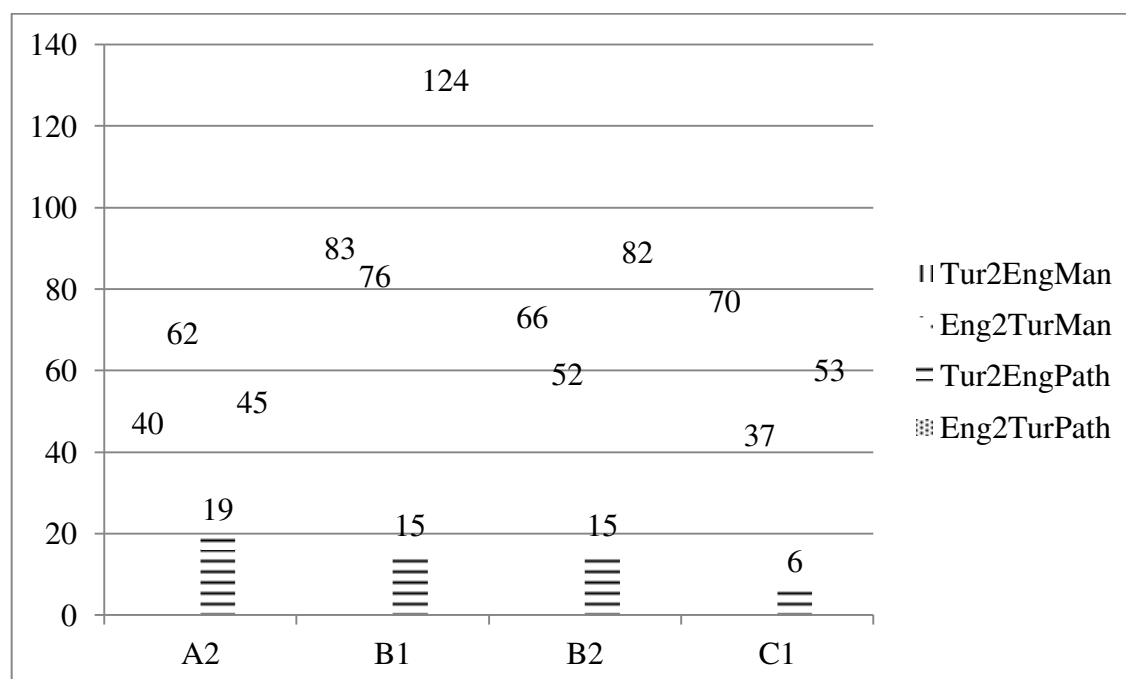


Figure 5. Verb Distribution in Oral Translations across English Proficiency Levels

Figure 5 shows participants' manner and path verb distributions in their oral translations from Turkish to English and English to Turkish. While A2 level participants produced 40 manner verbs in their Turkish to English oral translations, they produced 62 manner verbs in their English to Turkish oral translations. As for path verbs, they had 19 in Turkish to English and 45 in English to Turkish oral translations. B1 level participants produced 83 manner verbs in their Turkish to English oral translations whereas they produced 76 manner verbs in their English to Turkish oral translations. For path verbs, they produced 15 in Turkish to English and 124 in English to Turkish oral translations. As for B2 level, 66 manner verbs emerged in participants' Turkish to English oral translations in comparison to 52 manner verbs in their English to Turkish oral translations. B2 level participants produced 15 path verbs in their Turkish to

English oral translations and 82 in their English to Turkish oral translations. Finally, C1 level participants produced 70 manner verbs in their Turkish to English oral translations while they produced 37 in their English to Turkish oral translations. As for path verbs, they had 6 in Turkish to English and 53 in English to Turkish oral translations.

The highest frequency of motion verbs came from B1 level participants as they had the highest number of participants ($n = 29$). Nonetheless, the rate between the frequencies should be checked rather than the frequencies themselves. Therefore, it can be seen that the number of the manner verbs in Turkish to English oral translations decreased as the proficiency levels increase. Similarly, the number of the path verbs in English to Turkish oral translations increased along with the proficiency levels which overall presented a profile in line with the expected results.

For the inferential analysis, as the aim of this sub-research question was to see if manner and path information were different across proficiency levels in Turkish and English oral translations, a One-way ANOVA was utilized by defining manner and path verbs as the dependent variable and the proficiency levels (A2, B1, B2, C1) as the independent variables. This analysis was run four times. Firstly, Turkish to English manner results; secondly, English to Turkish manner results; thirdly, Turkish to English path results; and finally English to Turkish path results were analyzed and presented.

For the first analysis, as the data violated the normality, as assessed by Shapiro-Wilk test ($p = ,241$ for A2, $p = ,145$ for B1, $p = ,001$ for B2, $p = ,217$ for C1), the One-way ANOVA was replaced with a Kruskal-Wallis Test. The results are given in Table 26.

Table 26

Manner Verb Usage in Turkish to English Oral Translations across English Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	24,41	30,098	3	,000
B1	29	31,17			
B2	17	42,97			
C1	11	65,95			
Total	74				

Table 26 displays the results of the analysis that was conducted to see if manner verb usage difference in Turkish to English oral translations across proficiency levels was statistically significant. As the normality criterion was not met, a non-parametric test, Kruskal-Wallis, was conducted to determine if there were differences in manner information between groups that differed in their level of English proficiency: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). The result showed a statistically significant difference between the different levels of proficiency, $\chi^2(3) = 30,098$, $p = ,000$ with a mean rank manner verb usage of 24,41 for A2, 31,17 for B1, 42,97 for B2, and 65,95 for C1.

For the second analysis, as the data again violated the normality, as assessed by Shapiro-Wilk test ($p = ,181$ for A2, $p = ,132$ for B1, $p = ,014$ for B2, $p = ,001$ for C1), the One-way ANOVA was replaced and a Kruskal-Wallis Test was conducted. The results are given in Table 27.

Table 27

Manner Verb Usage in English to Turkish Oral Translations across English Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	44,00	5,155	3	,161
B1	29	31,67			
B2	17	36,32			
C1	11	44,64			
Total	74				

Table 27 presents the results of the analysis that was conducted to see if manner verb usage was different in English to Turkish oral translations across proficiency levels and if this result was statistically significant. As the distribution of the data was not normal, a Kruskal-Wallis was conducted to determine if there were differences in manner information between groups in reference to English proficiency levels: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). The result did not yield a statistically significant difference across levels of proficiency, $\chi^2(3) = 5,155$, $p = ,161$ with a mean rank manner verb usage of 44,00 for A2, 31,67 for B1, 36,32 for B2, and 44,64 for C1.

For the third analysis, which was conducted to see if path verb usage in Turkish to English oral translations across proficiency levels was statistically significantly different, a test of normality was initially conducted. As the data distribution was not normal, as assessed by Shapiro-Wilk test ($p = ,023$ for A2, $p = ,000$ for B1, $p = ,006$ for B2, $p = ,000$ for C1), the One-way ANOVA was replaced and a Kruskal-Wallis Test was run. The results are given in Table 28.

Table 28

Path Verb Usage in Turkish to English Oral Translations across English Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	46,09	5,370	3	,147
B1	29	33,09			
B2	17	39,41			
C1	11	32,91			
Total	74				

Table 28 shows the results of the analysis that was conducted to see if path verb usage difference in Turkish to English oral translations across proficiency levels was statistically significant. As the distribution of the data was not normal, a Kruskal-Wallis was conducted as a non-parametric test to determine if the difference in path information between groups in reference to their English proficiency levels was significant: A2 ($n = 17$), B1 ($n = 29$), B2 ($n = 17$) and C1 ($n = 11$). The result did not yield a statistically significant difference across levels of proficiency, $\chi^2(3) = 5,370$, $p = ,147$ with a mean rank path verb usage of 46,09 for A2, 33,09 for B1, 39,41 for B2, and 32,91 for C1.

For the final analysis, as the test of normality was not violated, as assessed by Shapiro-Wilk test ($p = ,371$ for A2, $p = ,056$ for B1, $p = ,677$ for B2, $p = ,099$ for C1), a One-way ANOVA was conducted. The descriptive results are given in Table 29 while inferential results are given in Table 30.

Table 29

The Descriptive Values of Proficiency Levels

LEVEL	N	$\bar{x}$	SD
A2	17	2,64	1,45
B1	29	4,27	1,53
B2	17	4,82	1,55
C1	11	4,81	1,16
Total	74	4,10	1,66

As can be seen in Table 29 there were 17 participants in levels A2 and B2, 29 participants in B1 level and 11 participants in C1 level. Table 30 shows the inferential results of the One-way ANOVA.

Table 30

Path Verb Usage in English to Turkish Oral Translations across English Proficiency Levels

PATH	SUM OF SQUARES	df	MEAN SQUARE	F	p
Between Groups	51,353	3	17,11	7,894	,000
Within Groups	151,782	70	2,16		
Total	203,135	73			

Table 30 presents the results of the analysis that was conducted to see if the Path verb usage in English to Turkish oral translations across English proficiency levels was statistically significant when compared across proficiency levels. A one-way ANOVA was run. Participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). Data was normally distributed for each group, as assessed by Shapiro-Wilk test (p = ,371 for A2, p = ,056 for B1, p = ,677 for B2, p = ,099 for C1); and there was homogeneity of variances, as assessed by Levene's test of homogeneity of variances (p

= ,465). Path verb frequency was low for A2 ($\bar{x} = 2,64$, $SD = 1,45$), and similar for B1 ($\bar{x} = 4,27$, $SD = 1,53$), for B2 ($\bar{x} = 4,82$, $SD = 1,55$) and for C1 ($\bar{x} = 4,81$, $SD = 1,16$). The analysis for path verb usage between these proficiency levels resulted in a statistically significant difference, $F(3,70) = 7,894$, $p = ,000$.

4.5.3.4. 3d. SD1 and SD2 in Turkish and English Oral Translations

The final sub-question of the third research question was to show if SD1 and SD2 were different in oral translations of the participants from one language to the other. The same coding and analysis pattern which were used in analysis 1d were also applied to this sub-question.

It was assumed at this stage that Turkish speakers would omit manner information in their English to Turkish oral translations as Turkish is a verb framed language whose speakers tend to omit manner information to avoid more cognitive load. On the contrary, participants were expected to add manner information to their Turkish to English oral translations as English is a satellite framed language which would require its speakers to use manner verbs to express motion events even if they eliminate path satellites especially in lower proficiency levels. This expectancy would result in higher SD2 in English while SD1 would be higher in Turkish. In order to test this claim, oral translations of the participants from Turkish to English and from English to Turkish were analyzed in a comparative fashion. Firstly, their SD1 information in their Turkish to English and English to Turkish oral translations was compared. Secondly, the same analysis was applied to SD2 information in Turkish to English and English to Turkish oral translations.

Before the inferential analysis results are given, some descriptive results are shown in Figure 6.

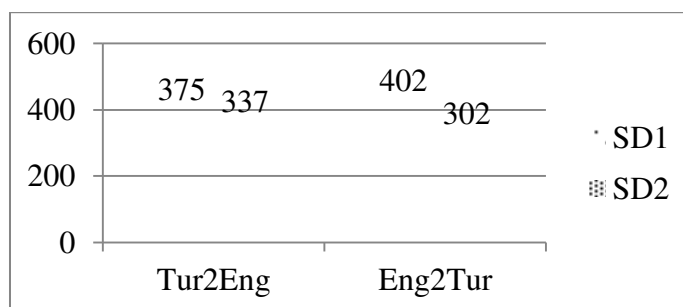


Figure 6. Semantic Density Results for Turkish and English Oral Translations

Figure 6 displays the descriptive results of semantic density analysis in oral translations. It is understood that the participants produced more SD1 sentences in both Turkish to English and English to Turkish oral translations than SD2 sentences. They had $n = 375$ SD1 and $n = 337$ SD2 sentences in their Turkish to English oral translations while they produced $n = 402$ SD1 and $n = 302$ SD2 sentences in their English to Turkish oral translations. The inferential analysis results are presented below.

For this part of the analysis, a Paired-samples t-test was designed by defining SD1 and SD2 as the dependent variables while the languages were independent variables. Before the analysis, a test of normality was conducted and it was seen that the assumption of normality was violated, as assessed by Kolmogorov-Smirnov's test ($p = ,049$). Therefore, a Wilcoxon signed-rank test was conducted whose results are given in Table 31 to present the SD1 information comparison between English to Turkish and Turkish to English oral translations.

Table 31

SD1 Comparison in Turkish and English Oral Translations

		N	MEAN RANK	SUM OF RANKS	Z	p
English to Turkish –	Negative Ranks	25 ^a	30,08	752,00	- 1,405 ^b	,160
Turkish to English	Positive Ranks	36 ^b	31,64	1139,00		
	Ties	13 ^c				
	Total	74				

Legend: a. English to Turkish SD1 < Turkish to English SD1

b. English to Turkish SD1 > Turkish to English SD1

c. English to Turkish SD1 = Turkish to English SD1

Table 31 shows the SD1 information comparison between English to Turkish and Turkish to English oral translations by Turkish EFL learners. A Wilcoxon signed-rank test was conducted to decide if the difference between SD1 information in English to Turkish and Turkish to English oral translations was statistically significant. As can

be seen in the table, 25 participants had higher SD1 information in their Turkish to English oral translations while 36 of the participants had higher SD1 information in their English to Turkish oral translations. Remaining 13 participants had an equal number of SD1 information in both of their oral translations. Therefore, the test did not yield a statistically significant result between participants' SD1 information, $z = -1,405^b$, $p = ,160$.

The exact same analysis was conducted for SD2 information in the oral translations of the participants. For SD2 analysis, a test of normality was initially conducted which proved that the assumption of normality was violated, as assessed by Kolmogorov-Smirnov's test ($p = ,004$). Therefore, a Wilcoxon signed-rank test was run whose results are given in Table 32.

Table 32

SD2 Comparison in Turkish and English Oral Translations

		N	MEAN RANK	SUM OF RANKS	Z	p
Turkish to English –	Negative Ranks	26 ^a	31,10	808,50	- 1,747 ^b	,081
English to Turkish	Positive Ranks	39 ^b	34,27	1336,50		
	Ties	9 ^c				
	Total	74				

Legend: a. Turkish to English SD2 < English to Turkish SD2

b. Turkish to English SD2 > English to Turkish SD2

c. Turkish to English SD2 = English to Turkish SD2

Table 32 presents the SD2 information comparison between Turkish to English and English to Turkish oral translations by Turkish EFL learners. A Wilcoxon signed-rank test was conducted to determine if the difference between SD2 information in Turkish to English and English to Turkish oral translations was statistically significant. As can be seen in the table, 26 participants had higher SD2 information in their English to Turkish oral translations while 39 of the participants had higher SD2 information in

their Turkish to English oral translations. Remaining 9 participants had an equal number of SD2 information in both their oral translations. Therefore, the test did not result in a statistically significant difference between participants' SD2 information, $z = -1,747^b$, $p = ,081$.

Examples of SD1 and SD2 information in the oral translations of Turkish EFL learners from their L1 to L2 and L2 to L1 are provided below. Semantic density information is given in brackets. English proficiency levels of the participants are also provided in brackets. The coding provided for the examples here (SD1 and SD2) can be followed from Table 3.

Example from Turkish sentences:

Original sentence: Duru kapıdan geçti. (SD1)

Expected translation: Duru walked through the door. (SD2)

Ex. 1. Duru passed from the door. (A2 level) (SD1)

Ex. 2. Duru crossed the door. (B1 level) (SD1)

Ex. 3. Duru went through the door. (B2 level) (SD1)

Ex. 4. Duru walked through the door. (C1 level) (SD2)

Example from English sentences:

Original sentence: Dumbledore walked into the sitting room. (SD2)

Expected translation: Dumbledore oturma odasına girdi. (SD1)

Ex. 1. Dumbledore oturma odasına yürüdü. (A2 level) (SD2)

Ex. 2. Dumbledore oturma odasına doğru yürüdü. (B1 level) (SD2)

Ex. 3. Dumbledore oturma odasına girdi. (B2 level) (SD1)

Ex. 4. Dumbledore oturma odasına girdi. (C1 level) (SD1)

4.6. Additional Findings

For the present study, the first and the third research questions had two aims. The perceptions and expressions of motion events in Turkish and English were searched simultaneously and the results have been presented with various analyses so far. At the end of these analyses, two more sub-research questions for each research question emerged. The first four sub-questions of the first research question analyzed and presented the data with various descriptive and inferential analyses. However, for these analyses the data which came from the oral descriptions of the participants was not analyzed in terms of being correct and incorrect or being acceptable or not, which would serve better to the aims of this dissertation. Therefore, two final analyses were conducted for the first research question and they were named as 1e and 1f as can be seen in Table 5 and are also given below.

1e. Is there a relationship between correct and incorrect English oral descriptions across proficiency levels in English?

1f. Is there a relationship between not acceptable, acceptable, and expected English oral descriptions across proficiency levels in English?

Data from oral descriptions in English by the participants answered sub-questions both 1e and 1f at this point. The levels of the participants were taken as the reference point for comparison similar to 1c. This format of additional sub-questions was also applied to the third research question as the very last statistical analyses of this dissertation. The sub-research questions of the third research question are as follows:

3e. Is there a relationship between correct and incorrect oral translations across proficiency levels in English?

3f. Is there a relationship between not acceptable, acceptable, and expected oral translations across proficiency levels in English?

Data from oral translations from Turkish to English and from English to Turkish by the participants answered sub-questions both 3e and 3f at this point. The levels of the participants were taken as the reference point for comparison similar to 3c.

4.6.1. 1e. Correct and Incorrect Oral Descriptions in English across Proficiency Levels

The analysis that was conducted for sub-research question 1b was done with the sole purpose of presenting a profile of manner and path verb usages in the oral descriptions of the participants in their L1 (Turkish) and L2 (English) without assessing them in terms of being correct or incorrect. This analysis, on the other hand, aimed to check for correct and incorrect motion verb usages in the oral descriptions of Turkish EFL learners in their L2 and compare them in reference to their proficiency levels.

The coding that was used for this analysis can be seen in Table 3. Turkish oral descriptions of motion events by the participants were not included in this analysis as Turkish was the native language of the participants. All English oral descriptions were tagged as correct (+) or incorrect (-) and later compared across proficiency levels. An oral description coded as “+” meant that the sentence was grammatically correct while “-” meant the opposite. Table 3 presents examples.

For the result of this particular analysis it was hypothesized that participants with a lower level of proficiency would produce more incorrect oral descriptions of motion verbs while participants with a higher level of proficiency would produce more correct oral descriptions of motion verbs in their target language.

Before the inferential statistics, two pieces of descriptive statistics for the results of this particular analysis is given in Figure 7 and Figure 8.

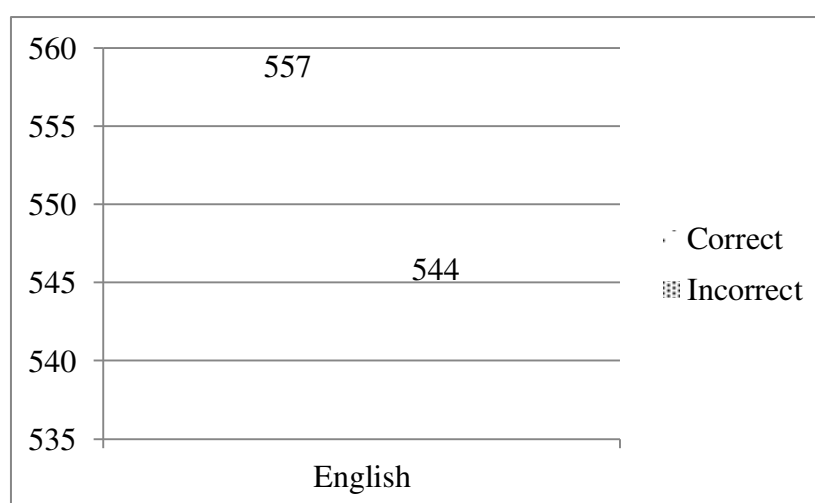


Figure 7. Correct and Incorrect Usages of Motion Verbs in English

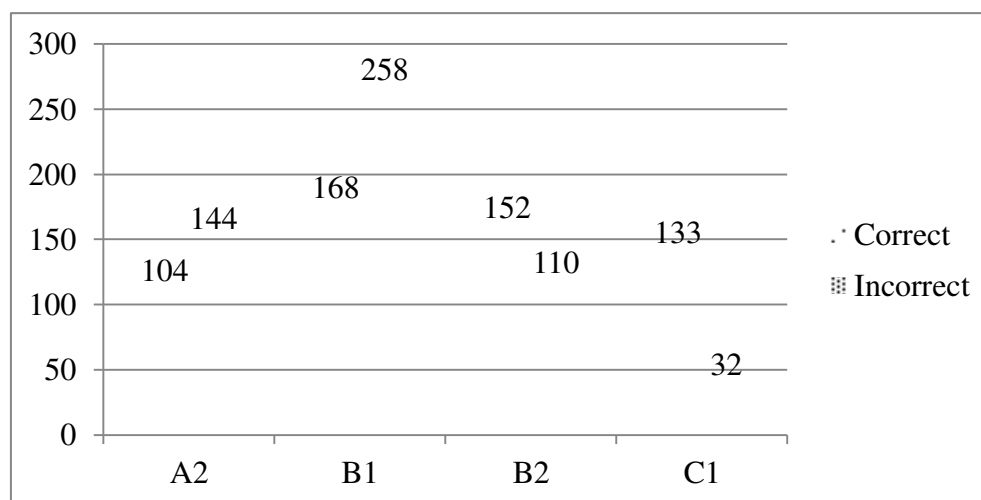


Figure 8. Correct and Incorrect Usages of Motion Verbs across Proficiency Levels in English

Figure 7 shows all correct and incorrect usages of motion verbs in English oral descriptions of the participants. According to the figure, the participants produced 557 correct and 544 incorrect usages of motion verbs in their English oral descriptions. Figure 8 presents the results of the same descriptive analysis in terms of proficiency levels. According to the figure, participants whose English proficiency levels were A2 produced 104 correct and 144 incorrect usages of motion verbs while participants whose English proficiency levels were B1 produced 168 correct and 258 incorrect usages of motion verbs in their English oral descriptions. Participants with B2 level proficiency had 152 correct and 110 incorrect usages whereas those with C1 level finally had 133 correct and 32 incorrect usages of motion verbs. It can be seen from the descriptive statistics that the frequencies of correct and incorrect usages differed from two lower proficiency levels to the two higher.

As the aim of the sub-question 1e was to reveal if correct and incorrect motion verb usages in English oral descriptions of Turkish EFL learners were different across proficiency levels in English, a One-way ANOVA was utilized by defining correct and incorrect usages as the dependent variables and the proficiency levels (A2, B1, B2, C1) as the independent variables. Similar to the analysis pattern that has been followed so far, this analysis was also held at two stages. Firstly, correct usage results were analyzed and presented. Then, incorrect usage results are given.

For this current analysis, participants were in four groups: A2 ($n = 17$), B1 ($n = 29$), B2 ($n = 17$) and C1 ($n = 11$). However, data was not normally distributed for each

group, as assessed by Shapiro-Wilk test ($p = ,584$ for A2, $p = ,220$ for B1, $p = ,089$ for B2, $p = ,026$ for C1). Therefore, the One-way ANOVA was replaced by a non-parametric test and a Kruskal-Wallis Test was conducted. The results are given in Table 33.

Table 33

Correct Motion Verb Usage Results across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	31,26	19,892	3	,000
B1	29	28,91			
B2	17	43,65			
C1	11	60,27			
Total	74				

Table 33 shows the results of the analysis that was conducted to see if the correct motion verb usages in English oral descriptions of the participants were statistically significant when compared across proficiency levels. As the normality criterion was not met initially, a non-parametric test was conducted. A Kruskal-Wallis test resulted in a statistically significant difference in correct motion verb usages in the oral descriptions of the participants, $\chi^2(3) = 19,892$, $p = ,000$, with a mean rank correct motion verb usage of 31,26 for A2, 28,91 for B1, 43,65 for B2, and 60,27 for C1.

For the second half of the analysis, the same procedure was applied to incorrect usages of motion verbs in English oral descriptions of the participants. Participants were once again in four groups: A2 ($n = 17$), B1 ($n = 29$), B2 ($n = 17$) and C1 ($n = 11$). Similar to the first part of 1e, data was not normally distributed for each group, as assessed by Shapiro-Wilk test ($p = ,196$ for A2, $p = ,135$ for B1, $p = ,130$ for B2, $p = ,026$ for C1). Therefore, the One-way ANOVA was replaced by a Kruskal-Wallis Test. The results are given in Table 34.

Table 34

Incorrect Motion Verb Usage Results across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	42,85	17,051	3	,001
B1	29	45,40			
B2	17	32,68			
C1	11	15,86			
Total	74				

Table 34 presents the results of the analysis that was done to reveal whether the incorrect motion verb usages in English oral descriptions of the participants were statistically significant across their proficiency levels. As the normality was violated, a non-parametric test was conducted instead of a One-Way ANOVA. A Kruskal-Wallis test resulted in a statistically significant difference in incorrect motion verb usages in the oral descriptions of the participants, $\chi^2(3) = 17,051$, $p = ,001$, with a mean rank incorrect motion verb usage of 42,85 for A2, 45,40 for B1, 32,68 for B2, and 15,86 for C1.

Examples of correct and incorrect motion verb usages by participants in their L2 are given below. One example is presented from each proficiency level. Motion verbs are written in bold.

Examples of correct usages of motion verbs:

Ex. 1. She is **walking**. (A2 level)

Ex. 2. She is **running** upstairs. (B1 level)

Ex. 3. She is **crawling** out of the building. (B2 level)

Ex. 4. She is **jumping** out of the apartment. (C1 level)

Examples of incorrect usages of motion verbs:

Ex. 1. She is **came** in the door. (A2 level)

Ex. 2. She is **entering** the building by **jumping**. (B1 level)

Ex. 3. She is **going** across the road by **crawling**. (B2 level)

Ex. 4. She has just **entered** a building by **running**. (C1 level)

4.6.2. 1f. Not Acceptable, Acceptable, and Expected Oral Descriptions in English across Proficiency Levels

The analysis that was presented in 1e checked for correct and incorrect motion verb usages in the oral descriptions of Turkish EFL learners in their L2 and compared them according to their proficiency levels. This current analysis deals with English oral descriptions by the participants in terms of them being not acceptable, acceptable or expected in comparison to the expected oral descriptions that were set at the very beginning of the study as the most natural way of describing the specific motion events in the videos.

The coding that was used for this analysis can be seen in Table 3. Similar to 1e, Turkish oral descriptions of motion events by the participants were not included in this analysis as Turkish was the native language of the participants. All English oral descriptions were tagged as not acceptable (NA), acceptable (A) or expected (E) and later compared across levels. An oral description coded as “NA” meant that the sentence was grammatically or pragmatically incorrect and did not make sense. If a sentence was coded as “A”, it meant that the sentence may be grammatically incorrect, yet it conveys the meaning and the motion verb is somehow described in the target language. Finally, if a sentence is coded as “E”, it meant that it is grammatically and pragmatically correct and it is formed as the expected version that was set prior as well as conveying the meaning. There may have been minor grammatical mistakes. Table 3 presents examples.

For the result of this particular analysis it was hypothesized that participants with a lower level of proficiency would produce more not acceptable oral descriptions of motion verbs while participants with a higher level of proficiency would produce more expected oral descriptions of motion verbs in their target language. Participants with proficiency levels in between would present a data profile which has some features from both ends.

Before the inferential statistics, two pieces of descriptive statistics for the results of this particular analysis is given in Figure 9 and Figure 10.



Figure 9. Not Acceptable, Acceptable and Expected Usages of Motion Verbs in English

Figure 9 presents the descriptive statistics of NA, A, and E usages of motion verbs in English. It also shows some data that was counted as empty when participants remained silent during the oral description of a motion event, for they lacked the required linguistic competence or when they made a statement such as “I do not know”. According to the figure, the participants produced 447 not acceptable sentences, 512 acceptable sentences and 132 expected sentences. There were 15 empty occurrences.

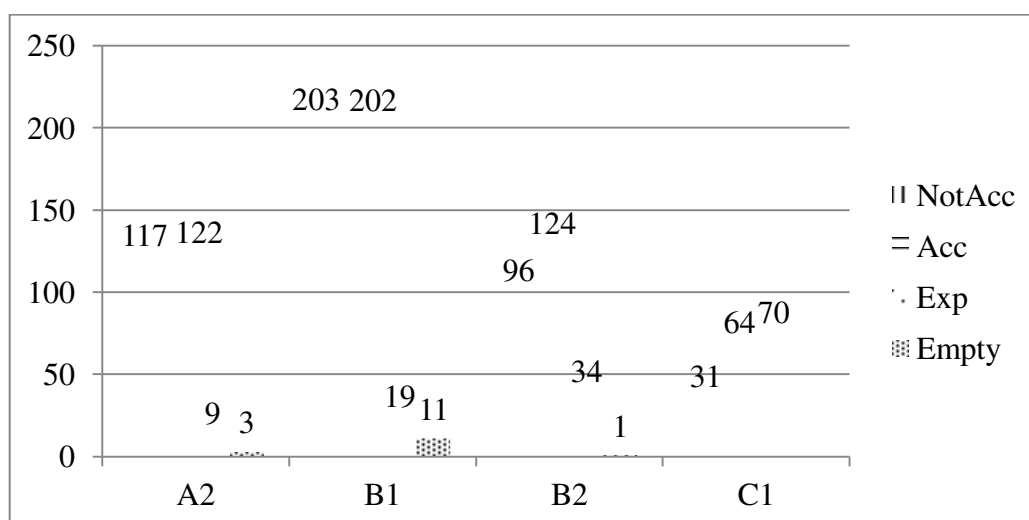


Figure 10. Not Acceptable, Acceptable and Expected Usages of Motion Verbs across Proficiency Levels in English

Figure 10 shows the results in terms of proficiency levels. According to the figure, participants with A2 level proficiency produced 117 not acceptable, 122 acceptable, 9 expected and 3 empty sentences. B1 level participants had 203 not acceptable, 202 acceptable, 19 expected and 11 empty sentences. Participants whose English proficiency level was B2 produced 96 not acceptable, 124 acceptable, 34 expected sentences and 1 empty sentence. Finally, C1 level participants had 31 not acceptable, 64 acceptable, 70 expected sentences. The increase in the number of expected sentences is noteworthy.

For the inferential analysis, since the aim of the sub-question 1f was to reveal if not acceptable, acceptable and expected motion verb usages in English oral descriptions of Turkish EFL learners were different across proficiency levels in English, a One-way ANOVA was designed by defining not acceptable, acceptable and expected usages as the dependent variables and the proficiency levels (A2, B1, B2, C1) as the independent variables. Similar to the analysis pattern that has been followed so far, this analysis was run in three stages. Firstly, not acceptable usage results were analyzed and presented. Secondly, acceptable usage results were analyzed and presented. Finally, expected usage results were analyzed and presented.

For this current analysis, participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). However, data was not normally distributed for each group, as assessed by Shapiro-Wilk test ($p = ,143$ for A2, $p = ,228$ for B1, $p = ,489$ for B2, $p = ,029$ for C1). Therefore, the One-way ANOVA was replaced by a non-parametric test and a Kruskal-Wallis Test was done. The results are given in Table 35.

Table 35

Not Acceptable Motion Verb Usage Results across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	41,24	9,653	3	,022
B1	29	43,00			
B2	17	35,50			
C1	11	20,32			
Total	74				

Table 35 shows the results of the analysis that was conducted to see if the not acceptable motion verb usages in English oral descriptions of Turkish EFL learners were statistically significant when compared across proficiency levels. As the normality criterion was not met prior to the analysis, a non-parametric test was conducted. A Kruskal-Wallis test yielded a statistically significant difference in not acceptable motion verb usages in the oral descriptions of the participants, $\chi^2(3) = 9,653$, $p = ,022$, with a mean rank not acceptable motion verb usage of 41,24 for A2, 43,00 for B1, 35,50 for B2, and 20,32 for C1.

For the second part of the analysis, the same procedure was repeated for acceptable usages of motion verbs in English oral descriptions of the participants. Participants were once again in four groups: A2 ($n = 17$), B1 ($n = 29$), B2 ($n = 17$) and C1 ($n = 11$). This time, the normality was not violated, as assessed by Shapiro-Wilk test ($p = ,483$ for A2, $p = ,167$ for B1, $p = ,168$ for B2, $p = ,786$ for C1). Therefore, a One-way ANOVA was conducted. The descriptive results are given in Table 36 while One-way ANOVA results are in Table 37.

Table 36

The Descriptive Values of Proficiency Levels

Level	N	$\bar{x}$	SD
A2	17	7,17	3,97
B1	29	6,96	3,32
B2	17	7,29	3,38
C1	11	5,81	2,56
Total	74	6,91	3,36

As can be seen in Table 36, there were 17 participants in levels A2 and B2, 29 participants in B1 level and 11 participants in C1 level. Table 37 shows the results of One-way ANOVA as inferential analysis.

Table 37

One-way ANOVA Results for Acceptable Motion Verb Usage across Proficiency Levels

MANNER	SUM OF SQUARES	df	MEAN SQUARE	F	p
Between Groups	16,91	3	5,63	,487	,693
Within Groups	810,60	70	11,58		
Total	827,51	73			

Table 37 presents the results of the analysis that was conducted to see if the acceptable motion verb usages in English oral descriptions of the participants were statistically significant when compared across proficiency levels. A one-way ANOVA was run. Participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). Data was normally distributed for each group, as assessed by Shapiro-Wilk test (p = ,483 for A2, p = ,167 for B1, p = ,168 for B2, p = ,786 for C1); and there was homogeneity of variances, as assessed by Levene's test of homogeneity of variances (p = ,267). Acceptable motion verb usage frequency was similar for A2 ($\bar{x}$ = 7,17, SD = 3,97), for B1 ($\bar{x}$ = 6,96, SD = 3,32), for B2 ($\bar{x}$ = 7,29, SD = 3,38) and for C1 ($\bar{x}$ = 5,81, SD = 2,56). Therefore, the differences between these proficiency levels was not statistically significant, $F(3,70) = ,487$, p = ,693.

For the final part of the analysis, the same procedure was applied to expected usages of motion verbs in English oral descriptions of the participants. Participants were once again in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). Similar to the first part of 1f, normality was proven to be violated, as assessed by Shapiro-Wilk test (p = ,000 for A2, p = ,000 for B1, p = ,001 for B2, p = ,227 for C1). Therefore, the One-way ANOVA was replaced by a Kruskal-Wallis Test. The results are given in Table 38.

Table 38

Expected Motion Verb Usage Results across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	29,06	25,275	3	,000
B1	29	30,84			
B2	17	40,68			
C1	11	63,18			
Total	74				

Table 38 displays the results of the analysis that was conducted to see if the expected motion verb usages in English oral descriptions of the participants were statistically significant across their proficiency levels. As the normality was violated, a non-parametric test was conducted instead of a One-Way ANOVA. A Kruskal-Wallis test showed that there was a statistically significant difference in expected motion verb usages in the oral descriptions of the participants, $\chi^2(3) = 25,275$, $p = ,000$, with a mean rank expected motion verb usage of 29,06 for A2, 30,84 for B1, 40,68 for B2, and 63,18 for C1.

Examples of NA, A, and E motion verb usages by participants in their target language are given below. One example is presented from each proficiency level. Motion verbs are written in bold.

Examples of NA usages of motion verbs:

Ex. 1. She is **going** into by **creeping** from door. (A2 level)

Ex. 2. She is **getting** the house by **dancing**. (B1 level)

Ex. 3. The woman **left** the building by **running**. (B2 level)

Ex. 4. She is **entering** the apartment by **crawling**. (C1 level)

Examples of A usages of motion verbs:

Ex. 1. She is **crawling** through the door. (A2 level)

Ex. 2. She is trying to **go** inside the apartment. (B1 level)

Ex. 3. The woman **gets** out **crawling**. (B2 level)

Ex. 4. She is **going** into the apartment. (C1 level)

Examples of E usages of motion verbs:

Ex. 1. She is **walking** down the stairs. (A2 level)

Ex. 2. She **crawled** out of the building. (B1 level)

Ex. 3. She is **running** out of the building. (B2 level)

Ex. 4. She is **jumping** down the stairs. (C1 level)

4.6.3. 3e. Correct and Incorrect Oral Translations across Proficiency Levels in

English

The analysis for sub-research question 3b was run with the purpose of having a general profile of manner and path verb usages in the oral translations of the participants in their first and second languages without assessing them as correct or incorrect. This current analysis, on the contrary, aimed to evaluate correct and incorrect motion verb usages in the oral translations of Turkish EFL learners in their L2 and present a comparison between their proficiency levels.

The coding that was used for this analysis can be seen in Table 3 along with the others. All oral translations were tagged as correct (+) or incorrect (-) and later compared across levels. An oral translation coded as “+” meant that the sentence was grammatically correct while “-” meant that it was not. Table 3 presents examples.

For the result of this particular analysis it was hypothesized that participants with a lower level of proficiency would produce more incorrect oral translations of motion verbs while participants with a higher level of proficiency would produce more correct oral translations of motion verbs.

Before the inferential statistics, two pieces of descriptive statistics for the results of this particular analysis is given in Figure 11 and Figure 12.

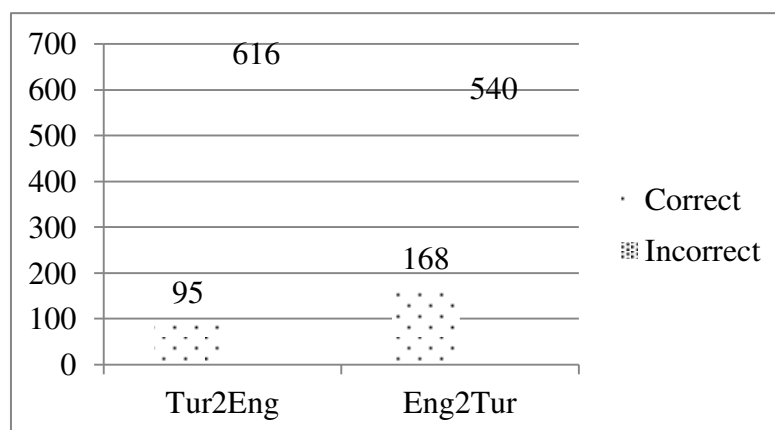


Figure 11. Correct and Incorrect Oral Translations of Motion Verbs

Figure 11 shows all correct and incorrect oral translations of motion verbs by the participants. According to the figure, the participants produced 95 correct and 616 incorrect oral translations of motion verbs in their Turkish to English oral translations while they produced 168 correct and 540 incorrect oral translations of motion verbs in their English to Turkish oral translations.

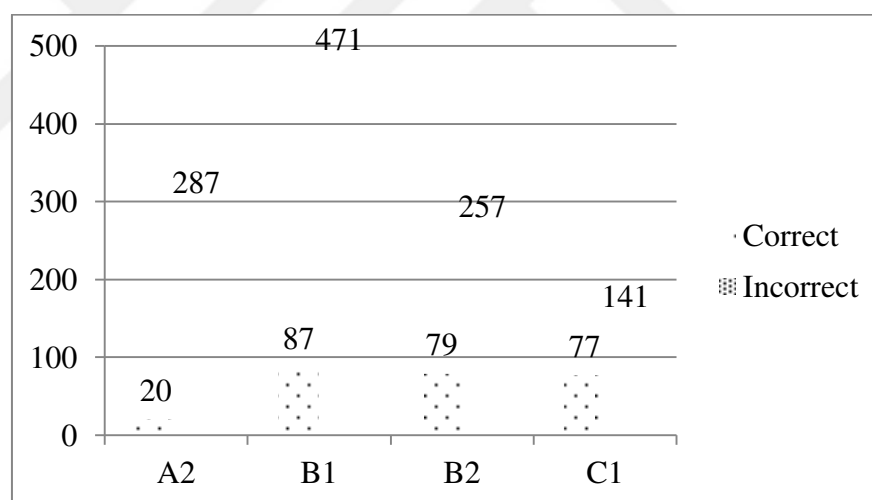


Figure 12. Correct and Incorrect Oral Translations of Motion Verbs across Proficiency Levels in English

Figure 12 presents the results of the same descriptive analysis in terms of proficiency levels. According to the figure, participants with A2 level English proficiency produced 20 correct and 287 incorrect oral translations of motion verbs while participants with B1 level English proficiency produced 87 correct and 471 incorrect oral translations of motion verbs in their oral translations. Participants whose proficiency levels were B2 had 79 correct and 257 incorrect oral translations whereas

those participants whose proficiency levels were C1 had 77 correct and 141 incorrect oral translations of motion verbs. It can be seen from the descriptive statistics that the frequencies of incorrect oral translations outnumbered the frequencies of correct oral translations for all proficiency levels.

The aim of the sub-question 3e was to see whether or not correct and incorrect oral translations by Turkish EFL learners were different across their proficiency levels in English. Therefore, a One-way ANOVA was designed by defining correct and incorrect oral translations as the dependent variables and the proficiency levels (A2, B1, B2, C1) as the independent variables. This analysis was held at two stages such as the correct oral translation results and incorrect oral translation results.

In this analysis, participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). However, data was not normally distributed for each group, as assessed by Shapiro-Wilk test ($p = ,012$ for A2, $p = ,050$ for B1, $p = ,073$ for B2, $p = ,286$ for C1). Therefore, the One-way ANOVA was replaced by a non-parametric test and a Kruskal-Wallis Test was run. The results are given in Table 39.

Table 39

Correct Oral Translation Results across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	14,79	41,147	3	,000
B1	29	34,48			
B2	17	48,24			
C1	11	63,95			
Total	74				

Table 39 shows the results of the analysis that was conducted to see if the correct oral translations of the participants were statistically significant when compared across proficiency levels in English. As the normality criterion was not met, a non-parametric test was run. A Kruskal-Wallis test resulted in a statistically significant difference in correct oral translations of the participants, $\chi^2(3) = 41,147$, $p = ,000$, with a mean rank correct oral translations of 14,79 for A2, 34,48 for B1, 48,24 for B2, and 63,95 for C1.

For the second part of the analysis, the same procedure was applied to incorrect oral translations of the participants. They were once again in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). Similar to the first part of 3e, data was not normally distributed for each group, as assessed by Shapiro-Wilk test (p = ,018 for A2, p = ,001 for B1, p = ,021 for B2, p = ,304 for C1). Therefore, the One-way ANOVA was replaced by a Kruskal-Wallis Test. The results are given in Table 40.

Table 40

Incorrect Oral Translation Results across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	46,82	18,062	3	,000
B1	29	43,22			
B2	17	32,71			
C1	11	15,41			
Total	74				

Table 40 displays the results of the analysis that was run to see if the incorrect oral translations of the participants were statistically significant across their proficiency levels in English. As the normality was violated, a non-parametric test was conducted instead of a One-Way ANOVA. A Kruskal-Wallis test yielded a statistically significant difference in incorrect oral translations of the participants, $\chi^2(3) = 18,062$, $p = ,000$, with a mean rank incorrect oral translations of 46,82 for A2, 43,22 for B1, 32,71 for B2, and 15,41 for C1.

Examples of correct and incorrect oral translations by participants are given below. One example is presented from both Turkish to English and English to Turkish oral translations from each proficiency level (given in brackets). Motion verbs are written in bold.

Examples of correct oral translations from Turkish to English:

Original sentence: Duru aceleyle içeri girdi.

Ex. 1. Duru **came** in. (A2 level)

Ex. 2. Duru **went** inside in a hurry. (B1 level)

Ex. 3. Duru **rushed** inside. (B2 level)

Ex. 4. Duru **rushed** into the room. (C1 level)

Examples of incorrect oral translations from Turkish to English:

Original sentence: Aylin yangın merdiveninden yuvarlandı.

Ex. 1. Aylin **rolled** from the fire stairs. (A2 level)

Ex. 2. Aylin **fell** from the fire exit stairs. (B1 level)

Ex. 3. Aylin has **fall** from the fire stairs. (B2 level)

Ex. 4. Aylin **fell** from the fire stairs. (C1 level)

Examples of correct oral translations from English to Turkish:

Original sentence: The hospital doors opened again and Hagrid walked in.

Ex. 1. Hastane kapıları tekrar açıldı ve Hagrid içeri **girdi**. (A2 level)

Ex. 2. Hastane kapıları tekrar açıldı ve Hagrid içeri **girdi**. (B1 level)

Ex. 3. Hastanenin kapıları tekrardan açıldı ve Hagrid içeri **girdi**. (B2 level)

Ex. 4. Hastane kapıları tekrar açıldı ve Hagrid içeri **girdi**. (C1 level)

Examples of incorrect oral translations from English to Turkish:

Original sentence: Harry leapt over a low table.

Ex. 1. Harry alçak masadan **düştü**. (A2 level)

Ex. 2. Harry alçak masaya **yaslandı**. (B1 level)

Ex. 3. Harry alçak bir masaya kendini **bıraktı**. (B2 level)

Ex. 4. Harry alçak bir masanın üzerine **uzandı**. (C1 level)

4.6.4. 3f. Not Acceptable, Acceptable, and Expected Oral Translations across Proficiency Levels

The analysis that was presented in 3e checked correct and incorrect oral translations of Turkish EFL learners and compared them according to their proficiency levels in English. The analysis in this part deals with oral translations by the participants in terms of being not acceptable, acceptable or expected in comparison to the expected oral translations that were defined as reference prior to the study as the most natural way of expressing the translated sentences.

The coding that was used for this analysis can be seen in Table 3. All oral translations were tagged as not acceptable (NA), acceptable (A) or expected (E) and later compared across levels. An oral translation coded as “NA” meant that the sentence was grammatically or pragmatically incorrect and did not make sense in the target language. If a sentence was coded as “A”, it meant that the sentence may be grammatically incorrect, yet it conveys the meaning in the target language. Finally, if a sentence is coded as “E”, it meant that it is grammatically and pragmatically correct and it is formed as the expected version that was set prior as well as conveying the meaning. There may have been minor grammatical mistakes. Table 3 presents examples.

For the result of this particular analysis it was hypothesized that participants with a lower level of proficiency would produce more not acceptable oral translations while participants with a higher level of proficiency would produce more expected oral translations. Participants with proficiency levels in between would present a data profile which has some features from both ends.

Before the inferential statistics, two pieces of descriptive statistics for the results of this particular analysis is given in Figure 13 and Figure 14.

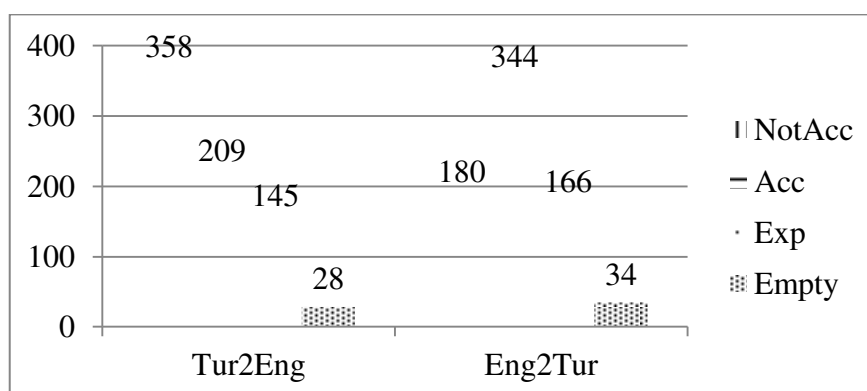


Figure 13. Not Acceptable, Acceptable and Expected Oral Translations

Figure 13 presents the descriptive statistics of oral translations in terms of being not acceptable, acceptable and expected in reference to the expected translations in the target languages. It can be seen from the figure that the participants produced more not acceptable sentences in their Turkish to English than in their English to Turkish oral translations. The numbers were 358 and 180 respectively. As for the acceptable oral translations, it is seen that they had 209 in Turkish to English and 344 in English to Turkish oral translations. They also produced 145 Turkish to English and 166 English to Turkish expected oral translations. Finally, they had 28 empty answers for Turkish to English and 34 empty answers for English to Turkish oral translations.

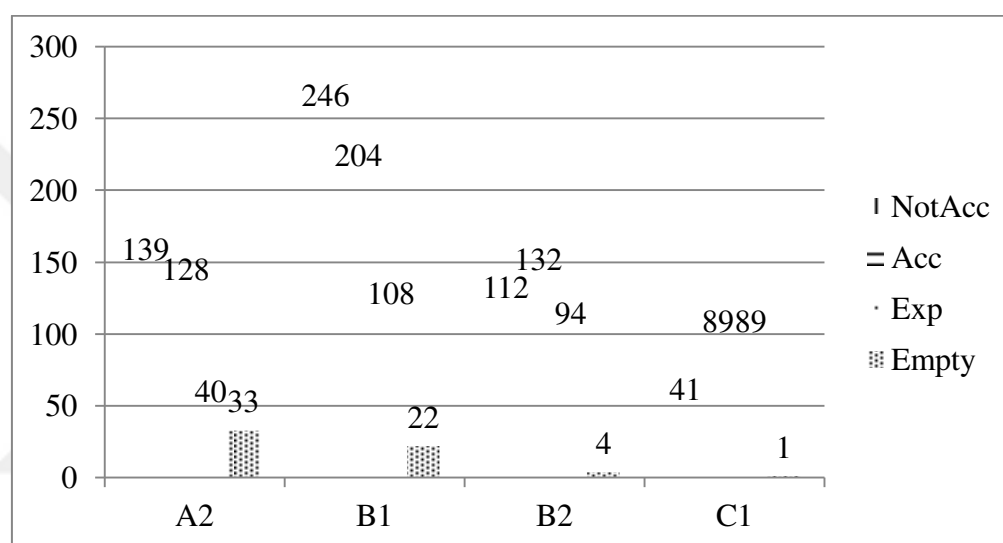


Figure 14. Not Acceptable, Acceptable and Expected Oral Translations across Proficiency Levels

Figure 14 presents the results of the same descriptive analysis in terms of proficiency levels in English. However, oral translations here are not divided into two such as from Turkish to English and from English to Turkish. The overall frequencies are given without any directions between languages. According to the figure, A2 level participants produced 139 not acceptable, 12 acceptable, 40 expected and 33 empty sentences in total in their oral translations. B1 level participants had 246 not acceptable, 204 acceptable, 108 expected and 22 empty sentences in total. B2 level participants produced 112 not acceptable, 132 acceptable, 94 expected and 4 empty sentences in total. Finally, C1 level participants produced 41 not acceptable, 89 acceptable, 89 expected sentences and 1 empty sentence in total in their oral translations.

For the inferential analysis, as the aim of the sub-question 3f was to reveal if not acceptable, acceptable and expected oral translations of Turkish EFL learners were

different across their proficiency levels in English, a One-way ANOVA was designed by defining not acceptable, acceptable and expected oral translations as the dependent variables and the proficiency levels (A2, B1, B2, C1) as the independent variables. Similar to 1f, this analysis was also conducted in three stages. Firstly, not acceptable oral translation results were analyzed and presented. Secondly, acceptable oral translation results were analyzed and presented. Finally, expected oral translation results were analyzed and presented.

For this current analysis, participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). However, data was not normally distributed for each group, as assessed by Shapiro-Wilk test ($p = ,557$ for A2, $p = ,382$ for B1, $p = ,246$ for B2, $p = ,038$ for C1). Therefore, the One-way ANOVA was replaced by a non-parametric test and a Kruskal-Wallis Test was done. The results are given in Table 41.

Table 41

Not Acceptable Oral Translations across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	43,00	21,312	3	,000
B1	29	46,40			
B2	17	32,59			
C1	11	13,14			
Total	74				

Table 41 shows the results of the analysis that was conducted to see if the not acceptable oral translations of Turkish EFL learners were statistically significant when compared across proficiency levels. As the normality criterion was not met prior to the analysis, a non-parametric test was conducted. A Kruskal-Wallis test yielded a statistically significant difference in not acceptable oral translations of the participants, $\chi^2(3) = 21,312$, $p = ,000$, with a mean rank not acceptable oral translations of 43,00 for A2, 46,40 for B1, 32,59 for B2, and 13,14 for C1.

For the second part of the analysis, the same procedure was repeated for acceptable oral translations by the participants. Participants were again in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). This time, the normality was not

violated, as assessed by Shapiro-Wilk test ($p = ,350$ for A2, $p = ,514$ for B1, $p = ,573$ for B2, $p = ,237$ for C1). Therefore, a One-way ANOVA was conducted. The descriptive results are given in Table 42 while One-way ANOVA results are in Table 43.

Table 42

The Descriptive Values of Proficiency Levels

Level	N	$\bar{x}$	SD
A2	17	7,52	1,80
B1	29	7,06	2,15
B2	17	7,64	2,26
C1	11	8,09	2,25
Total	74	7,45	2,10

As can be seen in Table 42, there were 17 participants in levels A2 and B2, 29 participants in B1 level and 11 participants in C1 level. Table 37 shows the results of One-way ANOVA as inferential analysis.

Table 43

One-way ANOVA Results for Acceptable Oral Translations across Proficiency Levels

MANNER	SUM OF SQUARES	df	MEAN SQUARE	F	p
Between Groups	9,49	3	3,16	,703	,553
Within Groups	314,88	70	4,49		
Total	324,37	73			

Table 43 presents the results of the analysis that was conducted to see if the acceptable oral translations of the participants were statistically significant when compared across proficiency levels. A one-way ANOVA was conducted. Participants

were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). Data was normally distributed for each group, as assessed by Shapiro-Wilk test ($p = ,350$ for A2, $p = ,514$ for B1, $p = ,573$ for B2, $p = ,237$ for C1); and there was homogeneity of variances, as assessed by Levene's test of homogeneity of variances ($p = ,988$). Acceptable oral translation frequency was similar for A2 ($\bar{x} = 7,52$, $SD = 1,80$), for B1 ($\bar{x} = 7,06$, $SD = 2,15$), for B2 ($\bar{x} = 7,64$, $SD = 2,26$) and for C1 ($\bar{x} = 8,09$, $SD = 2,25$). Thus, the differences between these proficiency levels was not found to be statistically significant, $F(3,70) = ,703$, $p = ,553$.

For the final part of the analysis, the same procedure was applied to expected oral translations of the participants. Participants were in four groups: A2 (n = 17), B1 (n = 29), B2 (n = 17) and C1 (n = 11). Similar to the data coming from not acceptable oral translations, normality for this data was also proven to be violated, as assessed by Shapiro-Wilk test ($p = ,208$ for A2, $p = ,047$ for B1, $p = ,157$ for B2, $p = ,281$ for C1). Therefore, the One-way ANOVA was replaced by a Kruskal-Wallis Test. The results are given in Table 44.

Table 44

Expected Oral Translations across Proficiency Levels

LEVEL	N	MEAN RANK	χ^2	df	p
A2	17	19,94	35,730	3	,000
B1	29	31,48			
B2	17	47,56			
C1	11	64,95			
Total	74				

Table 44 presents the results of the analysis that was conducted to see if the expected oral translations of the participants were statistically significant across their proficiency levels. As the normality was violated, a non-parametric test was conducted instead of a One-Way ANOVA. A Kruskal-Wallis test resulted in a statistically significant difference in expected oral translations of the participants, $\chi^2(3) = 35,730$, p

= ,000, with a mean rank expected oral translations of 19,94 for A2, 31,48 for B1, 47,56 for B2, and 64,95 for C1.

Examples of NA, A, and E oral translations by participants in the target languages are given below. One example is presented from each proficiency level. Motion verbs are written in bold.

Examples of NA oral translations from Turkish to English:

Original sentence: Duru koşarak Deniz'den uzaklaştı.

Ex. 1. Duru separete from Deniz by **running**. (A2 level)

Ex. 2. Duru **went** far away by **running** from Deniz. (B1 level)

Ex. 3. Duru **got** away from Deniz by **running**. (B2 level)

Ex. 4. Duru **ran** and **went** away. (C1 level)

Examples of A oral translations from Turkish to English:

Original sentence: Bilge eve vardığında koşarak yukarı çıktı.

Ex. 1. Bilge **went** upstairs when she is home – at home. (A2 level)

Ex. 2. Bilge **went** up the stairs when she came home. (B1 level)

Ex. 3. When Bilge arrived home, she **went** upstairs **running**. (B2 level)

All participants whose proficiency levels were C1 produced this oral translation in the expected version. Therefore, no example is given for C1 level.

Examples of E oral translations from Turkish to English:

Original sentence: Özge pencereden biraz uzaklaştı.

None of the participants with A2 and B1 level proficiency were able to orally translate this sentence into English in the expected version. Therefore, no example is given for A2 and B1 levels.

Ex. 1. Özge **moved** a little away from the window. (B2 level)

Ex. 2. Özge **moved** a little away from the window. (C1 level)

Examples of NA oral translations from English to Turkish:

Original sentence: The telescope and trainers in his lap rolled across the floor.

Ex. 1. Teleskop ve çalıştırıcıları yörüngesinden çıktı. (A2 level)

Ex. 2. Onun teleskobu ve ayakkabıları odanın köşesinde duruyordu. (B1 level)

Ex. 3. Kucağındaki teleskop ve diğer şey yere saçıldı. (B2 level)

All participants with C1 level proficiency produced this oral translation in either acceptable or expected version. Therefore, no example of NA is given for C1 level.

Examples of A oral translations from English to Turkish:

Original sentence: The barman walked away.

Ex. 1. Barmen **uzaklaştı**. (A2 level)

Ex. 2. Barmen **uzaklaştı**. (B1 level)

Ex. 3. Barmen **yürüyerek uzaklaştı**. (B2 level)

Ex. 4. Barmen **uzaklaştı**. (C1 level)

Examples of E oral translations from English to Turkish:

Original sentence: Then he limped away without another word.

Ex. 1. Tek kelime etmeden **topallayarak uzaklaştı**. (A2 level)

Ex. 2. Tek bir söz söylemeden **topallayarak uzaklaştı**. (B1 level)

Ex. 3. Tek kelime daha etmeden **topallayarak uzaklaştı**. (B2 level)

Ex. 4. Daha sonra başka bir kelime söylemeden **topallayarak uzaklaştı**. (C1 level)

CHAPTER V

DISCUSSIONS

5.1. Introduction

This chapter of the dissertation discusses the findings of this particular study in relation to those in the literature. It addresses each research question in the same fashion as the previous chapter did.

5.2. Research Question 1

The first research question along with its sub-questions is given below as a reminder.

- Do Turkish EFL learners perceive and express motion events in Turkish and English, two typologically different languages, in their oral expressions in a different way? If yes, do they conform to Talmy's S-language pattern in English and V-language pattern in Turkish in their productions?

1a. Are manner and path looks different when they watch the videos to consecutively describe in Turkish and English?

1b. Are manner and path descriptions different in Turkish and English?

1c. Are manner and path descriptions different across proficiency levels in English?

1d. Are SD1 and SD2 different in Turkish and English descriptions?

For the first sub-research question 1a, which analyzed whether manner and path looks were statistically different when the participants watched motion verbs with the purpose of describing them in Turkish and in English afterward, there were four sets of results from manner and path looks of two different sets of participants. These results were given in Tables 7, 8, 9 and 10. While manner looks yielded statistically significant results for both sets, path looks yielded statistically significant result for the 1st set only. The 2nd set of participants' data of path looks was not statistically significant. Firstly, this result can be attributed to the item effect. The point of having two different sets was to prevent the item effect by providing the participants with various stimuli.

Nonetheless, the other parts of the analysis were found to be significant. However, a look at the ratio of manner to path looks in both languages shows that the duration of manner looks were higher than the durations of path looks in both languages. This could be explained as the dynamicity effect of the manner information. It is possible that the participants paid more attention to manner areas in the videos with the aim of understanding what the motion event was while paying less attention the path areas because those were static and one look at the path area sufficed whereas they watched the manner area until the end of the video. In addition, while there were 30 motion events in the videos, there were three backgrounds used as the path areas. This could be another reason why path looks were lower than the manner looks in duration as the participants recognized the background in an instant once a video started and they did not need to pay more attention to it during the video. However, when the looks were compared in terms of English manner – English path and Turkish manner – Turkish path pairings, it can be seen that the ratios are closer to each other in Turkish pairing than in English pairing. This shows that the participants still watched manner areas at a higher rate for their English descriptions. Therefore, the hypothesis that the participants would allocate their attention more to the manner information than to the path information in the videos that they were going to describe in English, which is a satellite framed language, was met. However, as they displayed the same pattern also in Turkish, it cannot be said that the hypothesis was fully met because they did not pay more attention to the path information and less attention to the manner information in the videos that they were going to describe in Turkish, which is a verb-framed language. At this point, the results contradict those of Slobin and Özçalışkan (2003) as given in Yıldırım (2016) because they mention that V-framed languages pay less attention to the *Manner*, which is not in line with the current results. These results coming from the eye-tracking analysis can also be discussed in relation to those in Soroli and Hickmann (2010). After comparing French and English speakers' attention allocation patterns on path and manner AOIs, they conclude their results with a partial language effect in the eye-movements data as no significant difference was found in speakers' attentions. These results together point to a Universalist view, for languages do not seem to have an effect on their speakers' perceptions of the events at the conceptual level. Papafragou et al. (2008) reported similar results in terms of event perception. Their result may seem contradictory at first because they concluded that speakers with different L1 backgrounds (English and Greek in their case) allocated their attention to motion event

regions differently. What differed, however, was the order of their attention allocation to specific regions. In addition, this result came from the linguistic task for bounded events only. Their nonlinguistic task, on the other hand, revealed that the eye movements of both language groups were almost identical. This result coming from the nonlinguistic task of the study is in line with those mentioned above supporting the Universalist view when linguistic forms were not considered. Toplu's (2011) results are in the same vein as she also reported a uniform pattern at the conceptual level from the participants with English, French and Turkish languages, which was a result that supported the Universalist view. On the other hand, Soroli and Hickmann (2010) reported results from their eye-tracking data coming from a non-verbal categorization task, which seemed to support a partial language effect on the eye-movements of the participants. Yet, they also reported that this result was not statistically significant. Another study by Soroli (2018) reported moderate language effect on attention allocation. As French participants attended more to path component while English participants observed the events in a linear way and Greek participants' ways of attending alternated, the results revealed typological constraints on the representational system. Finally, Feinmann (2020) reported results that were free of language effect through his non-verbal task and presented evidence in support of cognitive universalism. Therefore, this means that further studies with similar methodologies are required to complement or challenge these results as there are both reports of partial language effects which contradict the Universalist view and reports of a consistent universal pattern across languages. The eye-tracking results of the current study, on the other hand, are in line with the Universalist view.

For the second sub-research question 1b, which investigated whether manner and path information in participants' oral descriptions were statistically significantly different in Turkish and in English, there were again four sets of results from manner and path descriptions by two sets of participants. The results were presented in Tables 11, 12, 13 and 14. All of the results for all four analyses were found to be statistically significant. When checked thoroughly, it can be seen that both the participants in the 1st Set and the ones in the 2nd Set produced more manner verbs in their English oral descriptions than in their Turkish oral descriptions. Similarly, they all produced more path verbs in their Turkish descriptions than in their English descriptions. These results showed that Turkish EFL learners have a partial understanding of the different necessities of these two typologically different languages. Therefore, they resort to the

canonical motion event verbalization patterns of these languages when they need to verbalize motion events. While their utterances may still have traces of their L1 verbalization patterns, grammatically incorrect structures or they may lack path satellites, they know that manner verbs are the tools to describe the events in English and path verbs in Turkish at the semantic level. Therefore, the hypotheses that the participants would describe the videos with a manner verb and path satellite as the canonical motion event verbalization pattern requires in English and they would form their Turkish sentences in their descriptions with a path verb and manner satellite or with a path verb only while ignoring manner information in Turkish were to some extent verified. The results are in line with those of İşler (2014). She also concluded in her study that L1 of the participants may have an effect on their thinking for speaking strategies in their L2 English motion verb usages and path of motion expressions. Similarly, Hijazo-Gascón's (2018) results support the cross-linguistic influence having a significant role in the expression of motion in a second language. Yet, in terms of the high number of path usage in the oral descriptions by the participants in their native language, it can be said that this result was expected as Turkish is a verb-framed language and path verbs in Turkish are more *codable* and *accessible* (Slobin, 2003, 2004). Similarly, Demirtaş (2009) also elicited results that suggest that speakers of the Turkish language prefer to encode motion through Path verbs and they give the manner information through subordinate manner verbs or subordinate adverbial manner phrases. Additionally, from L1 perspective, Papafragou and Selimis (2009) also concluded with a higher manner verb usage in English and a higher path verb usage in Greek which they referred as another verb-framed language. Soroli (2012), similarly, concluded English manner verb usage with path satellites and path verb usage in French, which is in line with the current study. However, unlike Papafragou and Selimis (2009), she treated Greek in her study as an equipollently-framed language which yielded a similar usage of manner and path verbs but this result is not related to the current study as equipollently-framed languages are not within its scope. Soroli and Hickmann (2010) also elicited results that are in line with those discussed so far. From their production task, they reported higher manner information in English data and higher path information in French data. Finally, Feinmann (2020) also presented higher manner frequency in English and higher path frequency in Spanish in his verbal elicitation task. These results all present evidence for Talmyan typology as satellite-framed languages and verb-framed languages display their distinctive verbalization patterns.

For the third sub-research question 1c, which analyzed the effect of English proficiency levels of the participants on their manner and path verb usages in their English oral descriptions, there were two sets of analysis for manner and path descriptions for all participants. These results were presented in Tables 16 and 17. Neither the analysis of manner descriptions nor the analysis of path descriptions yielded statistically significant results. This result can be attributed to the fact that all four proficiency levels had more manner descriptions than path descriptions and the frequencies were similar to each other for each level. Therefore, it can be inferred that the proficiency level in English does not have an effect on Turkish EFL learners' oral descriptions of motion events, for they presented the same patterns in all levels. Both the participants from low levels and those from high levels in English had more manner verbs than path verbs as the language itself necessitates. Therefore, the hypothesis that participants with a lower level of proficiency would produce fewer motion verbs while participants with a higher level of proficiency would produce more motion verbs was not met. This result contradicts that of İşler (2014) in terms of path element usage in English motion events. Her comparison of proficiency levels such as pre-intermediate and upper-intermediate revealed that the ratio of Upper-Intermediate group in path elements was higher than those of Pre-Intermediate group. She also refers to Cadierno (2004, 2008a) and Cadierno and Ruiz (2006). After studying with Danish L2 speakers of Spanish, they reported that the influence of the L1 in the expression of motion is stronger at the initial and intermediate stages but weaker at an advanced stage as they are able to express motion events in target-like ways more (p. 265 as cited in İşler, 2014). Stam (2015) reported similar results from her 14-year-long case study. Her participant started to use path satellites more in her L2 English productions, which is the canonical motion event verbalization pattern in English, as her proficiency level progressed. Demirtaş (2009) and Duruk (2015) concluded their studies with usages of path satellites in English descriptions of their participants with a high proficiency level of English. These separate results can be thought in relation to the current study as C1 level participants were the only group who provided the highest use of path satellites compared to the other proficiency levels in their English oral descriptions. Nevertheless, as Negueruela, Lantolf, Jordan and Gelabert (2004) and Larrañaga, Treffers-Daller, Tidball and Ortega (2012) both concluded, expressions of motion events are troublesome even at advanced levels with L2 thinking for speaking patterns. Yıldırım (2016) reported similar results on L1 conceptual transfer to L2 English even at

advanced level. Stam (2006) also studied proficiency level comparison with Spanish and English as typologically different languages. The results revealed that intermediate level learners followed L1 thinking patterns in their L2 motion descriptions in which the path satellites lacked, which seemed to be similar to the current results as well as oral translation task results of this study. Additionally, Spring and Horie (2013) also concluded their study with no significant difference between Japanese and Chinese learners of mid-level and high level English, which is yet another result showing that the proficiency levels of the learners do not make a big difference in their performances. In a similar fashion, Flecken et al. (2015) also reported that the participants in their study did not display evidence of acquisition of target-like motion event conceptualization patterns even if they had high proficiency in their L2 as well as a considerable amount of L2 exposure. In conclusion, overall results suggest that as the proficiency levels of the learners increase, they get closer to native-like usage in their productions. Nevertheless, their utterances still display traces of their native languages and they are not entirely error free. These results can be considered as supportive of linguistic relativity and thinking for speaking hypotheses as learners of other languages have problems with restructuring their motion event verbalization patterns that are deeply formed and shaped in accordance with their L1s.

For the sub-research question 1d, which investigated if semantic density was different in Turkish and English oral descriptions by the participants, there were again two sets of analysis, one for SD1 and another for SD2. The results of these analyses can be followed from Tables 18 and 19. Both analyses were found to be statistically significant. However, when the ratios are checked, it can be seen that the participants had a higher SD2 result in Turkish than in English. Based on the literature, for this dissertation as well, it was hypothesized that Turkish speakers would omit manner information in their Turkish descriptions of motion events as Turkish is a verb framed language and they would use a path verb in their sentences. On the other hand, if they had an understanding of the canonical motion event verbalization pattern of the English language, they would resort to manner verbs with path satellites, which, in return, would lead them to have a naturally higher semantic density in English. However, this hypothesis was not met because the participants still had higher SD2 results in their Turkish descriptions even if they showed in 1b that they had an understanding of the canonical motion event verbalization patterns of the two languages. They still had more manner verbs in English descriptions and more path verbs in Turkish descriptions but

this did not cause them to have less manner information in Turkish since they also expressed manner information in their Turkish descriptions through the use of adverbial adjuncts along with their path verbs. They simply used path verbs in the main verb slot and an additional adjunct for manner information in Turkish. This result can be explained with the fact that the manner information in the videos was highly salient. Therefore, the participants did not omit it and made a conscious reference to it in their oral descriptions even if it may have caused an extra cognitive load for them. As Özyürek (2000) also indicates, V-language speakers do not indicate manner unless it is salient. The results here contradict those of Soroli and Hickmann (2010). Their investigation of English and French in that specific study revealed that semantic density was higher in English than in French, which was an expected result according to the hypotheses formed in line with the canonical motion event verbalization patterns of the languages in hand as English as a satellite-framed and French as a verb-framed language. Similarly, Slobin (2003) concludes that the speakers of verb-framed languages mostly omit the Manner information, which is another contradictory result to the current ones. In addition, as an explanation to the common trend of verb-framed language speakers' omitting manner information in their L1s, Papafragou et al. (2006) mention *inferability of the manner* (p. B75). Namely, when contextual information already covers the manner component in a sentence, speakers of verb-framed languages do not refer to it additionally. However, the participants in this study did not display this tendency.

5.3. Research Question 2

The second research question along with its sub-questions is given below once again.

- Do Turkish EFL learners conceptualize language differently when given linguistic expressions of motion events in Turkish and English? If yes, do they differentiate S-language – V-language patterns in English and in Turkish respectively?

2a. Are acceptability orders different in Turkish and English?

2b. Are acceptability orders different across proficiency levels in English?

For the first sub-research question 2a, which analyzed if acceptability orders by the participants statistically significantly differed in Turkish and English, there was one

analysis whose results were given in Table 20. This specific analysis elicited a statistically significant result. The acceptability rankings of English sentences were found to be lower than Turkish sentences for most of the participants (82,43 %). Therefore, the hypothesis that the participants would perceive the distinctive canonical motion event verbalization patterns of the two languages and would rank English ones according to the natural patterns of the English language without having an effect of their L1 on them, and in return have a high number of correct ranking in English as well as in Turkish was not met. Had the participants grasped the canonical motion event verbalization patterns in English entirely, their rankings of English sentences would have been similar to their Turkish rankings without creating a big difference. The fact that they seemed to have differentiated the languages in the analysis of 1b did not reveal itself at this stage because it may have been possible that the participants were still not able to identify and differentiate lexicalization patterns even if they produced more manner verbs in English oral descriptions at the individual vocabulary level due to the fact that the target motion verbs in the study were mostly basic vocabulary acquired early in language learning process such as *walk*, *run*, *jump*, *dance*, and so on. A more detailed look at the individual ranking papers of the participants showed that their most preferred lexicalization pattern in English sentences was the one given as a distractor because it reflected a direct translation effect from L1. An example is given below for explanatory purposes:

1	She is limping out of the building.
3	She is exiting the building by limping.
2	She is limping and exiting the building.
4	She is limping with the building.

Picture 21. Expected Acceptability Order of the Verb *limp out of*

The order given in Picture 21 is the expected order of the sentences to describe the motion event *limp out of* by native speakers of English. As can be seen, the highest rank as the canonical verbalization pattern includes manner verb with a path satellite. However, the participants had the tendency to rank these sentences as 3, 1, 2, 4 instead of 1, 3, 2, 4 as they thought that the appropriate way of utterance would be path verb +

by manner satellite due to L1 effect as the equivalent meaning in Turkish would be uttered with this structure. This resulted in their lower number of correct rankings in English sentences. This shows that participants were not able to differentiate the necessities of English motion verb verbalization pattern as manner verb + path satellite even if they managed to produce sentences with manner verbs earlier. However, the fact that those productions mostly lacked path satellites seems to be in line with the current results. In terms of their Turkish rankings, on the other hand, the participants provided results that are in line with Toplu (2011) since they judged the acceptability of the given sentences correctly in terms of the canonical motion event descriptions in their L1 providing results that are supportive of Talmy (1985). Overall results supported the thinking for speaking hypothesis (Slobin, 1996a) as there is a clear effect of participants' L1 on their L2.

For the second sub-research question 2b, which investigated whether acceptability judgment rankings were different across proficiency levels in English, there was one analysis whose results were given in Table 21. The results were not found to be statistically significant as the mean scores of the acceptability judgment rankings were close to each other. This means that the English proficiency levels of the participants did not have an effect on their acceptability judgment of English motion verb verbalization patterns. Both lower levels and higher levels presented a similar profile regardless of their proficiency levels in English. Therefore, the hypothesis that the participants would have higher correct rankings as their proficiency level increased was not met. This result can be explained in a similar fashion to 2a analysis and its results. As the participants from all levels showed some effect of L1 transfer to their perceptions of English sentences, their results were not found to be different than others. Because they transfer the Turkish suffix *-erek / -arak* as *by Ving* in English and may think that this canonical verbalization pattern in Turkish (Toplu, 2011, p. 99) also applies to English sentences, even C1 level participants ranked this distractor as 1 or 2 which affected their overall scores. Similarly, Soroli and Hickmann (2010) reported a strong language effect through their verbal categorization task, which was designed in a similar fashion to the current one as well as to that one in Toplu (2011), as their participants also followed the verbalization patterns of their own languages. To sum up, these results overall point to linguistic relativity hypothesis since participants' languages seem to affect their perceptions and selections of linguistic data that is presented to them in addition to thinking for speaking hypothesis since these

perceptions and selections are transferred to the judgments of sentences in L2 English in the current study.

5.4. Research Question 3

The last research question along with its sub-questions is given below.

- Do Turkish EFL learners perceive and reflect a two-way effect on their L1 (Turkish) and L2 (English) when orally translating motion events from Turkish to English and vice versa?

3a. Are attention allocations different in Turkish and English sentences?

3b. Are manner and path information different in Turkish and English oral translations?

3c. Are manner and path information different across proficiency levels in Turkish and English oral translations?

3d. Are SD1 and SD2 different in Turkish and English oral translations?

For the first sub-research question 3a, which investigated if attention durations that were allocated to the manner and path information in sentences were statistically significantly different when the participants read the sentences in Turkish to translate them into English and in English to translate them into Turkish, two sets of analysis were conducted. Their results were given in Tables 22 and 23. They both yielded statistically significant results. For manner information, the participants' allocating more of their attention while translating the sentences from Turkish to English may mean that they focused on the manner verbs in Turkish sentences because they may have noticed that the manner information was given in an extra constituent along with the path verb, which eventually may have led them to think that it should be necessary in the English translation of the sentence. Similarly, in the second analysis which compared path looks in both translations, they allocated more attention on the path information in Turkish sentences. This may have also resulted from the fact that path information is the main verb of a sentence in Turkish. In other words, it is the constituent which gives the sentence its meaning as an end result of the action. Therefore, the participants may have focused on path information while thinking as to how to orally translate it into English consecutively as a path verb would not be preferred as the canonical motion event verbalization pattern in English. Yet, the results do not seem to present a distinctive pattern even if they were significant. Seen in this

way, the hypothesis that the participants would allocate their attention to the sentences differently was not entirely met because they focused on the manner and path information in both languages in a similar way. Nevertheless, as Soroli and Hickmann (2011) also argue, “... languages strongly invite speakers to rely on those available structures that constitute the most typical and accessible ways of organizing information, thereby also inviting them to pay more or less attention to different types of information” (p. 594) as the participants in this study did for Turkish sentences. They relied on path verbs for the meanings of the sentences and manner adjuncts to translate them as main verbs in English.

For the second sub-research question 3b, which analyzed whether manner and path information in participants’ oral translations were statistically significantly different in their L1 (Turkish) and L2 (English), there were two sets of analysis whose results were given in Tables 24 and 25. While the result for manner information was not found to be statistically significant, the path information result was statistically significant. The reason behind this difference between the statistical significances of the results may have stemmed from the fact that manner information was high in both Turkish to English and English to Turkish translations while path information was remarkably high in English to Turkish oral translations as the participants used more path verbs in their from English to Turkish translations. Unlike the contradictory eye-tracking results of 3a, these results of 3b presented a more stable profile. While having manner information in both of the translations, reserving the path information to the sentences that were translated from English to Turkish and not using it as frequently in the sentences that were translated from Turkish to English shows that the participants still serve the purposes of distinctive verbalization patterns of the languages in their oral translations. This result is also in line with the results of sub-research question 1b. Therefore, the hypothesis that the participants would translate the path verbs in Turkish as manner verbs in English and manner verbs in English as path verbs in Turkish as this is the pattern that is naturally required by the languages was partially met. In return, the number of path verbs in the oral translations that were done from English to Turkish was much higher whereas the number of manner verbs in the oral translations that were done from Turkish to English was not as high as expected. Slobin’s (2004) comment seems to be complementary with the current results. He argues that when an English manner verb is used with a particle that can be translated as a path verb in a Verb-framed language, translators prefer to omit manner information and use the equivalent

path verb. It seems that this is also the current case given the remarkably high number of path verbs in English to Turkish translations. Similarly, Cifuentes-Férez and Rojo (2015) mentioned *constituent status* as an explanation to avoiding manner. Namely, they suggested that whether an element is an obligatory syntactic constituent (like the verb) or optional (like an adverbial) affects its usage frequency. In this sense, path verbs in the Turkish language are obligatory syntactic constituents as they are the main verb of a sentence. One other explanation to this result could be the number of neutral verbs in the translations of the participants from Turkish to English. While their manner verbs were expected to be high, their neutral verbs outnumbered their manner verbs, which may have statistically affected the final results. However, as neutral verbs were not included in the analysis, this difference cannot be interpreted any further. Nevertheless, a similar result for motion event descriptions also emerged in Yıldırım (2016). Even though it was not a translation task, the result can be interpreted in terms of usage in L2. She mentioned that L2 learners mostly used bare verbs with path satellites to express the motion events, which displays a highly similar pattern as the participants in this current study used a remarkable number of neutral verbs to refer to motion events in their oral translations. In addition, Navarro and Nicholadis (2005) concluded similar results with Spanish learners of highly advanced English having a tendency to use a higher amount of “bare verbs” even though they used satellite-framing to a very similar degree to English native speakers (as given in Spring and Horie, 2013). Finally, Cifuentes-Férez and Rojo refer to Ibarretxe-Antuñano (2003, p. 163) to mention several translation strategies such as “total translation of the motion event to total omission of motion, ... different types of ‘partial translation,’ such as translation of only a portion of manner/path, translation by a different type of manner/path, and omission of any type of manner/path” (2015, p. 278). It is possible that the participants may have made use of these strategies in their translations. However, these will not be discussed further as they were not analyzed individually in this study since they were not within the scope of this dissertation. Alonso (2011) also reported L1 Spanish conceptual transfer into L2 English translations as the participants used Spanish lexicalization patterns in their English translations as path verbs in the main verb slot even if they were advanced level translation department students. This could also be regarded as in line with the current results of this study.

For the third sub-research question 3c, which investigated the effect of English proficiency levels of the participants on their oral translations taking the manner and

path information as the comparison point, there were four sets of analysis that were presented in Tables 26, 27, 28 and 30. The results were partially significant. Manner verb usage in English to Turkish and path verb usage in Turkish to English translations were not significant while manner verb usage in Turkish to English and path verb usage in English to Turkish translations were significant. The reason why the first two results that are mentioned were not significant may be due to the similarity in frequencies which did not cause a distinctive pattern between the languages. The fact that the last two results were significant may be attributed to more distinctive frequencies. Overall, the results did not have a systematic increase or decrease tendency in accordance with the proficiency levels. Therefore, the initial hypothesis that the higher the participants' proficiency levels were, the further their oral translations were from the source language and the closer to the target language, which overall meant fewer manner verbs and more path verbs in Turkish to English oral translations in lower proficiency levels and more manner verbs and fewer path verbs in higher proficiency levels in comparison to fewer path verbs and more manner verbs in lower proficiency levels and more path verbs and fewer manner verbs in higher proficiency levels in English to Turkish oral translations, was not entirely met. The results can be discussed in relation to Deng and Chen's (2012) conclusion in their study. They concluded that translators cannot continue to use the same lexicalization pattern of the source language because they have to re-lexicalize their patterns according to the cognitive requirements of the target language. Even if the results of the sub-research question 3b discussed above seemed to be significant when generally compared between languages due to their partly distinctive features, the re-lexicalization process referred by Deng and Chen (2012) does not seem to present itself across proficiency levels in English as the results of individual levels do not seem to be different from one another. In addition, Cifuentes-Férez and Rojo (2015) reported that typological differences between the languages affected the translators' decision making processes more than their level of expertise did during their translations. The participants in their study were experienced translators and translation students, both of whom can be thought as advanced level English L2 users. Therefore, they can be compared to C1 level participants in this study, who also displayed L1 Turkish patterns in their L2 English oral translations even if they performed better than the other proficiency levels. Therefore, this result can overall mean that proficiency levels alone do not affect oral translation performances, and in return lexicalization patterns in the target language.

For the sub-question 3d, which aimed to show if SD1 and SD2 were statistically significantly different in oral translations of the participants from one language to the other, there were two sets of analysis as presented in Tables 31 and 32. Neither result was statistically significant. This result can stem from the fact that the participants did not have a differential profile in their semantic density data. They still had a higher SD1 in English to Turkish and a higher SD2 in Turkish to English oral translations, which seems to be the expected result. However, the frequencies were not distinctive enough to yield a statistically significant difference which may mean that the participants may or may not have paid similar attention to the semantic density information of the sentences to be translated from one language to the other because they were already thinking for translating which meant a high cognitive load for them on its own. For the results of sub-question 1d, it could have been easier for them to produce sentences that were semantically dense as they produced only one sentence as the oral description for the videos. However, this task required them to orally translate one sentence from a language to another within a certain period of time, which requires higher cognitive load. In short, even if the results are not statistically significant, the hypothesis that the participants would have higher SD2 in English and higher SD1 in Turkish was met with a little difference in raw numbers. The results can be seen in comparison to those of presented in the discussion of the sub-research question 1d. Additionally, Slobin's (2004) comment that was given above about the translators' using an equivalent path verb in a verb-framed language when they are translating a manner verb with a path satellite from a satellite-framed language seems to apply to these results. It can be seen as an explanation to the low-manner information in English to Turkish translations. In line with Slobin (2005) as well, participants seemed to be less concerned with manner information at this point.

5.5. Additional Findings

As the first and third research questions required two more additional analyses each in terms of oral descriptions and oral translations being correct or incorrect and being acceptable or not, those analyses were also conducted and the descriptive and inferential results were presented in the previous chapter. The sub-questions are copied below as reminders.

1e. Is there a relationship between correct and incorrect oral descriptions in English across levels?

1f. Is there a relationship between not acceptable, acceptable, and expected oral descriptions in English across levels?

3e. Is there a relationship between correct and incorrect oral translations across proficiency levels in English?

3f. Is there a relationship between not acceptable, acceptable, and expected oral translations across proficiency levels in English?

At this point of this dissertation, it should be kept in mind that these final four sub-questions of research questions 1 and 3 dealt with the correct and incorrect usages of motion verbs in participants' oral descriptions and oral translations. In addition, an alternative continuum such as NA, A, and E answers was suggested to evaluate learners' performances in their L2s. The studies in the literature, on the other hand, were mostly conducted in a descriptive fashion for definitive purposes to classify motion verb usage from cross-linguistic perspectives. In other words, they did not evaluate their participants' performances in terms of being correct or incorrect usages. Therefore, the results to these final four sub-questions should be considered and evaluated on their own as they do not have directly related references in the literature.

For the fifth sub-question of the first research question 1e, which investigated the correct and incorrect motion verb usages in the oral descriptions of Turkish EFL learners in their L2 and compared them according to their proficiency levels, there were two sets of analysis. The results were given in Tables 33 and 34 which both presented statistically significant results. This result shows that Turkish EFL learners had distinctive frequencies of correct and incorrect oral descriptions of motion verbs and their proficiency levels had an effect on their utterances. It can also be seen in Figure 8 that their incorrect descriptions sharply decreased as their proficiency levels increased. Even if a similar pattern can also be observed in the correct descriptions across proficiency levels, they have smaller differences in frequencies which in return may have contributed to the final significant result. Nonetheless, the frequencies of overall correct ($n = 557$) and incorrect ($n = 544$) oral descriptions are very close to each other, which is a remarkable result as incorrect descriptions seemed to appear even in high proficiency levels. This result can also be interpreted from the manner verb usage point of view as in sub-research question 1b. It can be said that even if Turkish EFL learners know that the English language requires them to use manner verbs unlike their L1,

Turkish, which requires path verbs; they are not able to use these manner verbs in correct structures. Therefore, the hypothesis that participants with a lower level of proficiency would produce more incorrect oral descriptions of motion verbs while participants with a higher level of proficiency would produce more correct oral descriptions of motion verbs in their target language was met as A2 and B1 levels had higher incorrect usage results while B2 and C1 levels had relatively higher correct usage results.

As can be seen from the results and the discussions of the above analysis, evaluating the participants' oral descriptions as correct and incorrect did not seem to serve the ultimate purpose of this dissertation. Therefore, the final category of evaluation that was suggested to evaluate the learners' productions as not acceptable, acceptable and expected was considered and three sets of analysis were conducted to answer the sub-research question 1f. The results were given in Tables 35, 37 and 38. While the results of not acceptable and expected usages of motion verbs in the oral descriptions of the participants across levels were found to be significant, acceptable results were not statistically significant. One way to infer these results can be that not acceptable and expected results showed a decrease and increase respectively in accordance with the proficiency levels of the participants while acceptable usage results did not since all proficiency levels still produced acceptable usages with similar frequencies. Therefore, the hypothesis that the participants with a lower level of proficiency would produce more not acceptable oral descriptions of motion verbs while participants with a higher level of proficiency would produce more expected oral descriptions of motion verbs in their target language was verified.

For the fifth sub-question of the third research question 3e, which aimed to evaluate correct and incorrect motion verb usages in the oral translations of Turkish EFL learners from their L1 to L2 and vice versa and present a comparison across their proficiency levels, two sets of analysis were run whose results were given in Tables 39 and 40. Both analyses yielded statistically significant results as there was a certain decrease in the frequency of incorrect oral translations of motion verbs as the proficiency levels increased. However, the hypothesis that the participants with a lower level of proficiency would produce more incorrect oral translations of motion verbs while participants with a higher level of proficiency would produce more correct oral translations of motion verbs was not met as all proficiency levels within themselves had higher incorrect oral translations than correct oral translations. The inference of this

result can be that even the participants with the highest levels of proficiency are not able to produce error free oral translations as they still reflect their L1 verbalization patterns on their L2 productions as oral translations. Alonso (2011) argues that translation tasks may affect the translators as they have the L1 sentences in front of them. Therefore, they may be biased and think that they have to transfer the exact same structure to the language into which they translate. However, she also mentions that “the task of the translator is to provide a target-like English sentence” (p. 364). Therefore, having sentences in L1 should not cause a problem for them in terms of transfer effect.

Similar to 1f, the final sub-question of the final research question of this dissertation 3f also aimed to evaluate the oral translations by the participants as not acceptable, acceptable and expected because evaluating them as correct or incorrect again contradicts the purpose of this dissertation. Three sets of analysis were conducted to answer the sub-research question 3f. The results were presented in Tables 41, 43 and 44. Parallel to the results of 1f, these results were also found to be statistically significant for not acceptable and expected usage of motion verbs in the oral translations by the participants across levels while acceptable results were not statistically significant. In a similar fashion, the results can be attributed to the fact that all not acceptable, acceptable and expected oral translations presented a decrease as the proficiency levels increased. Therefore, the hypothesis that the participants with a lower level of proficiency would produce more not acceptable oral translations while participants with a higher level of proficiency would produce more expected oral translations was verified. However, the end pattern is in line with this hypothesis not in terms of more expected oral translations but in terms of not acceptable oral translations. While participants with proficiency levels (A2 and B1) had higher not acceptable oral translations than their acceptable and expected oral translations, participants with B2 and C1 levels presented a different profile, if not entirely the opposite. The highest proficiency level had the lowest not acceptable oral translation frequency, which is a result that is in line with the initial hypothesis.

CHAPTER VI

CONCLUSION

6.1. Introduction

This final chapter of the dissertation summarizes the general findings and discussions of this particular study with general conclusions in a broad sense. Then it mentions some implications for language learning and teaching. After presenting the limitations of the current study, it ends the dissertation with suggestions for further research.

6.2. General Conclusions

The aim of this dissertation was to provide with an explanation to the problem of foreign language acquisition within the limit of semantic domain of motion according to the definite language typology in the Talmyan sense with the thinking for speaking hypothesis as the theoretical framework (Slobin, 1996a). Comparing Turkish L1, a verb-framed language, and English L2, a satellite-framed language, according to their lexicalization patterns as used by the participants in this study, it sought the differences in terms of linguistic comprehension and expression of motion events in these two languages in a cross-linguistic analysis.

The linguistic comprehension and expression of motion events in these two languages were elicited via two tasks such as oral event description in these two languages and a two-way consecutive translation, both of which were accompanied by an eye-tracker device. Apart from these two tasks, an acceptability judgment task was implemented as the third data collection tool in order to elicit data in relation to comprehension of motion events in both languages. Having analyzed canonical motion event verbalization patterns in both languages from a cross-linguistic perspective, the study presented results to be evaluated in terms of challenging or supporting linguistic relativity (Whorf, 1956) and thinking for speaking (Slobin, 1996a) hypotheses.

The first task which was called as oral description task was developed to answer the first research question. The aim of the first research question was to define and compare the ways in which Turkish EFL learners perceived and expressed motion events in their Turkish L1 and English L2. An oral description task which was accompanied by an eye-tracker device was conducted in order to elicit the related data.

The data that came from the eye-tracking recordings and oral description transcriptions led to multiple layers of analyses. The four stages of the analysis revealed the following results:

(a) At the level of perceiving and conceptualizing of motion events upon watching them in real-life dynamic videos, the participants provided data whose results were in line with the Universalist view as their attention allocation patterns to the different elements of a motion event such as manner or path did not differ from one another when they were watching the videos with the purpose of describing them in Turkish and in English consecutively. Therefore, the thinking for speaking hypothesis as an extension of linguistic relativity hypothesis was not verified at this point as the languages did not seem to affect the attention patterns of Turkish EFL learners.

(b) At the level of expressing motion events in the form of oral descriptions upon watching the videos, the participants provided data whose results were in line with the linguistic relativity and thinking for speaking hypotheses as their verbalization patterns in two languages in hand differed from each other in accordance with their own canonical motion event verbalization patterns according to Talmyan typology.

(c) In terms of the effect of proficiency levels in English on participants' usage of motion verbs in their English L2, the data concluded with results that were in line with thinking for speaking hypothesis once again. As both the participants with a low level proficiency and the participants with a high level proficiency displayed usage of motion verbs in a similar fashion, their data did not differ from one another, which in return was proven to be statistically insignificant. Even though the learners get closer to native-like usage in their productions as their proficiency levels increase, their utterances still display traces of L1 patterns even at C1 level.

(d) In terms of semantic density analysis of the first research question, which can be thought in relation to Talmyan typology as it refers to the manner information in speakers' productions as the canonical verbalization patterns of the languages according to their typology, the results contradicted those in the literature. Turkish EFL learners did not omit manner information in their oral descriptions unlike the general tendency of verb-framed languages and they provided even higher SD2 results in their Turkish descriptions.

The second task of the dissertation was called as acceptability judgment task which was designed to answer the second research question. The purpose of the second research question was to provide comprehension data when linguistic stimuli was presented to the participants, which was the aspect that differed from the first research question as the task which was designed for the first research question did not have any linguistic stimuli. Therefore, this task was thought of as complementary to the first one. The data came from the sentence rankings by the participants upon watching motion event videos. The two stages of that analysis elicited following results:

(a) In terms of judging the acceptability of the sentences in their L1, the participants' overall performances supported the linguistic relativity hypothesis as they all ranked the sentences according to the necessities of their native language. As for L2, thinking for speaking hypothesis was at play as the acceptability judgments of the participants for English sentences were affected by their L1 patterns.

(b) Similar to the results of the proficiency levels of the participants that were reported in the first research question, the results for this research question were also insignificant. The judgments of the participants did not differ in accordance with their proficiency levels, which in return supported the linguistic relativity hypothesis since participants' L1 (Turkish) seemed to affect their perceptions and ranking of linguistic stimuli and thinking for speaking hypothesis since this effect was reflected on the judgments of sentences in L2 (English).

The final research question of this dissertation was answered by the oral translation task that was specifically designed to serve this aim. It elicited the effect of the participants' L1 on their L2 (English) translations and compared the translations of motion verbs in these languages from one another. This consecutive translation was also accompanied by an eye-tracker device. Similar to the first research question, the data which was collected through the eye-tracking recordings and oral translation transcriptions resulted in multiple layers of analyses. The four stages of the analysis revealed the following results:

(a) In terms of attention allocation to the certain elements of a motion event such

as manner verbs and path satellites in English sentences and path verbs and manner adjuncts in Turkish sentences, the results cannot be strongly defended in line with either the Universalist view or the relativist view as they did not provide consistent patterns.

(b) Oral translation results of the study were in line with the oral descriptions of the motion verbs as they both yielded canonical motion event verbalization patterns in accordance with Talmyan typology. The participants' oral translations were mostly in line with the target language requirements in their English to Turkish translations, which meant no effect of L2 on their L1 patterns. However, their Turkish to English translations displayed effects of source language which is a result that is in line with thinking for speaking hypothesis.

(c) The effect of proficiency levels of the participants on their oral translations was concluded in line with thinking for speaking hypothesis once again, for the proficiency levels did not cause a significant difference and the L1 transfer was still observed in all levels of proficiency even if it was less on the oral translations of C1 level participants.

(d) Semantic density results of the data that came from the oral translation task were in line with the Talmyan typology and those in the literature with the results of SD1 being higher in Turkish and SD2 being higher in English.

Apart from describing and comparing the motion verb usage of Turkish EFL learners in their Turkish and English, the ultimate aim of this dissertation was to provide with a continuum of evaluation of these learners' performances in their L2. This aim led to the analyses that were additionally conducted as the final two sub-research questions of the first and the third research questions. Instead of evaluating language learners' performances in their L2 as correct and incorrect usages, a continuum such as not acceptable, acceptable, and expected productions was proposed. As the data analysis also showed, most grammatically incorrect oral descriptions or oral translations by the participants in this current study could as well be evaluated as acceptable since they still conveyed the meaning. Therefore, with the aim of promoting more language production by language learners, their answers should not be evaluated as incorrect and correct only in order not to demotivate them and hinder their performance during their language learning processes.

6.3. Implications

This study used its elicited results in giving an explanation to usage differences of Turkish EFL learners in Turkish and English as their typologically different native and foreign languages respectively. In doing so, it set its discourse not on the correct or incorrect usages of language forms in comparison to native speakers' but semantically shaped lexicalization patterns which are set by their first language and being progressively shaped by their target languages. Therefore, this may provide language teachers with insights into the possible reasons why their learners keep using certain ways of expressions in the target language. Thus, instead of vainly trying to correct these so-called mistakes of their learners, language teachers may focus on showing ways as to how their students can differentiate their L1 lexicalization patterns from their lexicalization patterns in their L2 and make them parallel with the native-like usage if necessary. In addition, language teachers and test designers may consider restructuring their testing and assessment criteria. While testing students in their exams or evaluating their productions in their spoken or written performances, they may gauge students' answers in terms of being NA, A or E usages compared to native like usage, E being the closest end to native-likeness. Instead of having strict ends such as correct or incorrect, having a continuum would encourage language learners to produce more language and give assessors more flexibility for testing as some productions of language learners could still be evaluated as acceptable while not being completely correct or incorrect. As also suggested by Demirtaş (2009, p. 104), an *awareness-oriented teaching* can be employed by language teachers and the differences between typologically different languages and their naturally distinctive outcomes in language productions can be taught explicitly during language teaching process when it comes to motion verbs in particular, for this is one area in which even the most proficient language learners create erroneous utterances. Finally, the idea of a comparative approach suggested by Jarvis and Pavlenko (2008) seems to be in line with the purpose of this study. Providing language learners with explicit instances of analysis and comparison of the differences between L1 and L2 would help them understand the cross-linguistic differences so that they could shape their L2 concepts in accordance with the requirements of that specific L2.

As can be seen from the results of this present study in addition to those in the literature, it is clear that motion is a potentially problematic area in terms of language

comprehension and production even if it is a universal conceptual domain which means that it is shared by all languages of the world. The problematic aspect of motion is caused by its various lexicalization patterns in different languages. When language learners are in the process of learning a language that is typologically different from their L1, it causes even more problems. Therefore, it is safe to claim that teaching of motion verbs should be conducted explicitly as the implicit methods of teaching clearly do not work in this domain. Had they worked, language learners would not have displayed the problems that they had even at highest levels of proficiency as they would know that languages differ in their ways of expressing motion events. As also discussed by Jarvis and Pavlenko (2008), Cadierno (2008b), Demirtaş (2009) and Kilimci (2017), awareness on language typology should be raised consciously and language learners should be explicitly taught language forms with a focus-on-form approach (Long 1991) in regards to motion constructions and guided in this direction from the early stages of their language learning process. As Kilimci (2017) reports from Ellis (2002, p. 234), “grammatical structures or features that do not correspond one to one in L1 and L2 are suited for explicit instruction” (p. 1121). Stam (2015) also argues that bringing these constructions to the attentions of L2 learners would promote learners’ acquisition of L2 thinking for speaking patterns in a shorter period of time. Combining with explicit instruction, Cifuentes-Férez and Rojo (2015) also note this point in terms of translator education to investigate if translation students could be successfully trained in ‘thinking-for-translating,’ both in their L1 and L2 (p. 297).

Foreign language material developers should design language books with a specific reference to typological differences when it comes to motion verbs. Motion verbs seem to be a neglected area in foreign language teaching as it does not attract enough attention by either material developers or language teachers in return. As language teachers mostly tend to use course books as their primary source of reference in their language classes, they may have a tendency to neglect the language areas that are not covered in these books. Therefore, material developers should deal with this neglected area in order to help language teachers incorporate motion events into their classes as a language point which should get as much attention as other language forms.

Test designers who work in foreign language testing and assessment may work in cooperation with language teachers and design their tests in a way that the performances of language learners can be evaluated on a continuum rather than a two-end-scale. Having not acceptable answers on one end and native-like expected answer

on another and allocating a wider space on the continuum to the acceptable answers would give language learners more flexibility to produce more language in spoken or written forms without being limited by two ends such as correct and incorrect sharply.

A final point can be made in relation to Flecken et al. (2015). They argue that designing constructive teaching material is still a long way. However, the linguistic awareness that is aimed for language learners should start with language teachers. Therefore, this area of language teaching should be a component of teacher training prior to language teaching (Flecken et al., 2015).

6.4. Limitations

This current study had some limitations to its design and scope. These limitations can be mentioned in regards to participant number, eye-tracking methodology, the number of motion verbs and in return videos, and the lack of a non-verbal task in the study.

In terms of participant number, it can be said that the number of Turkish EFL learners in this study was fairly enough ($n = 74$) compared to most studies that have been conducted in this field. However, the number of English native speakers was too low ($n = 4$). Even if the data that was collected from these participants were not included in the analyses at any point and they were used only as a comparison base in terms of lexicalization patterns, it could have been more reliable to have more native speakers of the English language in the study to have a bigger comparison data.

As for eye-tracking methodology, it should be kept in mind that the methodology has its own limitations. Data loss is one such limitation, which is highly encountered in eye-tracking studies. Therefore, researchers have to eliminate some participants' data when the analysis process starts since some or most of their data was lost during the collection process and the remaining data is not enough for the analysis. This was the case with 12 participants in the first task and 8 participants in the third task of this current study even though data was collected from all 74 participants. Another limitation of eye-tracking methodology is the reasons why a participant looks at a specific point on the screen. There may be different reasons why a participant allocates his attention to certain points while watching a video or reading a sentence or a text. These reasons can only be interpreted but cannot be known for certain especially in reading studies.

There were 10 motion verbs in this study along with their 5 satellites. They formed a pool of 50 motion verbs in total, 30 of which were used in the first task and 20 of which were used in the second task. Because there were only 5 satellites which were displayed in three backgrounds, this may have affected the participants' attention allocations since they would be familiar and in return not watched after a few videos once they noticed that the same backgrounds were used.

Final limitation that is mentioned above is related to the lack of a non-verbal task in the data collection process. As the first and third tasks in this study aimed to elicit linguistic data and the second task aimed to elicit linguistic comprehension data, a non-verbal task such as non-verbal categorization task could have added more to the cognitive side of this dissertation.

Apart from the limitations that have been presented so far, one final remark can be made regarding the communication among participants during data collection weeks. The nature of this communication may or may not have affected the reliability of the data collection process. Since the data collection took place over four weeks, it is possible that the participants talked to other participants during the process as majority of them were classmates. Therefore, before the data collection procedure, they may have asked for details or clues from each other. However, it is considered that this is not likely to have affected the reliability of the end results of the dissertation since the participants were not aware of the aims of the study while they were providing language production and comprehension data. During the process, the researcher aimed at giving them enough information to guide them through the tasks. Yet, they did not know what was in the focus of the research so that their performances would not be manipulated in any sense. Thus, the communication among participants should not be thought as effective on the reliability of the data.

6.5. Suggestions for Further Research

Firstly, some suggestions in relation to the limitations of the study will be given. Then some general suggestions for further research will conclude the chapter and the dissertation.

In order to have bigger English L1 comparison data to the English L2 data, future studies could consider having more native speakers of English in their data collection processes. To take this comparison data even further, English L1 data could

be collected from different varieties of English to investigate if they are at play in motion event verbalizations.

To compensate for the limitations of the eye-tracking methodology, the physical environment and conditions of the data collection should be controlled very strictly. Another potential solution to data loss could be having shorter sessions of data collection with multiple breaks in between. The participants in the study reported that it had been challenging for them to focus on the screen while trying not to look elsewhere for around 15 minutes. Therefore, the duration could be shortened for individual participants even if it would lengthen the entire data collection process for the researchers.

In terms of real-life stimuli dynamic videos, future studies could consider to shoot more videos to have a larger pool with various backgrounds so that the participants would also stay alert to follow the changes in the videos.

As for the lack of a non-verbal task in this dissertation, future studies could consider incorporating such a task to elicit pure comprehension data. In addition to verbal tasks which elicit linguistic data, non-verbal tasks add more to the cognitive sides of motion event studies, which therefore support their results with various kinds of data.

As also stated in the implications, explicit formal instruction on the use of motion verbs could be tested in experimental designs. Building on few studies with this design in the literature, the implementation period could be longer. The participants could sit an additional delayed posttest in order to observe the delayed effect of explicit teaching of motion verb constructions.

Another point that could be attended for future studies could be the usage of neutral verbs by the participants in their English L2 productions and Turkish to English oral translations. As they were not within the scope of this current dissertation, they were quantitatively reported but not individually analyzed here. However, they seem to have a potential to reveal in terms of their preferences to motion verbs especially in oral translations.

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APPENDICES

APPENDIX A

INFORMED CONSENT FORM

This research is conducted by Nebahat Badem, PhD candidate at Çukurova University. It aims to investigate the expression of particular events in Turkish and English languages by English language learners. There is an outline of the methodology to be used below. Out of 3 tasks, the first one includes watching certain videos and describing them. The second one is about deciding the acceptability of some sentences about the videos you will watch. Lastly, the third task asks you to translate some sentences from English to Turkish and vice versa. You can find details below on the table. There will be an eye-tracking device accompanying the first and the third tasks which will help the researcher to analyze your eye movements with the aim of gaining some perspective about your conceptual and linguistic representations of above mentioned events in your cognition. The entire process will be audio-taped for later analysis of your descriptions. The time allocation for each task is also detailed below. Please read the information on the table.

TASKS	Description		Time Allocation
Informed Consent Form			Approximately 2 min.
Short interview for demographic information			Approximately 2 min.
Video Description	Oral	Eye-tracking	Approximately 15 min.
Break			5 minutes
Acceptability Judgment	Nonoral	Sentence ordering	Approximately 8 min.
Translation	Oral	Eye-tracking	Approximately 15 min.
Post participation information			Approximately 3 min.
Total Time			Approximately 50 min.

Participation in this study is totally voluntary. Your responses along with your answers during the tasks will be kept confidential and will be solely used for scientific and academic purposes. They will not be evaluated in terms of being right or wrong.

Thank you for your participation in this study. Should you have any questions in mind, please contact Instructor Nebahat Badem at: nbadem@adanabtu.edu.tr.

“I realize that I participate in this study voluntarily and I acknowledge that I am free to stop and leave the study at any time I please. I understand and accept the information I have read above and I know my answers will be used for scientific and academic purposes.”

Name and Surname:

Signature:

Date:

APPENDIX B

DEMOGRAPHIC INFORMATION FORM

Participant Number:	
Name and Surname:	
Age:	
Gender:	
Educational Background:	
Languages spoken:	
Have you ever lived in another country more than six months?	
If yes, where, when, why and for how long?	
Language proficiency exam and score?	
Phone number:	
E-mail address:	

APPENDIX C

ACCEPTABILITY JUDGMENT TASK SENTENCES

This is the order I would put it in the most natural way:

March (into, out of, up, down, across)

- ☐ She is marching into the building.
- ☐ She is entering the building by marching.
- ☐ She is marching and entering the building.
- ☐ She is marching the building.

- ☐ She is marching out of the building.
- ☐ She is exiting the building by marching.
- ☐ She is marching and exiting the building.
- ☐ She is marching of the building.

- ☐ She is marching up the stairs.
- ☐ She is ascending the stairs by marching.
- ☐ She is marching and ascending the stairs.
- ☐ She is marching above the stairs.

- ☐ She is marching down the stairs.
- ☐ She is descending the stairs by marching.
- ☐ She is marching and descending the stairs.
- ☐ She is marching during the stairs.

- ☐ She is marching across the street.
- ☐ She is crossing the street by marching.
- ☐ She is marching and crossing the street.
- ☐ She is marching afloat the street.

Limp (into, out of, up, down, across)

- ☐ She is limping into the building.
- ☐ She is entering the building by limping.
- ☐ She is limping and entering the building.
- ☐ She is limping the building.

- ☐ She is limping out of the building.
- ☐ She is exiting the building by limping.
- ☐ She is limping and exiting the building.
- ☐ She is limping with the building.

- ☐ She is limping up the stairs.
- ☐ She is ascending the stairs by limping.
- ☐ She is limping and ascending the stairs.
- ☐ She is limping the stairs.

- ☐ She is limping down the stairs.
- ☐ She is descending the stairs by limping.
- ☐ She is limping and descending the stairs.
- ☐ She is limping into the stairs.

- ☐ She is limping across the street.
- ☐ She is crossing the street by limping.
- ☐ She is limping and crossing the street.
- ☐ She is limping of the street.

En doğal şekliyle şu sıralamada söylerim:

Hop

- ☐ Kadın binaya giriyor.
- ☐ Kadın binaya sekerek giriyor.
- ☐ Kadın sekiyor ve binaya giriyor.
- ☐ Kadın binayı giriyor.

- ☐ Kadın binadan çıkıyor.
- ☐ Kadın binadan sekerek çıkıyor.
- ☐ Kadın sekiyor ve binadan çıkıyor.
- ☐ Kadın binada çıkıyor.

- ☐ Kadın merdivenlerden çıkıyor.
- ☐ Kadın merdivenlerden sekerek çıkıyor.
- ☐ Kadın sekiyor ve merdivenlerden çıkıyor.
- ☐ Kadın merdivenlere çıkıyor.

- ☐ Kadın merdivenlerden iniyor.
- ☐ Kadın merdivenlerden sekerek iniyor.
- ☐ Kadın sekiyor ve merdivenlerden iniyor.
- ☐ Kadın merdivenlere iniyor.

- ☐ Kadın caddeden karşıya geçiyor.
- ☐ Kadın caddeden karşıya sekerek geçiyor.
- ☐ Kadın sekiyor ve caddeden karşıya geçiyor.
- ☐ Kadın caddeyi karşıya geçiyor.

Tiptoe

- | | |
|--------------------------|---|
| ☐ | Kadın binaya giriyor. |
| ☐ | Kadın binaya parmak ucuna basarak giriyor. |
| ☐ | Kadın parmak ucuna basıyor ve binaya giriyor. |
| ☐ | Kadın binayı giriyor. |
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|--------------------------|--|
| ☐ | Kadın binadan çıkıyor. |
| ☐ | Kadın binadan parmak ucuna basarak çıkıyor. |
| ☐ | Kadın parmak ucuna basıyor ve binadan çıkıyor. |
| ☐ | Kadın binada çıkıyor. |
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- | | |
|--------------------------|---|
| ☐ | Kadın merdivenlerden çıkıyor. |
| ☐ | Kadın merdivenlerden parmak ucuna basarak çıkıyor. |
| ☐ | Kadın parmak ucuna basıyor ve merdivenlerden çıkıyor. |
| ☐ | Kadın merdivenlere çıkıyor. |
-
- | | |
|--------------------------|--|
| ☐ | Kadın merdivenlerden iniyor. |
| ☐ | Kadın merdivenlerden parmak ucuna basarak iniyor. |
| ☐ | Kadın parmak ucuna basıyor ve merdivenlerden iniyor. |
| ☐ | Kadın merdivenlere iniyor. |
-
- | | |
|--------------------------|---|
| ☐ | Kadın caddeden karşıya geçiyor. |
| ☐ | Kadın caddeden karşıya parmak ucuna basarak geçiyor. |
| ☐ | Kadın parmak ucuna basıyor ve caddeden karşıya geçiyor. |
| ☐ | Kadın caddeyi karşıya geçiyor. |

APPENDIX D**TRANSLATION TASK SENTENCES**

Please translate the following sentences from Turkish to English.

1. Kız keçi gibi sıçrayıp atlayarak gruba doğru ilerledi.
2. Göksel yuvarlana yuvarlana sahnenin sağına kayd.
3. Duru aceleyle içeri girdi.
4. Aylin yangın merdiveninden yuvarlandı.
5. Can arkasını dönüp gitti.
6. Duru koşarak Deniz'den uzaklaşt.
7. Duru kapıdan geçti.
8. Kaya arkasını dönüp yürüdü.
9. Bilge hemen sıçrayarak yataktan fırladı.
10. Bilge eve vardığında koşarak yukarı çıktı.
11. Özge pencereden biraz uzaklaşt.
12. Dışarıdaki güneş odaya süzülüyordu.

Please translate the following sentences from English to Turkish.

1. She marched into the shop.
2. Harry could feel the Felix Felicis wearing off as he crept back into the castle.
3. Harry ran down the stairs two at a time.
4. The telescope and trainers in his lap rolled across the floor.
5. Dumbledore walked into the sitting room.
6. Harry leapt over a low table.
7. They float in through your ears.
8. The barman walked away.
9. I imagine that Riddle climbed down.
10. Harry climbed into the boat carefully.
11. The hospital doors opened again and Hagrid walked in.
12. Then he limped away without another word.

CURRICULUM VITAE

Nebahat BADEM

July 2020

EDUCATION

- 2014 - 2020** Çukurova University, Ph.D.
 Major: English Language Teaching
 Advisor: Assoc. Prof. Dr. Cem Can
- 2012 - 2014** Çukurova University, M.A.
 Major: English Language Teaching
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- 2008 - 2012** Çukurova University, B.A.
 Major: English Language Teaching

EMPLOYMENT

- 2014 – Present** English Language Instructor, School of Foreign Languages,
 Adana Alparslan Türkeş Science and Technology University
- 2013 – 2014** English Language Teacher, Diem English Globe Language
 Education Center Adana
- 2012 – 2013** English Language Teacher, British Culture Language Schools
 Adana

LANGUAGES

- Turkish:** native
- English:** advanced
- French:** beginner

CONFERENCES & TRAINING

- How does EU 24 – 27 April 2012
 Development Çukurova University and Economy University, Poland
- Process Affect Me? Participant

Foreign Language The Fourth International ELT Students Conference 6 – 8 May, 2013	Alliance Française, Adana – French A1 Level / 1 June 2011 Organizing Committee Member
The Fourth International ELT Students Conference 6 – 8 May, 2013	Oral Presentation Titled as “A Classroom Research on the Reasons of Lack of EFL Learners’ Motivation towards Writing” by Nebahat Badem
LIF2014 – Language in Focus	Oral Presentation of the Paper Titled as “A Comparison of Communication Verbs Used by Turkish EFL Learners and Native Speakers of English Language – A corpus-based Study” by Fatih Ünal Bozdağ & Nebahat Badem
LIF2015 – Language in Focus	Oral Presentation Titled as “The Usage of Phrasal Modals by Turkish EFL Learners and Native Speakers” by Nebahat Badem
IATEFL TTed SIG 2015	Oral Presentation of the Paper Titled as “Written Corrective Feedback Types on L2 Writing by Turkish Adult EFL Learners” by Nebahat Badem & Fatih Ünal Bozdağ
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LIF2016 – Language in Focus	Oral Presentation Titled as “Tracing the Use of Phrasal Verbs in ICLE and BAWE: A Corpus Based Analysis” by Nebahat Badem & Tuğba Şimşek

HOPES Teacher Trainee
Training Course

British Council e- Trainee
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Child Protection
Awareness

LIF2018 – Oral Presentation Titled as “Spotting Phrasal Verbs in Written
Language in Focus and Spoken Registers: Are EFL Learners Aware of the
Difference?” by Tuğba Şimşek & Nebahat Badem

FOCI VXII – Participant and Panelist – Action Research and Curriculum
Forum on Development: Implications and Possibilities
Curricular Issues

LIF2019 – Oral Presentation Titled as “A Comparison of Turkish EFL
Language in Focus Learners’ Use of Phrasal Verbs to L1 English Users’: A Corpus-
Based Study” by Nebahat Badem & Tuğba Şimşek

PAPERS

Bozdağ, F. Ü., & Badem, N. (2017). A Comparison of Communication Verbs Used by
Turkish EFL Learners and English Native Speakers: A Corpus Based Study.
Gaziantep University Journal of Social Sciences, 16(3).

Babanoğlu, M. P., Ağçam, R., & Badem, N. (2018) Explicit and Implicit Written
Corrective Feedback in Higher EFL Education: Evidence from Turkey. İnönü
University Journal of the Faculty of Education, 19(3), 104-116.

CURRENT RESEACRH INTERESTS

Cognition

Language and Cognition

Linguistic Representation in Cognition

Motion

Eye-Tracking Methodology