PRESCHOOL CHILDREN'S STORY CONSTRUCTION AND USE OF DEIXIS IN FICTIONAL NARRATIVES

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ABSTRACT

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The Deictic Shift theory suggests that for interpreting an utterance, deictic terms must be used and one's Deictic Center needs to be shifted with respect to the speaker's. In the present study, Turkish preschool children's fictional narratives are studied by examining the deictic terms they use to construct the story-world context within the theory of Deictic Shift and Deictic Center. For this goal, narratives elicited by a picture-based book by 47 preschool children between ages 3;6 and 6 are explored and compared to 23 adults' narratives. Younger children used more demonstrative deictic terms, suggesting that they are tuned to the picture-book rather than the story context. They also used temporal deictics less frequently than adults, indicating that temporal deictics develop alongside the ability of plot organization. Overall, the results show that narrative development goes hand in hand with the development of how the expressions of the real-world context are shifted to the story-world context and the development of deictic markers to convey psychological proximity.

Keywords: narrative development, story-world, deictic center, deictic shift, storytelling

ÖZ

OKUL ÖNCESİ ÇOCUKLARIN HİKAYE KURGULAMALARI VE KURGUSAL HİKAYELERDE GÖSTERİMSEL TERİM KULLANIMLARI

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Deiktik Değişim teorisi, bir ifadeyi yorumlamak için deiktik terimlerin kullanılmasının ve konuşmacıya göre deiktik merkezin değişmesinin gerektiğini öne sürer. Bu çalışmada Türkçe konuşan okul öncesi çocuklarının kurgusal anlatıları ile Deiktik Merkez ve Deiktik Değişim teorisi içerisinde hikâye dünyası bağlamını oluşturmak için kullandıkları deiktik terimler araştırılmıştır. Bu amaç için, 3;6 ve 6 yaşları arasındaki 47 okul öncesi çocuğun resimli bir kitabı hikâyeleştirdikleri anlatıları incelenmiş ve 23 yetişkinin hikayesiyle karşılaştırılmıştır. Daha küçük çocuklar daha gösterici bir ifadeyle, hikâye bağlamına kıyasla resimli kitaba odaklanıp buna uygun deiktik gösterici terimler kullanmışlardır. Ayrıca zaman belirten deiktik terimleri yetişkinlerden daha az sıklıkla kullanmışlardır ve bu da zamansal terimlerin hikâye kurgulama yeteneğinin yanında geliştiğini göstermektedir. Genel olarak sonuçlar; anlatı gelişiminin, gerçek dünya bağlamında kullanılan dilin hikâye dünyası bağlamındaki değişimi ile deiktik ifadelerin psikolojik yakınlığı belirtmedeki gelişimi ile paralel gittiğini göstermektedir.

Anahtar sözcükler: anlatı gelişimi, hikâye dünyası, deiktik merkez, değiktik değişim, hikâye anlatımı

To my mother and father…

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ACC	accusative case
DAT	dative case
LOC	locative case
ABL	ablative case
PAST	past tense suffix
QUOT	quotative suffix
IMPF	imperfective suffix
AOR	aorist
PLU	plural suffix
GEN	genitive case
POSS	possessive suffix
PASS	passive suffix
REF	reflexive suffix
CONJ	conjunction
EXCL	exclamation
COP	copula
COM	comitative case
CV	converb
VN	verbal-noun
NEG	negation suffix
CHILDES	Child Language Data Exchange System
CHAT	Codes for the Human Analysis of Transcripts
SES	socioeconomic status

CHAPTER 1

INTRODUCTION

Narrative is an important property of human language and an important aspect of children's linguistic development. Narratives display a different developmental trajectory than other elements of language acquisition; in particular, they necessitate a special analysis of deictic information; i.e. the analysis of deictic terms, the referents of which change in the discourse world. Thus, this thesis addresses Turkish pre-school children's narrative development from the viewpoint of the development of deixis.

Lyons (1968) explains the notion of deixis as handling "the 'orientational' features of language which are relative to the time and place of utterance." (p. 275). For Fillmore,

> Deixis is the name given to the formal properties of utterances which are determined by, and which are interpreted by knowing, certain aspects of the communication act in which the utterances in question can play a role." (Fillmore, 1997, p. 154).

Fillmore (1997) outlines five grammatical forms and lexical items that are referred to as deictic terms. These terms are interpreted only by the social context in which they are uttered, and the roles of these terms might be interchangeable according to the context they are used in. (a) Person deixis is the communicators in a communicative act, (b) place deixis is the location in which these people are, (c) time deixis is the combination of the encoding and the decoding time of the utterance, (d) discourse deixis refers to the parts of discourse, and (e) social deixis shows the social roles and parts of the individuals in a conversation (Fillmore, 1997).

Deictic expressions could be used both by gestural demonstration (i.e. by pointing to the object) or symbolic demonstration. 'This pencil' is a gestural demonstration when accompanied by pointing, and 'this year' is an example of symbolic usage (Levinson, 2004).

According to Goldin-Meadow and Alibali (2013), gestures play an important role in creating and understanding the language starting from the early childhood years. Firstly, it is essential for producing language: the visuo-spatial context of the utterance must be parallel to the speech. Moreover, the speaker makes can break down the units of speech with gestures. Secondly, children begin to gesture at early months of age, and it is claimed that the first gestures are for deixis. Gestural presentation is necessary for attracting the addressor's attention to the entity or the topic and necessary for language acquisition as Levinson (2004) explains. Thus, demonstrative deixis is crucial because children learn many things through gestures.

For the story teller, it is important to create the story world's spatiotemporal information in the narrative. This can be analyzed in narratives in the scope of the terms 'Deictic Center' and 'Deictic Shift'. The Deictic Center is a term used for the point of reference in which a term is uttered, and it is mostly the speaker's location and time. The concept was introduced by Bühler (1982) and Lyons (1968, 1977) (explained in more detail in Chapter 2). The related term, Deictic Shift indicates that for the comprehension of an utterance, deictic terms must be interpreted correctly by making a shift from oneself to the speaker or the writer. More specifically, it refers to the thesis that "the deictic field is constituted on a different basis in fictional narrative than it is in conversation and other language situations" (Galbraith, 1995, p. 32)**.** For language users, constructing a Deictic Center and enabling the listener to do deictic shifts when necessary obviously necessitate narrative competence (Duchan, 1995).

A related concept is Deictic Projection, which refers to the speaker's projection of his/her center to an imaginary situation which has the same linguistic devices as the real-world center (Lyons, 1977). Thus, the Deictic Shift Theory holds that there must be a shift from the center of the speaker and the listener to tell and comprehend a story. The Deictic Shift enables the listeners and readers to comprehend the projected center. Therefore, both terms serve for the same situation; in our case there is a shifted Deictic Center which is the narrative-world.

To date, Turkish children's narrative development has been tackled from various perspectives (Berman, 1988; Aksu-Koç & Nicolopoulou, 2015) (see Chapter 2). Demonstratives and locative terms in Turkish have been studied in conversations of children and proximal relations of these uses have been explained according to their referents (Küntay & Özyürek, 2002, 2006), but to the best of our knowledge, deictic pronouns have not been addressed in the context of narrative production. Therefore, studying children's narrative structuring in terms of deixis in Turkish would contribute to psycholinguistics and cognitive science research.

1.1. Purpose of the Study

This study examines Turkish preschool children's narrative production in terms of their use of deictic terms for generating the story world's environment, situated against a developmental perspective.

Our departure point is that children's use of deictic terms to refer to entities, places, and time in their stories indicates their ability in story-world construction. Within a developmental perspective, this study aims to answer the following

(1) Do 3, 4, and 5-year-old children differ from each other in their storytelling performance in terms of Deictic Shift Theory?

(2) Do 3, 4, and 5-year-old children differ from adults in their storytelling performance in terms of Deictic Shift Theory?

We hypothesized that:

$H_{1:}$ The preschool children (children aged 3;6 and 4-years) will not be as developed as older children (namely children 5-year and older) or adults in terms of their use of deictic terms to construct the Deictic Center of the story.

H_2: Adults can differentiate the real-world context and the fictional context, so they can properly use the deictic terms to perform in a story-world context; and their term usage is different than preschool children. Therefore, they do not have difficulties to stay in the story-world's center

We limit our study with the production of deictic terms (see Section 1.2.2 below) and leave comprehension of deixis out of scope. In the rest of this chapter, the background to the study, i.e. the topic of indexicals, including deixis and demonstratives, as well as the Turkish pronoun system will be provided.

1.2. Background: Pronoun and Deixis

1.2.1. Deixis

Deixis refers to the properties of language which are interpreted attentionally, intentionally, and contextually (Levinson, 2004). All natural languages have deixis. The Turkish language has deictic terms such as adverbs (e.g. *şimdi* 'now'), demonstrative pronouns (e.g. *sen*, 'you', *o* 'he/she'), and expressions which involve deictic markers. For example; *bu* 'this' in example (1) is a deictic marker for an NP involving *bu* at the specifier position. The pronoun *bu* is interpretable in the context of conversation, i.e., its reference depends on the speaker's demonstrations or intentions and its reference varies from context to context. In Turkish, which has a three-way pronominal system, *bu* indicates that the book is close to both the speaker and the listener in a real-world context. (There will be more on the pronominal system below and deictic expressions in Chapter 3).

(1)	Bu	kitap-ı	Ayşe-ye	al-dı-m
	This	book-ACC	Ayşe-DAT	buy-PAST-1PS
	'I bought this book to Ayşe'			

An example utterance for different types of deixis is provided in example (2). To interpret the reference of *o* 'he/she', *dün* 'yesterday', and *bura-* 'here', we need to know the context of speaking in which this sentence is uttered.

(2)	O	dün	bura-da	ol-malı-ydı
	She/he	yesterday	here-LOC	be-MUST-PAST
	'He/she must have been here yesterday.'			

The area of pragmatics studies how utterances are interpreted in relation to the real-world knowledge, and how the sentence structure is affected by the speaker and the listener. Ever since Lyons (1977), it has been argued that deictic terms have pragmatic interpretations (Zubin & Hewitt, 1995). Hence, deixis is closely related to pragmatics.

Deictic expressions and deictic markers are different (Stirling & Huddleston, 2002). A deictic expression for Turkish would be *o adam* 'that man', and the deictic marker would be *o* 'that'. For the scope of this study, we leave out deictic expressions out of context.

Gestures such as pointing, the referents with fingers, head movements, and eye gaze are very common with deictic expressions. These are named as indexing acts (Stirling

& Huddleston, 2002). Indexing acts are important especially in a storytelling environment which includes a picture-based book since the pictures could both belong to the story-world and the real-world. Deictic expressions and indexing acts complete each other in the speaking context. The gestures, eye and head movements help the speaker to resolve the referents and help the listener to interpret deixis. For example, if I want a pen from someone by referring to it as *şu kalem* 'that pen', with a pointing gesture to this object, I could successfully help the agent resolve which pen I want him or her to give me.

However, the role of gesture is beyond the scope of this study. because we have analyzed only the text and audio records of the narratives.

Deictic expressions are also related with subjectivity since they demonstrate a subjective orientation. Their referents depend on the speaker's intention and the subjective context. Linguists, philosophers, and narrative theorists who have identified the extralinguistic, subjective and context-dependent aspect of a language named this differently (indexicals, deictics etc.). Subjectivity is involved because these terms can only be understood with reference to "I", "here", and "now" (Galbraith, 1995). For example, the terms '*here, yesterday, he/she* in example (1) above could only be understood by the listener or the reader who has the knowledge of the I-HERE-NOW of the context in which these terms are used.

The deictic expressions are related to a specific context which the speaker constructs, and these expressions connects the coordinates in the context. When a speaker uses the personal pronoun 'I', he/she speaks about him or herself. However; if the speaker is in the act of storytelling when using 'I', the personal pronoun referent should be interpreted in the story context. It could be a character speaking in the story.

1.2.2. Deictic and Anaphoric Usage of Pronouns in the Data

When speaking of deixis, it is important to mention the literature which differentiates and explains anaphors and deictic pronouns. One usage of the pronouns is called anaphoric, i.e. a pronoun whose reference can be resolved within a text. For a pronoun to be anaphoric, it has to have its referent before the pronoun is uttered (Büring, 2011). An example from this study's data is given in (3). Here, the utterance *Geyik ağaca takılan çocuğu almış* 'The deer took the boy who is stuck to a tree' takes place before (3).

(3)	Sonra	da	o-nu	bırak-mış
	Then	CONJ	he-ACC	drop-QUOT
	'Then it dropped him.'			

(6-year-old)

In (3), we need to understand the linguistic context to interpret *o* 'him'. In this case, we can take the pronoun *o* referring to the boy who gets stuck on the tree branch, which has already been introduced in the prior text, i.e., the referent (*çocuk 'child'*) is the antecedent of the anaphoric expression (King & Lewis, 2016).

Büring (2011) provides a three-way distinction for third-person definite pronouns that exists in traditional grammars. He gives the examples below (Büring, 2011).

(4) Every soprano bought her union card. (Büring, 2011, pp. 974, example 12a)
bound pronoun

(5) John met a soprano. He liked her. (Büring, 2011, pp. 974, example 12b)
anaphoric pronoun

(6) (scenario: *a woman walks in*)
She must be a soprano. (Büring, 2011, pp. 974, example 12c)
deictic pronoun

In example (4), 'her' is used for every soprano and we don't need to know the context to understand that. It is bound to the sentence. However, to understand the referents of anaphoric and deictic pronouns, we need to know the linguistic or extralinguistic context of the utterance.

In example (5), we understand that 'he' refers to 'John', and 'her' refers to the soprano from the first sentence and this usage is anaphoric. In example (6), the extralinguistic information, which is the scenario given in parentheses, enables us to interpret the referent of 'she' as the soprano who walks in, and this usage is deictic.

The deictic use of pronouns is understood within the context of the speaking (Büring, 2011). Although the context of the story is set during the narration process, and all the pronouns would have a referent inside the narrative; we can take *ora-* in example (7) as a deictic adverb uttered in the context of speaking (i.e. in the narrative world).

(7)

Baykuş	var-mış	ora-da	da
Owl	exist-QUOT	there-LOC	CONJ

'And the owl was there.'

(5-year old)

In summary, while the term deixis refers to a form whose referent can vary with respect to the features of the utterance act (i.e. the time, the place and the participants), anaphora establishes a relation between an anaphor and its antecedent (Stirling & Huddleston, 2002). Anaphora and deixis are closely related concepts, and they have a lot in common. Stirling and Huddleston (2002) summarize the common points under two major categories:

1) Forms may be deictic anaphoric at the same time. Stirling and Huddleston (2002) give the examples below:

(8) Sue is coming over later; we are having lunch together.
(Stirling & Huddleston, 2002, pp. 1454, example 9i)

(9) I was born in London and have lived here all my life.
(Stirling & Huddleston, 2002, pp. 1454, example 9ii)

(10) I was born in London and have lived there all my life.
(Stirling & Huddleston, 2002, pp. 1454, example 9iii)

In example (8), since the 1st person pronoun 'we' is used deictically, and 'Sue' is used anaphorically, 'we' refers to me (the speaker) and Sue.

In example (9), 'here' could be both anaphoric and deictic. If it is used to refer to the previous utterance of 'London', it is anaphoric. However, if it refers to the place of speaking, it is deictic. 'There' in example (10), is also both anaphoric and deictic. If it

refers to ‘London’, it is anaphoric. But if it refers to a distant place from the context of speaking, it has a deictic usage (Stirling & Huddleston, 2002).

2) Some items can function either as a deictic marker or as an anaphor (the underlined items in the first sentence of each set are deictic, whereas those in the second sentence of the set are anaphoric). Stirling and Huddleston (2002) give the examples:

(11) What that he got in his hand? Vs. He wants 30 US dollars but that’s too much.
(Stirling & Huddleston, 2002, pp. 1455, example 10i)

(12) She lives only half a mile away. Vs. I didn’t see her very often when I was at College: she lived too far away.
(Stirling & Huddleston, 2002, pp. 1455, example 10ii)

(13) They’ll be here soon. Vs. She was stunned but soon recovered.
(Stirling & Huddleston, 2002, pp. 1455, example 10iii)

In example (11), ‘that’ in the first sentence is deictically used since its referent could be interpreted according to the context of speaking. But ‘that’ in the second sentence is anaphorically used and it refers to ’30 US dollars’ which is uttered before the anaphoric term.

In example (12), ‘half a mile away’ is a relational term. It is understood according to the place of utterance of this sentence. However, the term ‘too far away’ is deictically used and could be interpreted as ‘away from college’. Stirling and Huddleston (2002) named this usage as implicitly deictic.

‘Soon’ in first sentence in example (13) is interpreted according to the time of the sentence is uttered and it is deictic. However, ‘soon’ in the second sentence is used to refer to the time after being stunned, it is anaphoric.

1.3. The Prononominal System of Turkish: The Use of Demonstrative Pronouns “bu, şu, and o”-

Pronouns are expressions used to refer to people, objects, or events which are previously mentioned (i.e. in an anophoric sense) or could be understood from the discourse context (i.e. in a demonstrative sense). The Turkish demonstrative system is shown to have a three-way distinction (Küntay & Özyürek, 2002). In Turkish grammar, *bu* ‘this’, *şu* ‘that’, and *o* ‘that’ are demonstrative pronouns used in different situations. The difference between *bu, şu,* and *o* has to do with the proximity of the referent to the speaker and the listener (but see Peeters & Özyürek, 2016, summarized in Section 5.2.1, for a different view than the ‘egocentric’ view of demonstratives). *Bu* is used for the objects which are close to the speaker, and *o* is used for the objects which are distant from the speaker (Göksel and Kerslake, 2005). When used demonstratively, the content of these pronouns changes according to the context. As in English, these same pronouns can also be used as anaphors, i.e. their interpretation depends on the previous use of linguistic expressions. The pronoun *şu* is mostly used when the speaker wants to draw attention to an entity for the first time. Thus, *şu* is usually cataphoric, while *bu* and *o* are generally anaphoric.

Here, we should also mention locative pronouns. Equivalents of English locative pronouns ‘here’, ‘there’ and ‘yonder’ are derived from the following demonstratives in Turkish: *bura-, şura-*, and *ora-*. However, these locative terms cannot be used in their bare forms. They take case suffixes as in examples (14) and (15):

(14) Bura-ya

here-DAT

‘to here’

(15) Şura-da

Yonder-LOC

‘belonging to the places yonder’

or they can take the plural suffix as in example (16) (Göksel & Kerslake, 2005):

(16) Şura-lar

Yonder-PLU

‘those places yonder’

Also, they can be inflected both for number and genitive case at the same time:

(17) Bura-nın

Here-GEN

‘belonging to here’

(18) Ora-lar-ın

There-LOC

‘belonging to places there’

In narratives, locative pronouns refer to places which are located in the story-world, and they are often deictic terms which should be understood in the story context. For example, in a sentence like (19), *burada* ‘here’ cannot be embraced in the real-world’s context but needs a Deictic Shift; i.e. it should be evaluated in the spatial context of the story being narrated. Thus, *burada* is evaluated as a deictic term in the story-world by the listeners and it refers to the jungle in that world.

(19)	Orman-a	git-ti-ler	bura-da	bir	arı	kovan-ı	gör-dü-ler
	Forest-DAT	go-PAST-PLU	here-LOC	a	bee	hive-P3S	see-PAST-PLU

‘They went to the forest, they saw a bee hive here (there).’

1.4. Zero Pronoun

In Turkish, the verb gives the information of the subject and the subject information without an overt subject NP in the sentence is called zero pronoun (Yüksel & Bozşahin, 2002). For example, sentence (20) does not contain an overt subject; the third person singular information is derived from the verb *gir-miş-Ø* '(it) entered' with the zero personal suffix.

(20)	O-nun	iç-i-ne	gir-miş
	It-GEN	inside-POSS-DAT	enter-QUOT
	'(It) entered it.'		

This is called pro-drop. Since Turkish is a pro-drop language, pronominal usage of subjects, objects, and indicators of possessive noun phrases can be dropped in utterances. The reason for pro-drop could be both stylistic or required for the grammatical or informational structure. For example;

(21) 'Deniz is cooking pasta.'

Deniz makarna pişiriyor.

'Deniz loves pasta.'

Deniz makarnayı seviyor.

'Deniz is hungry.'

Deniz aç.

Pro-drop can be used demonstratively as well as anaphorically.

(22) 'Deniz is cooking pasta.'

O makarna pişiriyor.

'She loves pasta.'

O makarnayı seviyor.

'She is hungry.'

O aç.

For a correct grammatical structure, zero pronouns are used instead of "Deniz" or "she". With zero pronouns, the sentences of the narrative refer to the same subject:

(23) 'Deniz is cooking pasta.'

Deniz makarna pişiriyor.

'(She) loves pasta.'

Ø makarna seviyor.

'(She) is hungry.'

Ø aç.

Using overt pronouns in a sentence mostly reports a change in the subject or object. In example (24), the repeated usage of the overt pronoun would convey the information that there are two different subjects which are being talked about. But with the zero pronoun, (25) is understood to convey information about the same entity.

(24) O matematik kulübüne üyedir. O liderlik yapmayı çok sever.

'He is a member of the math team. He likes to be the leader.'

(25) O matematik kulübüne üyedir. Ø liderlik yapmayı çok sever.

'He is a member of the math team. (He) likes to be the leader.

In this study, only the overt pronouns are taken into consideration to analyze the Deictic Center of the story. The use of zero pronouns and inflected information in the verb are not included in the analysis.

The rest of the thesis proceeds as follows: In Chapter 2, the relevant literature on narratives, deixis in narrative, and children's narrative development are discussed. In Chapter 3, the methodology of the present study is explained. Then in Chapter 4, the findings of the study are presented. Lastly, in Chapter 5, the results are summarized, and some conclusions are drawn.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the notions narrative, deixis and deictic terms, introduces theories of deixis, and aspects of children's narrative development. Section 1 explains what narrative is theoretically and outlines the mental model explanations for narratives, as well as the concept of narrative plot. Section 2 explains how deixis is analyzed in narratives, and the terms Deictic Center and Deictic Shift. Section 3 introduces the deictic terms i.e., personal, spatial, temporal terms, and discourse deixis. Lastly, section 4 outlines children's narrative development, including their narrative abilities, their use of demonstratives, and the construction of the Deictic Center in their narratives.

2.1. Narrative

There are many definitions of narrative and none of them perfectly fits to it. Narrative could be an event that is told by someone to other agents. Basically, storytelling is associated with narrative. The person who is a narrator utters or writes a text that an audience can comprehend by processing each sentence correctly and creates a meaningful representation. The process of temporally moving the events through a narrative is narration. According to Segal (1995a); in a story, the units of narrative are nonlinguistic devices such as people, places, events, which are combined spatiotemporally and causally. Thus, the story is a special kind of narrative with temporally ordered units forming a plot. (Kirkman, 2002).

Narrative is not only studied for a story structure, but it also demonstrates the basics of human understanding. Hyvärinen (2007) notes that people tell stories about themselves and actually these stories are about many other selves. Every story could be perceived in different contexts and from different perspectives. The most conspicuous aspect of narrative and the phenomenon closely related to the current study is that understanding a narrative depends on the contextual factors in which the narrative is told (Hyvärinen, 2007). The events of a story take place in a single space-time continuum, and this is a story world which consists of people, events, objects, and places. Again, their existence is related to each other spatially, temporally, and causally. In a fictional narrative as it is used in this study, the reader's and the listener's world and the real world are different and deictically independent from each other (Segal, 1995a).

2.1.1. Mental Models of Narrative

The skill of how readers or listeners construct mental models of a narrative is the basic skill for language comprehension. In a nutshell, the readers' identification of the events based on their knowledge about the real-world situations is a mental model. It has been established that readers or listeners tend to remember these models instead of the text itself (Bower & Morrow, 1990). Bower and Morrow introduce two major parts in narrative. The first is the internal representation, which represents the characters, the relationships between them, the characters' goals, plans, and actions in the story. Secondly, there is a mental map for this representation. Narratives are constructed around a center and this construction enables readers or listeners to build a network for connections between the events in the narrative. This center of the narrative might be related to the Deictic Center because network building would be possible by deictic expressions and their referents in the story.

The focus of the Deictic Center can also be divided into different characters (Bower & Morrow, 1990). The center is not only on one specific character; shifts in personal deixis could also occur. For example, in the picture book Frog Story, which is used the prompts of the current thesis, there are main characters (the child and the dog); and minor characters (the deer or the owl). Sometimes the story is told from the minor characters' perspectives too. Therefore, in the mental model, although the main character is the center of the story, there must be shifts to other characters, and this is necessary for comprehending and telling the story appropriately. From the analyst's perspective, this shift could be detected easily by looking at the WHO of a sentence (i.e. the subject or the doer of the event). For example, when the narrator uses reported speech for making the characters in the story speak; she conveys the information that the Deictic Center is on that character.

2.1.2. Narrative Plot and the Plot of 'Frog, where are you?'

Plot is the sequence of events in a narrative. The units of the plot are combined in the story for a meaningful content. The events and situations in a story are chained with the characters and other entities which belong to that story. According to Chatman (1980), a plot and the characters are necessary elements for novels and dramas; however, it may not be a necessary aspect for a poem. Since this study deals with a fictional story, it is assumed that plot is an important element for the narrative. The literature suggests that narrative needs a story and a discourse; in other words, the story has events and existents. The events are the actions and the happenings in the story world, and the existents are the characters and the settings (Chatman, 1980).

'Frog, where are you?' is a picture book for children. It has been used extensively to investigate the linguistic development of children in many languages, including Turkish.

Berman and Slobin (1994) introduce three main components of the frog story's plot:

- The onset: the events which initiate the story,
- The unfolding: the events that child and dog go through during the search of frog,
- The resolution: the theme of finding the frog.

These components can be recognized by the listener if the narrator makes inferences about the topic, such as the frog's disappearance (the onset) and the boy's search with his dog (the unfolding). The resolution part could be understood if there is some information in the narrative about finding the frog. Table 1 shows the content of each picture which belongs to the book.

Table 1.

Berman's (1988) illustration for the plot of the "Frog, Where Are You?"

Event Structure of Picture Book Story

Episode	Picture	Scene	Location
Stage Setting:	1-	Boy & dog look at frog in jar	Bedroom, night
Initial Event Chain:	2a	B & D asleep, Fr exits from jar	
	2b	B & D awaken, discover Fr gone	Bedroom, morning
Search at House:	3a	Search strts, B looks in boots Dog's head sticks in jar	
	3b	D looks out, B calls	At window
	4a	B looks out, D falls outside	From window
	4b	D in B's arms, jar shattered	Below window
Search Outdoors:	5-	B calling out, D looking round	In forest
	6a	B looks down gopher hole	At hole
		D barks at hanging beehive	At tree
	6b	Gopher jumps out, D shakes tree	
	7a	Hive falls down, D looks round	
Adventures, Mishaps:	7b	B climbs up, peers inside hole	In another tree
	8a	Owl appears, B falls down	At tree
	8b	Bees chasing, D running away	
	9a	Owl swooshes off, B cowering	At rock
	9b	B on top, calling, holding on	On rock
	10a	B caught on antlers	Behind rock
	10b	Deer carries B off, D runs with	Near cliff
	11-	B and D fall down, Deer watches	At cliff edge
	12a	B and D plunged into water below	Inside marsh
Beginning of End:	12b	B attends to sound, D on his neck	Near log
	13-	B signals for quiet, follows sound	At log
	14-	B and D climb log, see frogs below	
	15-	B has a frog, waves goodbye to others	Leaving marsh

For the script of the pages of "Frog Where Are You?", see Appendix A.

2.2. Deixis in Narrative

For a narrative to be understood correctly, the speaker or writer should have necessary cohesive devices so that the listener or the reader could construct the Deictic Center accordingly (Rapaport et al., 1989). The listener should be able to make inferences on the basis of the linguistic cues which are provided in the text. These cues might be grammatical, lexical or syntactic information of the utterance. Both stability and changes in the story are demonstrated by cohesive devices and anaphoric reference is an important ingredient of cohesion. The deictic and anaphoric expressions in a text

function as cohesive devices since they provide semantic links among the entities within and across a narrative. These devices introduce, maintain and shift the who, when, and where of the Deictic Center (Rapaport et al., 1989).

The deictic terms in narrative are created according to the fictional world and it is reflected by the narrator. Introducing, maintaining and shifting the center when necessary are done by the narrator (Rapaport et al., 1989). With the narrator's introducing the Deictic Center for a storytelling activity, it is understood that the utterances will be evaluated in the story world but not in the real-world environment.

From the perspective of communication theory, the use of deictic expressions underlies the fact that a message is transposed from a center to a receiver during the narration process. The speaker encodes the message for sending it with units of language, and the hearer receives the message by decoding it into units (Segal, 1995b).

- *Deictic Center and Deictic Shift*

Segal (1995b) argues that narratives are interpreted as if they were being experienced from a specific position, which is in the world of narrative. People cannot tell narratives without enabling the listeners to get inside of the story (Segal, 1995b).

There must be a deictic field of the narrative that is created for readers and listeners to shift their Deictic Center of the self-world orientation to a story world (Galbraith, 1995). According to Bühler (1990), the origin of the deictic field is marked with the deictic words *here, now,* and *I*. Of course, everyone can use *I* and this demonstrates a different object in each person's use. The same terms could be used by any person in any context, but they refer to different entities according to the context of language. For example, the usage of "I" in the narrative is a fictional term which may belong to a fictional character and hence it may be a different Deictic Center than the real-world "here and now" situation. In an oral storytelling environment, the storyteller gives some information about the place, character and time according to the deictic frame of the story. Normally, the place that narration takes place is "here", the current time is "now" where the narrative interaction occurs, "I" is the storyteller and "you" is the audience. Once the story is started to be told by the storyteller, the narrative's Deictic Center is gradually established for the audience. The story is not told by explaining the center like a lecture to the audience, rather it allows the listeners to see the story world and its centers. The deictic structures belong to the story world after it starts to be narrated (Zubin and Hewitt, 1995).

Example (1) shows an example from the present study.

(1)	Ø <u>Kendi</u>-ni	su-yun	iç-i-nde	bul-muş-tu
	Self-ACC	water-GEN	inside-POSS-LOC	Find-QUOT-PAST
	'Ø (He) found <u>himself</u> in the water.'			

(5-year-old)

To understand example (1), the listener must shift his or her deictic center to the created deictic center of the story. After that, the listener can interpret the agent, the agent's activity and the event which takes place into the story-world.

Spatio-temporal coordinates of the act of utterance affect the meaning of words in communication. The Deictic Center is the origin of these coordinates. Where, when,

and who in a narrative are the origins of place, time and person. All deictic terms in a narrative depend on the speaker's and the hearer's environment and the contextual situation. According to the Deictic Shift Theory, both speakers/authors and listeners/readers have a Deictic Center which represents the real-world situations and they shift their center to the story world. Therefore, deictic terms in a narrative belong to this story's world and its Deictic Center (Segal, 1995b).

According to the notion of Deictic Center, a story which is being narrated and its elements are in a story world. The story originates from the text of the author or speaker. However, the story world is fully constructed by the reader or listener. Everyday world's knowledge and its Deictic Center are important for constructing a mental model of the story world (also See Section 2.1.1) because the listener/reader uses the knowledge of the self-oriented world on the fictional domain (Segal, 1995b). Shapiro and Rapaport (1995) suggest that forming a Deictic Center is necessary because when reading or listening to a narrative, a person needs to construct a mental model of the story world. Only by using that model he/she can understand the story and answer the questions. Forming the Deictic Center helps the reader and the listener to track the who, when, and where of the story.

2.3. Deictic Terms

So far, we have discussed the notion of Deictic Center and how Deictic Shift applies to narratives. In this section, we will introduce the typology of deictic terms with examples from our data. This section will serve as the background to our analysis of Frog Story narratives in later chapters.

2.3.1. Personal Deixis

Personal deixis is expressed by means of personal and possessive pronouns in the utterance (Lugea, 2016). Although the narrator of the story is the speaker and listeners see the story from the narrator's perspective, in fictional narratives, the narrator does not always have the central point of view. The protagonist in the story may be in the Deictic Center, and the deictic terms are interpreted with the contextual information. For example, in the Frog Story the utterance in (2), *çocuk* 'the child' is the center of the deictic field because the story is narrated through his perspective.

(2)	Çocuk	aşağı-ya	bak-mış
	The child	down-DAT	look-QUOT
	'The child looked down.'		

2.3.2. Spatial Deixis

The spatial center of a story could be understood by locative pronouns. For example, as already introduced, in Turkish, *ora-* 'there' means 'a location far from the speaker', *bura-* 'here' conveys 'a location close to the speaker', and *şura-* 'yonder' expresses 'a location in the mid-position to the speaker and the listener'. Spatial information can also be understood by verbs like *gel-* 'come' 'move towards to the speaker's deictic center' and *git-* 'go' 'move away from the speaker's Deictic Center'. For example, in the Frog Story, when the narrator utters the clause in (3), she provides the listener with

the information of the spatial context and the Deictic Center. Spatial deixis relates the entities to the Deictic Center and provides information about the location of the story world (Lugea, 2016).

According to Fillmore (1997), *come* and *go* are verbs which necessitate reference to all other types of deixis in the sentence they are used in; person, place, and time. If a sentence as in example (3) which contains *ora* 'there' is uttered with the verb *gel-* 'come', it is not the case that 'there' is a place that the speaker is located now. Since the story characters are in a different place, the story is told from their perspective; and the place 'there' might be a place in the center of the story. Therefore, 'come' and 'go' should be interpreted with respect to other types of deixis in the sentence.

(3)	Yavru-lar-ı	da	ora-ya	gel-di
	Cub-PLU-POSS	also	there-DAT	come-PAST

'Its cubs also came there.'

Similar to Fillmore (1997), Rapaport et al. (1989) argue that *come* (gel) and *go* (git) are seen as deictic devices because these terms can only be understood in a specific context they are used in. The changing narrative world gives meaning to these terms by referring to the objects in this world and explaining the events. Similarly, in our data, the use of the verb *git-ti (go-PAST)* 'went' presents information for the listener to where the Deictic Center is (Example (4)).

(4)	Çocuk	su-ya	düş-ünce	köpek	de	peşinden	git-ti
	Child	water-DAT	fall-CV	dog	too	after	go-PAST

'When the child fell to the water, the dog went after him.

In example (4), the story is narrated from the dog's perspective. However, if the speaker used *came* instead of *went*; the child would be presented from a different perspective. Therefore, deictic terms may establish more than one aspect, like both personal and spatial ones, and readers' inference is changed by these expressions. *Go* and *come* help listeners to interpret the spatial location of the story. Moreover, when a Deictic Shift occurs, the listeners update their current knowledge according to the new Deictic Center (Rapaport et al., 1989).

2.3.3. Temporal Deixis

Time is an important aspect for narrative. Tense gives the temporal information about the event which is narrated. According to Huddleston and Pullum (2002), there are four parameters of time analysis: 1) Time referred to (the time span of the information), 2) Time of orientation (the reference point) 3) Time of the situation (time span that the situation covers), and 4) Deictic time (the time of encoding or decoding). If the speaker uses tense in her utterances in a real-world environment, then the utterance should be interpreted according to that context. However, a narrative has its own temporal information and tense would be interpreted according to the event which is being narrated.

The story's temporality necessitates a shift from the real world's time. Temporal deixis is related to the context of the story-world, and temporal information in the storytelling activity is evaluated within that world.

The use and interpretation of temporal reference necessitate the knowledge of the time of utterance, which involves the four parameters mentioned in Huddleston & Pullum (2002). Temporal adverbs that relate to a specific time domain are interpreted according to the context of utterance. Time of the utterance is related to the time of an event that is narrated; it can be before, simultaneous with the utterance time, or in a future time (Lugea, 2016). Temporal deictic terms might be special adverbial clauses or tense suffixes in Turkish. For example, the past tense suffix -di: *Gel-di* '(he/she) came' and *geçen hafta* 'last week'.

In fictional narratives the time is not related to the real world, it is interpreted in the fictional time. The time in the story world cannot be deictically related to the real-world. Moreover, fictional events are in a specific timeline and space. Two events can precede another only if they are happening in the same world. Therefore, they are temporally related to each other. Moreover, the terms 'before' and 'after' point to the events happening consecutively in a time interval in the story-world (Zubin & Hewitt, 1995). The terms for temporal information such as temporal adverbials can shift the Deictic Center.

The term *now* in narrative represents the moment in the story and it is a reference which is special for the narrative context. If there is a sentence which starts with *then*, the reference point is related to the 'now' of the Deictic Center of the narrative (Yuhan & Shapiro, 1995). Also, discourse markers such as *then* inform the listener or reader about a shift which is going to happen, or a new character's participation in the event and leaving the scene (Duchan, 1995).

The following utterance from Frog Story in our data in (5) provides the temporal Deictic Center information, which is the time after the child fell. This example consists of two clauses related by the discourse marker *sonra* 'then'. We understand that the events expressed in the clauses happened sequentially. These events belong to a specific story world and temporal terms are related to that context.

(5)	Geyik	çocu-ğu	aşağı	at-tı	ve	sonra	bir	ses	duy-ul-du
	deer	child-ACC	down	throw-PAST	and	then	a	sound	hear-PASS-PAST

'The deer pushed the child down and then a voice was heard.'

Further examples of temporal deixis from the present study are shown in Section 3.6.4.

2.3.4. Discourse Deixis

Webber (1988) characterizes the concept of discourse entities and relates it to discourse segments. Discourse entities are entities in the local context whose identities are known to the listener, e.g. objects, characters, things in the narrative. They can be referred to by pronouns. All deictic terms are interpreted in the discourse and hence discourse deixis could be taken as references to discourse segments (Webber, 1988). Thus, a term such as *bu* 'this' can refer to a segment in the discourse, e.g. a clause (or

utterance). Discourse segments that are referred to by pronouns can be propositions or eventualities (events, states); they can be any narrative clause.

Following Lyons' (1977) arguments, it can be stated that anaphoric usage of pronouns is derived from their deictic reference. For example, the usage of *bu* 'this' in example (6) refers to the situation of getting wet. In example (7); *bu* refers to the event of frog's escape; here, 'this' refers to a segment in the text (i.e. it is discourse deixis).

(6)	Islan-mış-lar-dı	ama	olsun	önemli	değil-di	bu
	get wet-QUOT-PL-P.COP	CONJ	so it be-EXCL	important	Not-P.COP	this

'They had gotten wet; but so it be, it was not important.'

(7)	Kurbağa	kaç-mış	ve	bu-na	çok	üzül-müş-ler-di
	frog	escape-QUOT	and	this-DAT	much	worry-QUOT-3PS-P.COP

'The frog runs, and they worry about this very much.'

According to Vallauri (2004), these referents are psychologically present to the participants. In fact, he also argues that anaphora is not different kind of reference; rather it is derived from deixis. We did not differentiate the anaphoric and deictic usages of the terms and called them deixis.

2.4. Children's Narrative Development

The concepts revolving around narrative and deixis have already been introduced and discussed in previous sections. This section involves a review of studies about children's narrative competence and their use of deictic terms.

2.4.1. Children's Narrative Abilities

Narrative competence is related to linguistic and psycholinguistic development and it interacts with the development in various domains, involving the development of symbolic representation, sociocultural awareness, the development of the sense of existence, schema development, as well as learning how to cohere.

Kemper (1984) argues that children become competent on narratives between the ages 2 and 10. They learn to comprehend the spatiotemporally structured plots of the narratives and they learn to produce new ones. Furthermore; for telling a story, there must be a causal relationship between the sequential events in addition to the plot competence. For example, the listener must be able to understand not only the events and situations but also the causality of the behaviors of the characters in the story-world. Because young children such as those between 2-4 ages are not fully capable of structuring the story in a causal way, the listeners must infer the causality of the plot structure from the events and situations which the storyteller indicates. In fact, Kemper (1984) argues that this is the reason why young children only state the actions of the characters without the cause and only express the events without a causal link between them. In our data from pre-school children, we find this tendency, as will be reported in Chapter 4.

Nicolopoulou (1997) argues that narrative competence is not only based on linguistic development or plot structuring. She claims that children use the narratives to represent different worlds in their own cognitive constructions and also to each other. Narratives, she argues, are symbolic representations of these worlds, and it is a necessary activity for making sense of the contexts. Narrative development relies on the sociocultural environment. The socio-cultural environment affects children's construction of the narratives in terms of the symbolic elements in the narrative, and their imagination (Nicolopoulou, 1997). The socio-cultural environment requires individuals to construct the world according to that context. Therefore, children learn to modify their narratives according to their environment; and then they learn to accept, reject or change their stories (Kirkman, 2002).

For creating a narrative, children's ability for organizing events and constructing schemas must be developed as well. Bamberg and Damrad-Fyre (1991) state that children at age 3 could have well-organized schemas in their mental network. They learn to relate events and objects and gain knowledge about the cause and effect relationships of these events. Thus, the finding that narrative development starts at or around age 2 parallels with children's ability to construct schemas.

Establishing coherence, i.e. the global organization of textual units, is one of the most important aspects in narrative development. According to Labov and Waletzky (1967), narratives must have orienting, unfolding, evaluation and resolution parts to be a fully coherent narrative. The orienting part has information about what the study is about, and the Deictic Center is constructed in this part. The evaluation part consists of the narrator's subjective comments about the event. The unfolding part has the "complicating action" which is the building block of the events in the story. There are some event series in this part. Lastly, the resolution is the result part. In this part, the narrator indicates that the story is over. Children's narratives mostly lack the orienting part, which introduces the characters and other entities in the narrative and where the Deictic Center is constructed (Labov & Waletzky, 1967). Our data also evince this tendency, as we will report in Section 4.1.

2.4.2. Developmental Stages in Narrative Abilities

According to Pearson and Villiers (2005), 3 and 4-year-olds tell minimally sequenced events. It has been observed that their narratives often lack clear temporal sequencing. They often use *"then"*, *"and then"*, i.e., simple juxtaposition of clauses and no other complex adverbial clauses.

In a study with Frog Stories (Berman, 1988), it was found that 3-year-old children mostly state the existence of objects in the pictures rather than telling the story. Also, they add irrelevant information or characters and objects from the real-world context to their narratives, e.g. they could mention their own friends instead of the characters in the story. In terms of plotline components, they refer to more subcomponents of each plot component with age; and they become nearly competent in plot approximately at age 5 and fully competent at age 7, which is early school-going age. It was found that there is a progression in using all the plotline elements until the age of 7. Children at age 9 are found to be as competent as adults in using all the plot elements (Berman, 1988).

In Berman (1988), the progression in the plot of the frog story was studied by only selecting one scene of the picture-based booklet. Berman argued that the "discovery that frog is missing" scene is an important one because it is the background of all the events in the story. It was found that adults used more clauses for telling this event by using more temporal terms (e.g. morning, next morning), and coordinate structures (e.g. they woke up and saw…). None of the preschoolers mentioned these or used embedded clauses like adults and older children (when they woke up next morning…).

In another study, Turkish children's narratives were studied (Balaban, 2015). Children's story plot was found to start developing at ages between 5 and 7. Also, it continues to develop to become like an adult competency after the age of 10. Therefore, the ability of organizing a story-world starts to improve in preschool years; however, children also continue to improve their narrative skills in elementary school years until adulthood.

2.4.3. Turkish children's Use of bu, şu *and* o

Küntay and Özyürek (2002) emphasize that not only proximity decides the usage of demonstratives, but also the addressee and the object's proximity, and the attention of the addressee play a role in the usage of demonstrative forms. In their study with adults, they found that *bu* 'this' was used for the objects closer to the speaker and *o 'that'* is used for the distant objects from the speaker, while *şu* 'that' was used equally for all distances. However, in children groups, *o* 'that' was used mostly for both distant and close objects. It appeared that children are not fully capable of using demonstratives to encode distal spaces in their conversations. Children also used *bu* instead of *şu* more compared to adults (Küntay & Özyürek, 2002).

Another study by Küntay and Özyürek (2006) suggests that there must be an agreement on what is being talked and joint attention must exist between the addresser and the addressee in an effective conversation. The attention of agents on the referents is an important factor for using demonstratives. In the study, it was found that although demonstratives are learned in the early stages of speech, the ability of monitoring and handling the states of attention of other people in conversations does not seem to develop until the age of 7 or 8. More particularly, when there is a Lego construction activity, the adult group has been found to use mostly *bu 'this'* and *şu* 'yonder' more than *o 'that'* in their conversational speech. Regarding children; firstly, children used a fewer number of demonstratives than adults' did. Secondly, their use of *şu* and *o* is less than *bu*. However, adults used *şu* and *bu* approximately in the same quantity and more than *o*. More than a half of the demonstratives in children's conversations was *bu*.

In a study on frog story-based narratives, deictic terms are found to be used instead of explicit mentioning the content in the pictures (Berman & Slobin, 1994). For example; the narrator uses the pronoun *onlar* 'they' instead of *çocuk ve köpek* 'the boy and the dog' or *o çocuk ve o köpek* 'that boy and the dog'. Because there is a visual scene both the listener and storyteller see, children assume that everyone knows the referents and they use deictic terms to refer to them by not taking the listener's story listening activity into consideration. As it will be discussed in section 4, we have observed this frequently in our study.

2.4.4. Children's Deictic Usage

West (2013) states that children's early demonstratives have a social role which indicates an attempt for joint attention with their gestures like pointing. The purpose of creating a joint attention between the agents is communication. Therefore, deictic term usage and its emergence is strongly related to communication in the developmental process.

The earliest use of demonstratives are one-word utterances, and they are replacements of the pointing gesture. According to West (2013), children's early use of indexical gestures is non-deictic since they do not have the joint attentional aspects and symbolic meanings. Moreover, their early usages of the demonstrative pronouns do not have a socially motivated purpose. They are used without taking the conversational partners and their deictic centers into account. However, in the developmental process, these demonstratives become deictic as they organize their deictic center. Moreover, children start to recognize other people's *origo* (deictic center) and they use deictic terms with indexical gestures according to them. In a socially established context and with conversational partners, children start to use the demonstratives deictically. This also enables children to shift their Deictic Center to the others' centers in their conversations, and their gestures are shaped according to that (West, 2013).

Having a conception about an entity and its existence in discourse is necessary to refer to it but referring to something is not only a linguistic ability. Differentiating the objects and object permanence are claimed to be important factors for using deixis as referring terms. Moreover; when the speaker is asked to tell something to a listener, the speaker might be in the need of wanting the listener to focus on the referred object, person, or space. Therefore, children's learning to use deictic terms has psycholinguistic and sociolinguistic aspects (Wales, 1984).

Duchan (1995) studied children's spontaneous narratives to observe whether they construct a Deictic Center in their narratives. Six deictic terms (*there, here, now, then, went, came*) in 2-6-year-old children's spontaneous narratives are analyzed to understand whether they exist in the clauses that introduce characters. After calculating the percentages and co-occurrences of deictic terms in children's narratives, it became clear that children use these terms to introduce characters to their stories. Therefore, preschool children organize their narratives' deictic centers in a different way from conversations.

So far, we provided background information for the study by explaining the narrative, deixis, the types of deixis, Deictic Center and Deictic Shift in the narrative, as well as children's narrative development and its relationship with deixis. In Chapter 3, the method of this study is explained.

CHAPTER 3

METHOD

In this chapter we present the material used for collecting data, introduce the participants and their characteristics as well as the task and the procedure for collecting the data from the participants.

3.1. Material (Frog story)

Mercer Mayer's *Frog, where are you?* is a 29-page wordless picture book which tells the story of a little boy and his dog and their searching adventures of a lost frog (Mayer, 1969). Throughout this thesis, we refer to this book either by its title or by the term "frog story". Starting with Berman and Slobin (1994), there have been many studies that used the frog story in linguistic projects, including psycholinguistic and language acquisition studies on both adults and children. Slobin (2005) emphasizes that the frog story has been used by so many researchers for studies of many languages, and there is a countless number of papers involving it. Slobin (2005) explains the convenience of the frog story book by emphasizing its structured plot and detailed information about temporal, spatial, and personal dimensions of the events.

Particularly for narrative studies, the frog story is favorable because it is homogenous in terms of data that will be analyzed and for comparisons that will be made on it. It provides a whole story rather than independent samples of events, and this enables researchers to do an analysis on the entire spoken narrative. Its attractive visuals stimulate the subjects allowing researchers to easily elicit narratives from children or adults. The story also enables the storytellers to take different perspectives on the events and shifting references between characters is possible since there is more than one character. These make the book an important resource for our study, so we settled on using it as the major data collection method.

3.2. Participants

The participants of the current study were native forty-seven preschool children and eleven adult Turkish native speakers. The data of children who had speaking difficulties and who told a story other than the study requires were not used. Narratives of fourteen children were taken from Aksu-Koç's data included in the CHILDES database (MacWhinney, 2000). The thirty-three of preschool children group's data have been collected from various private kindergartens in Ankara province for the purposes of the current study. The ages of children varied between 3 and 6, between 72 and 42 months (M=4;11 (years;months), SD=0.68), and the ages of the adult group varied between 65 and 20 (Mean age=27.65, N =23, SD=11.42). The children group

was divided to three age groups which are 3-4 (M=4;01, N=14, age min=3;06 max=4;07), 5 (M=4;10, N=16, age min=4;08 max=5;02) and 6 (M=5.07, N=16, age min=5;03 max=6;00) age groups. All the children were going to kindergarten, and all the adult participants were university graduates or from higher levels of education. Both the parents of children participants and the adult participants signed the consent forms for participating in the study (Appendix B and C).

The participants' summary information is provided in Table 2.

Table 2

Means and Standard Deviations for ages of participants used in the study

	No of participants	Age			
Groups	*n*	*M*	*SD*	*Max.*	*Min.*
3-4-year-old	14	4.10	0.33	4.58	3.50
5-year-old	17	4.96	0.17	5.17	4.67
6-year-old	16	5.56	0.30	6.00	5.25
Adults	23	27.65	11.42	65.00	20.00

3.3. Task and Procedure

We elicited narratives from the adult and children groups using "Frog, where are you?" The elicitation task with the children was carried out in rooms in the kindergartens. The elicitation task was carried out at homes or the university environment with adults.

The participants were called to the room one by one. Firstly, the participants were asked to skim over the book and in Turkish, they were told that "This is a story about a boy, a dog, and a frog; first you can freely examine the book and then I want you to tell the story in your own way." All adult participants and the children were prompted with this statement. However, some little children in ages 4-5 were tested with a puppet toy, and, in addition to the previous statement, they were told that the puppet needs to hear the story. The location of the study in all trials was a room with a table and chairs. There were only the experimenter and the participant in the room during the storytelling activity. For two of the children's testing (both were 5-year-old) there was one of their teachers during the storytelling activity.

The book was kept only in the participants' view to avoid any physical demonstration of the events to the researcher during the task because it is necessary for the storytellers to use linguistic devices only.

3.4. Recording and Transcription of the Data

Narratives of participants were audio-recorded by a smartphone. Then, the data were transcribed in the Notepad++ using the CHAT manual (MacWhinney, 2000), and they were separated for further analyses in Microsoft Excel program.

The information about the data is provided in Appendix D for both children and adults. The table presents the age, source of data, and the duration of the narratives only for the data we collected.

3.5. Plot Components

The plot was coded according to Ayas-Koksal's (2011) previous work specifically designed for the quantitative measurement of plot competence for "Frog, Where Are You?". Although there are more components in the original construction, only the three main parts are used and quantified in this study. The first part, onset, is the component which involves the introduction of the characters, temporal information and the setting of the story around the boy, the dog, and the frog. The second part, unfolding, includes the experiences of the boy and the frog during the search of the frog. And finally, the last part, resolution, involves the finding of the lost frog or a substitute frog. According to the coding criteria we constructed, there are subcomponents for each main component. The onset part is scored between 0-8, the unfolding part is scored between 0-6, and the resolution part has only one subcomponent which is finding the lost frog and the score is between 0-1 (Appendix E).

Other plot components of the Frog Story include the searching theme and its continuity. We did not take these as scoring components since our main purpose is not the plot organization, and we think that the three major components are enough to differentiate the participants in terms of their storytelling skills.

The plot component scores were calculated by the addition of all subcomponent scores in each main component, and the score is calculated for each participant's narrative.

Moreover, after identifying each plot part of all the elicited stories, the temporal terms and the verbs *gelmek* 'to come' and *gitmek* 'to go' are investigated with respect to the plot parts they are mostly or least frequently used in.

3.6. Deictic Terms in Narrative

As already discussed in Chapter 2, telling a fictional story is a different kind of activity than talking about a real-world event. Demonstrative terms and personal references were taken into consideration for the scope of this study.

As it was explained in Chapter 2, deixis and anaphora are not distinguished in this thesis. We followed Vallauri (2004), who does not make a distinction between deixis and anaphora: "Deictic reference and anaphoric reference are actually the same kind of semiotic, psychological and cognitive event. In both cases what happens is reference to something which is identifiable because it is present in the consciousness of the participants." (Vallauri, 2004, p. 25). Similarly, according to Cornish (2011) among others, anaphora is derived from deixis so that there must be an overlap between 'pure deixis' and 'pure anaphora'. Most importantly, because the data of this study is based on the elicitation of a fictional story from a picture-based book, not distinguishing them in the analysis seemed a better idea.

The use of *bu* 'this', *şu* 'that', and *o* 'that' as demonstrative and personal pronouns are analyzed; and in this way, story-world referents referred to by deictic terms in the story discourse are investigated. They are divided into four categories; (1) Entity deictic

terms, (2) Spatial deictic terms, (3) Temporal deictic terms, and (4) Discourse deixis. We explain each of these terms below with samples from our data.

3.6.1. Entity Deixis (Reference for Entities)

All the personal and demonstrative pronouns that refer to an entity belonging to the story-world are taken as an entity deictic term. The terms used to refer to characters and objects in the story are included in this group. Examples (1) to (5) illustrate entity deixis.

Before the sentence in example (1), the participant uttered the sentence *Bir tane çocuk taşa çarpmış elini* 'A boy hit his hand to a stone.' Therefore, *o* 'him' was used to refer to 'the boy'.

(1)	Baykuş	da	o-na	yardım	et-me-ye	gel-miş
	OWL	CONJ	he-DAT	help	do-CV-DAT	Come-QUOT

'And the owl came to help him.'

(6-year-old)

(2)	Kavanoz	var-mış	o-nun	iç-i-ne	gir-miş
	Jar	exist-QUOT	it-GEN	inside-POSS	enter-QUOT

'There was a jar, it entered it.'

(5-year-old)

Also, because the searching process is done for the lost frog in the story, *bu* 'it' was used to refer to the 'frog' in Example (3).

(3)	Her	yer-de	ara-yor-lar	şu	an-da	bu-nu
	Every	place-LOC	search-IMPF-PL	this	time-LOC	it-ACC

'They are searching for it everywhere.'

(adult)

In example (4), there is no previous representation of a referent for the reference *bu* 'this'. However, because of the pictures in the book and the course of events in the voice record, the referent is determined as the 'bee hive'.

(4)	Köpek	bu-nu	yakala-ma-ya	çalış-ıyor
	The dog	This-ACC	catch-VN-DAT	try-IMPF

'The dog tries to catch this.'

(3-4-year-old)

(5)	Bak	şu	arı	kovan-ı
	Look	that	bee	hive-POSS

'Look, that is the bee hive.'

(5-year-old)

In example (5), the child shows the bee hive by linguistically demonstrating it by using the term *şu* 'that'.

In example (6), there is an implicit referent of *o* 'that' in the process of the narrative and the picture-based story. In the context of the story, the referent is 'deer'.

(6)	Köpek	o-nu	yakala-yacak
	Dog	it (that)	catch-FUT
	'The dog will catch it.'		

(3-4-year-old)

Before the sentence in example (7), the participant says *Kayaların üzerine tırmanıyor çocuk* 'The boy climbs on the rocks.' Therefore, *o,* 'him' refers to the 'boy'.

(7)	Geyik	o-nu	boynuz-lar-ı-nın	tepe-si-ne	kaldır-ıyor
	Deer	him (that)	horn-PL-POSS-GEN	above-POSS-DAT	Raise-IMPF
	'The deer raises him above its horns.'				

(adult)

- *Ambiguous references*

The ambiguous terms are determined and reconsidered for further analysis. They are specified according to Peterson's (1993) classification: Ambiguous references are those whose referents cannot be detected in the story, i.e. in the transcripts. If there is no specific referent for a reference term in the narrative context, it is considered as an ambiguous reference. In other words, those referring items whose referents are non-specific with respect to the story are named as 'ambiguous references'.

Examples (8) and (9) show an instance of the ambiguous use of reference for entitites (ambiguous references are underlined).

(8)	<u>Bu</u>	da	<u>o</u>-nu	yakala-mak	isti-yor
	This	CONJ	it-ACC	catch-VN	want-IMPF
	'And this wants to catch it.'				

(3-4-year-old)

In example (8), there is no information in the discourse about what *bu* 'this' and *o* 'it' might refer to. We think that the child is using these terms in a non-specific way. Since the narrative is elicited by a picture-based book, and there are concrete entities in it with clear pictures, in example (8), the child feels free to convey information about whatever character's picture his attention is focused on at the moment.

(9)	Sonra	yakala-mış	<u>bu</u>-nu	bağır-mış-lar
	Then	catch-QUOT	it-ACC	yell-QUOT-PL
	'Then it caught <u>it</u>, they yelled.'			

(6-year-old)

Also, in example (9), the object or the character referred by *bu* 'it' could not be specified from the pictures or the voice records. It could refer to anything in the pictures in the book but unrelated to the story plot.

The referents of demonstrative deixis out of 192 tokens were analyzed by another researcher for inter-annotator agreement. Because the annotations were not categorical, the formula that Miles and Huberman (1994) presented for qualitative studies were used:

reliability = number of agreements / number of agreements + number of disagreements

We found that the reliability of the reference annotations including ambiguous references is 0.93.

3.6.2. Spatial Deixis (Reference for Places)

As already explained, spatial or place deixis refers to places in a discourse. Locative pronouns that give spatial information about the story-world are taken as spatial deixis. *Ora, bura, şura* ('there', here', 'yonder') which are derived from *o, bu, şu* (Göksel & Kerslake, 2005) are included in the spatial deixis group. Examples (10) - (15) illustrate spatial deixis:

(10)	Orada	mutlu	mesut	kurbağa	otur-uyor-muş	anne-si-yle	
	There	happily	happily	frog	sit-IMPF-QUOT	mother-POSS-COM	

'There the frog sits very happily with his mother.'

(6-year-old)

(11)	Çıkı-yor	bura-dan
	Exit-IMPF	there-ABL

'It exists from there.'

(3-4-year-old)

(12)	Kız	gülümse-miş	bura-da	bir	şey	bul-du-m	de-miş
	Girl	smile-QUOT	here-LOC	a	thing	find-PAST-1PS	say-QUOT

'The girl smiled and said "I found something here.".'

(6-year-old)

(13)	Bu	sefer	ora-da	baykuş-la	karşılaş-ıyor
	This	time	there-LOC	owl-COM	meet-IMPF

'This time, (he) meets the owl there.'

(adult)

(14) Şurada da orman var
Yonder (there) CONJ forest exist
'And there is the forest.'

(3-4-year-old)

(15) Çocuk çok kork-uyor ve uzak-laş-ma-ya çalış-ıyor bura-lar-
Boy very scared-IMPF and away-DRV-VN-DAT try-IMPF here-PL-ABL
'The boy gets scared and tries to get away from here.'

(adult)

3.6.3. Discourse Deixis (Reference to Discourse Segments)

When a deictic term is used for a prior expression involving words and phrases indicating eventualities, this is discourse deixis. The terms *bu, şu, o* which refer to a discourse segment are involved in this group. Discourse deixis can be expressed by means of demonstrative pronouns as the examples below show:

(16) Kurbağa annesi babasını özlemiş Onun için git-miş ora-ya
The frog missed his mother and father. That-GEN for go-QUOT there-DAT
'The frog missed his mother and father, that's why he went there.'

(6-year-old)

(17) Sen ailesinden koparmışsın Bu-nun fark-ı-na var-ıyor çocuk
almışsın
You separated it from its family. This-GEN realize-POSS-DAT reach-IMPF boy
'You separated it from its family, they boy realized that.'

(adult)

(18) Bildiğin aile kurmuşlar burada. Şaşır-ıyor-lar ne ara ol-du bu diye
They basically started a family there surprise-IMPF-PL what time happen-PAST this for
'They are surprised for when this happened.'

(adult)

(19)	Köpek pencereden aşağı düşerek kavanozu kırıyor.	Çocuk	bu-na	biraz	söyle-n-iyor	
	'The dog breaks the jar as he falls from the window'	child	this-DAT	little	grumble-ref-IMPF	
	'The child grumbles a little to this.'					
						(adult)

3.6.4. Temporal Deixis (Reference for Temporal Information)

Temporal deixis provides temporal information in the discourse and similarly to other forms of deixis, its content depends on the context. In the narrative world, temporal information belongs to the story-world, the lexical items about time are used to refer to the time in the story world. They are analyzed under three categories as below.

- *Macro-level terms*

The terms which provide the temporal information for setting the story-context are named as macro-level temporal terms. Temporal adverbials are used to describe the environmental setting in the storytelling activity such as *sabah* 'morning', *akşam* 'evening', *gece* 'night', or *öğle* 'afternoon' (Göksel & Kerslake, 2005). Examples (20) to (22) illustrate these usages.

(20)	O	gece	biraz	konuş-tuk-tan	sonra	uyu-muş-lar
	That	night	some	talk-CV-ABL	after	sleep-QUOT-PL
	'That night, they have slept after some talking.'					
						(6-year-old)

(21)	Çocuk	da	uyan-mış	sabah	ol-muş	kurbağa	yok-muş
	Boy	CONJ	wake-PAST	morning	become-QUOT	frog	Not exist-P.COP
	'The boy wakes up in the morning, and the frog is not there.'						
							(5-year-old)

(22)	Sonra	çocuk	öğle	uyku-su-na	yat-tı
	Then	boy	afternoon	sleep-POSS-DAT	lie-PAST
	'Then the boy lay down for an afternoon sleep.'				
					(adult)

- *Micro-level temporal terms*

According to Stirling and Huddleston (2002), temporal expressions such as 'recently', 'previously', or 'up till now' show a past time; 'at this time', or 'currently' are about

the present time, and ‘soon’, or ‘immediately’ are about the future. We called these kind of terms ‘micro-level temporal terms’.

The micro-level temporal terms used for staying connected to the story-world by stating that the events and situations take place at that time. The terms such as *o sırada/o esnada* ‘at that time’, *şu anda* ‘at the moment’, *bu arada/o arada* ‘by the way’ are included in this group. The examples between (23) to (25) illustrate their usage.

(23) O sırada kız baykuş-un yan-ı-na git-miş
That time girl owl-GEN next-POSS-DAT go-QUOT
‘At that time, the girl goes next to the owl.’

(6-year old)

(24) O esnada da kurbağa-yı bul-uyor-lar
That time CONJ frog-ACC find-IMPF-PL
‘At that time, they find the frog.’

(adult)

(25) Bu arada köpek cam-dan aşağı düş-üyor
This time dog window-ABL down fall-IMPF
‘Meanwhile, the dog falls down from the window.’

(adult)

- *‘Now’ and ‘Then’*

According to Stirling and Huddleston (2002), *now* and *then* are the temporal terms for *here* and *there*, and they are important for the temporal aspects of the story. Therefore, they should be treated as a separate temporal deixis category. The term *sonra* ‘then’ is mostly used anaphorically in the narrative because it shows a sequence between the events. We will refer to them by “temporal deictic terms”.

Şi*mdi* ‘now’ and *sonra* ‘then’ are important terms for Deictic Center construction, for establishing the continuity of the story and setting the narrative plot during narration (Duchan, 1995). Examples (26) to (29) illustrate such usages.

(26) Sonra ora-dan bir köstebek çık-tı
Then there-ABL a gopher get out-PAST
‘Then a gopher gets out from there.’

(6-year-old)

(27) Sonra çizme-ler-i-ni geçir-iyor baş-ı-na
Then boot-PL-POSS-ACC wear-IMPF head-POSS-DAT
'Then (he) wears his boots on his head.'

(5-year-old)

(28) Köpek şimdi çocuk-u yalı-yor
Dog now boy-ACC lick-IMPF
'The dog licks the boy now.'

(5-year-old)

(29) Sonra dışarı seslen-iyor-lar
Then outside call-IMPF-PL
'Then they are calling outside.'

(adult)

3.6.5. Come and Go

Following Fillmore's (1997) arguments already introduced in Chapter 1, the participant's usage of *gelmek* 'to come' and *gitmek* 'to go' are taken into consideration and counted. All the words including converbs (*geldiğ-inde, gid-i*nce, etc.), verbal nouns (*gelme, gidiş* etc.), and the inflected forms of the verbs (*gelir, gidiyor*) are included in this group. After identifying these expressions, their functions in the story are specified (e.g. introducing a character, moving from a place to another, a character's leaving the spatial center…) Various examples of these verbs are shown through (30) to (33).

The light verbs were not taken in this category (e.g. *hoşuna gitmek* 'like', *aklına gelmek* 'come up with an idea', *uykusu gelmek* 'getting sleepy', *denk gelmek* 'come across').

(30) Ondan sonra bir tane geyik gel-miş
That then a item deer come-QUOT
'After then, a deer has come.'

(5-year-old)

In example (30), *gel-* 'come' is used for putting the deer in the story for the first time.

(31) Bir baykuş gel-ip çocuk-u rahatsız et-ti
An owl come-CV boy-ACC disturb do-PAST
'An owl came and disturbed the boy.'

(6-year-old)

Another example of a first mention of a character is shown in example (31).

An example of a movement demonstration with the verb ‘come’ is shown in example (32).

(32)	Yavru-lar-ı	gel-di	sonra	yan-ı-na
	Baby-PL-POSS	come-PAST	then	side-POSS-DAT

‘Then its babies came to its side.’

(3-4-year-old)

(33)	Kurbağa-yı	çağır-mış	ama	kurbağa	gel-me-miş
	Frog-ACC	Call-QUOT	But	Frog	Come-NEG-QUOT

‘(He) called for the frog but it didn’t come.’

(5-year-old)

In example (34), ‘go’ is used to state the showing up of the frog.

(34)	Kavanoz-u-ndan	kaç-ıp	git-miş-ti
	Jar-POSS-ABL	run-CV	go-QUOT-P.COP

‘(It) ran away and went from (its) jar.’

(6-year-old)

Git- ‘go’ is used to indicate the frog’s disappearance in the story in example (34)

(35)	Onlar	da	gayet	mutlu	giderken
	They	CONJ	really	happy	go-AOR-COP

‘And they are really happy while (it is) going.’

(adult)

(36)	Çocuk	ve	köpek	orman-a	git-ip	bak-ıyor
	Boy	and	dog	forest-DAT	go-CV	look-IMPF

‘The boy and the dog go to the forest and looks.’

(6-year-old)

In (35) and (36), *git-* ‘go’ demonstrate a movement in the story world.

Example (37) shows the usage of the verb ‘go’ with a converb suffix.

(37)	Yat-ma-ya	git-er-ken	kurbağa-nın	akıl-ı-na	bir	şey	gel-miş
	Sleep-VN-DAT	go-AOR-COP	frog-GEN	mind-POSS-DAT	a	thing	come-QUOT

‘While going to sleep, something came into frog’s mind.’

(5-year-old)

(38) presents an example for saying goodbye and finishing the story.

(38) Yavru-lar-ı-nı gör-müş-ler git-miş-ler
Baby-PL-POSS-ACC see-QUOT-PL go-QUOT-PL
'They (the boy and the dog) saw their babies and went away.'

(6-year-old)

Another use of the verbs 'come' and 'go' is the light verbs as it is mentioned. In children's narratives, there are 2 usages of 'come', and 1 usage of 'go' with light verbs. For 'come', they are shown in (39) and (40).

(39) Akıl-ı-na bir fikir gel-miş
mind-POSS-DAT a idea Come-QUOT
'He came up with an idea.'

(3-4-year-old)

(40) Çocuk-un uyku-su gel-miş
boy-GEN sleep-POSS come-QUOT
'The boy felt sleepy.'

(3-4-year-old)

One usage of 'go' in light verbs is in *git başımdan,* which can be translated as 'leave me alone' in English.

This chapter presented the categories developed for the analyses in the present study. In Chapter 4, statistical analyses used in the analyses and their results are presented.

CHAPTER 4

RESULTS

This chapter includes the results of the study. We compare plot component scores within the participant groups analyze the demonstrative and locative pronoun usage and present the results with respect to each group. We also analyze and present the results of temporal terms, and the verbs ‘come’ and ‘go’.

4.1. Plot Components

As already stated in Chapter 3, the plot component scores are coded and analyzed according to Ayas-Koksal’s (2011) previous work

After quantifying each participant’s score, a one-way ANOVA between subjects was conducted to compare the effect of the developmental stage of children groups (age 3-4, age 5, age 6) on their deictic production in terms of plot component scores.

Table 3

Descriptive statistics of One-Way Analysis of Variance of plot component scores of children groups

Age	*n*	*Mean*	*SD*
3-4	14	3.86	.783
5	17	6.65	.809
6	16	8.63	.694

Figure 1 shows the groups’ mean plot component scores.

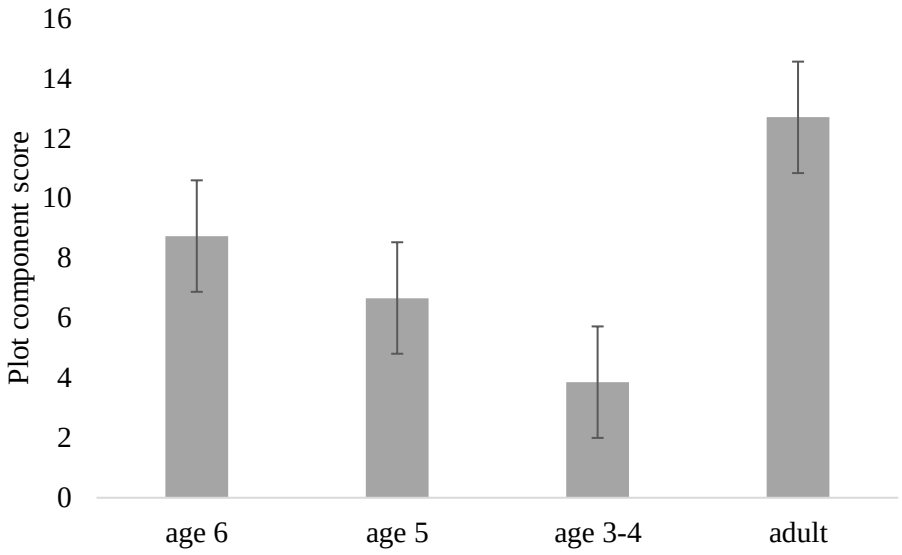

Figure 1 *The mean plot component scores of three group of children and adults*

According to the results, there was a significant effect of age between children groups on the sum of the scores of plot components, $p < .05$ $F(2, 44) = 9.248$, partial $\eta^2 = .30$ (Table 4). A post hoc LSD test was conducted to see which groups significantly differ from each other, and the results showed that 3-4-year-old group has significantly lower results in plot component scores than 5-year-olds ($p < .05$), and from the 6-year-old group ($p = .014$). On the other hand, the 5- and 6-year-old groups did not differ in their plot component scores, $p > .05$.

Table 4

One-Way Analysis of Variance of plot component scores of three children groups

Source	*df*	*SS*	*MS*	*F*	*p*
Between groups	2	170.40	85.2	9.248	.000*
Within groups	44	405.35	9.21		
Total	46	575.75			

*p < .05

A Shapiro-Wilk test was conducted to see whether the plot component scores data has a normal distribution in groups. According to the test results, the adult group's score distribution violates the normality assumption ($p < .05$). Therefore, we used a Mann-Whitney U test for comparing the plot component scores of the children (N = 47) and the adult (N = 23) group. It was found that scores of the adult group is significantly higher than all the children's groups in terms of their plot components, $U = 50.5$, $p < .001$.

Table 5 shows the results of the Mann-Whitney U test.

Table 5

Mann-Whitney test for plot component scores of children and adult groups

Mean rank		Mann-Whitney			
children	adult	Mann-Whitney U	Wilcoxon W	Z	Sig.
25.07	56.80	50.5	1178.5	-6.149	.000*

*p < .05

Therefore, it can be concluded that the difference between the groups is as expected in terms of deictic production when viewed from the perspective of plot construction.

4.2. Use of Demonstrative and Locative Pronouns Referring to Entities and Places

Since locatives *bura-* 'here'*, şura-* 'yonder'*, ora-* 'there' are derived from Turkish demonstratives *bu-* 'this', *şu-* 'that, *o-* 'that/it', we expect them to show a similar characteristic in terms of their references. For this reason, these demonstrative pronouns and locative pronouns are analyzed together (i.e. entity deixis and spatial deixis). All the inflected versions such as case and plural suffixes (e.g. *bura-da, ora-lar)* are counted in this group as well as nominative cases. Table 6 shows the descriptive statistics for these terms with respect to the groups.

Table 6

Total number of bu-/bura-, şu/şura, and o/ora used by the age groups

	Age groups			
Terms	*3-4-year-old*	*5-year-old*	*6-year-old*	*Adults*
bu-/bura-	40/56	11/27	19/19	37/17
(Total)	(101)	(38)	(38)	(54)
şu-/şura-	0/1	1/1	1/0	0/0
(Total)	(1)	(2)	(1)	(0)
o-/ora	37/15	38/16	48/24	87/39
(Total)	(52)	(54)	(72)	(126)

4.2.1. Bu and Bura

To see the difference between the groups' usage of *bu-* and *bura-*, the number of these terms were calculated for each participant. Then, the analyses were conducted to compare the four groups. *Bu-* and *bura-* s which refer to an entity and has a spatial referent are taken into consideration in the analysis.

A Shapiro-Wilk test results showed that the normality assumption is violated (not all the groups' data distribution was normal) ($p < .05$). Therefore, a Kruskal-Wallis test was conducted to compare the three groups of children (3-4-year-olds, 5-year-olds, 6-year-olds) in terms of the number of their uses of pronouns *bu-* 'this' and *bura-* 'here' in their narratives. There was a significant effect of age in the usage of *bu-* and *bura-*, $\chi^2(2) = 24.001$, $p < .001$. Mann–Whitney tests were used to follow up this finding. A Bonferroni correction was applied and so all effects are reported at a .0167 level of significance. It was found that the use of these terms used by 6-year-old and 5-year-old children ($U = 132$, $r = -.03$) are not different. However, 3-4-year-olds and 5-year-olds ($U = 14$, $r = -.77$) and 3-4-year-olds and 6-year-olds ($U = 19.5$, $r = -.72$) differ significantly in terms of their frequency of using *bu-* and *bura-* in their narratives. The 3-4-year-old children's usage of these terms is greater than the other children groups.

Table 7 shows the results which were elicited from the Kruskal-Wallis test.

Table 7

Kruskal-Wallis Test for children's use of bu- and bura- in their narratives

Mean rank			Kruskal-Wallis Test		
age 3-4	age 5	age 6	χ^2	df	Sig.
38.11	17.59	18.47	24.001	2	.000*

*p < .05,

Again, because the data was not distributed normally in the groups, a Mann-Whitney test was conducted to compare the number of *bu-* and *bura-* in children altogether and adult groups. The test showed that there is no significant difference between children and adults in terms of using these terms in their stories, $U = 465$, $p > .05$.

4.2.2. Şu- and Şura-

No statistical analysis has been conducted for *şu-* and *şura-* because they are used only 4 times by the participants.

4.2.3. O- and ora-

O- and *ora-* which refer to an entity and has a spatial referent are taken into consideration in doing the analysis.

According to Shapiro-Wilk test, the data distribution of the number of *o-* and *ora-* in the children groups is not normal ($p < .05$). Therefore, a Kruskal-Wallis test was

conducted to compare the three groups of children (3-4-year-olds, 5-year-olds, 6-year-olds) in terms of the number of their uses of pronouns *o-* and *ora-* in their narratives. The results showed that there was no significant difference between the groups in terms of their use of these terms, $\chi^2(2) = 1.587$, $p = .452$.

Shapiro-Wilk test results showed that the data distribution of the number of *o-* and *ora-* in the groups of adults and children was not normal ($p < .05$); therefore, a Mann-Whitney test was conducted to compare the number of *o-* and *ora-* in children ($N = 47$) altogether and the adult ($N = 23$) groups. The results showed that two groups differ significantly in terms of their use of these terms in their stories, $U = 216.5$, $r = .-49$, $p < .001$ (Table 8). The adult group used more *o-* and *ora-* in their narratives than all the children.

Table 8

Mann-Whitney Test for o- and ora- used by children and adults in their narratives

Mean rank		Mann-Whitney			
children	adult	Mann-Whitney U	Wilcoxon W	Z	Sig.
28.61	49.59	456	1593	-4.075	.000*

*p < .05

Also, Figure 2 demonstrates the number of *bu-/bura-* and *o-/ora* used as a pronoun in the narratives of four groups.

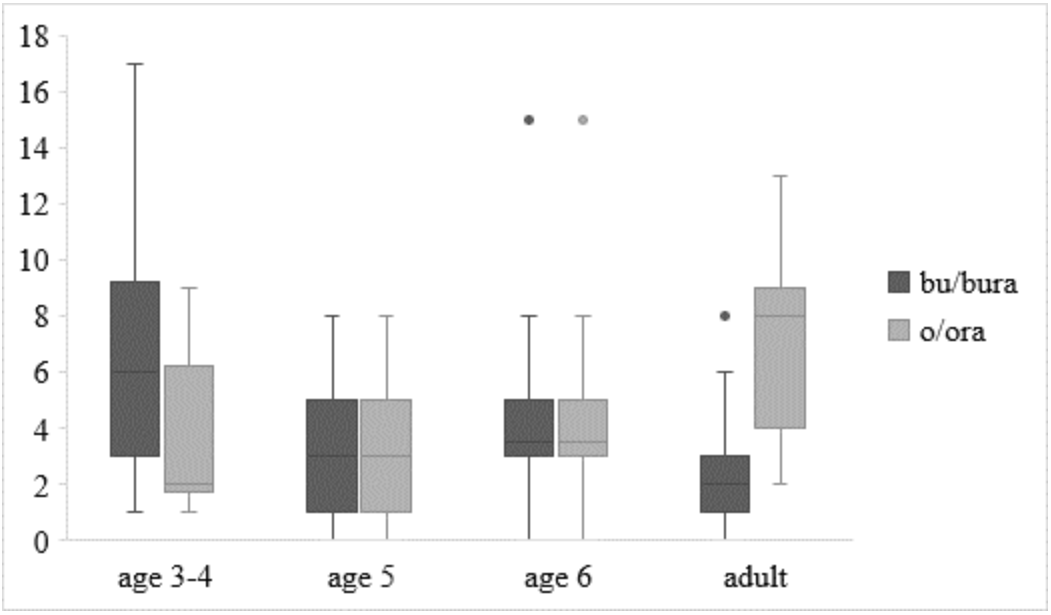

Figure 2 *Mean number of bu-/bura- and o-/ora used in narratives by four groups*

4.2.4. Comparison of bu-/bura- and o-/ora- Usages

For every age group, Mann-Whitney U test was conducted to see whether number of usages of *bu-/bura-* and *o-/ora-* differ.

A Mann-Whitney test showed that there is not a significant difference in terms of the numbers of *bu-/bura-* and *o-/ora-* in 3-4-year-old children group ($p > .05$).

A Mann-Whitney U test was conducted to see whether *bu-/bura-* and *o-/ora-* numbers significantly differ in 5-year-old group. It was found that the difference was significant, *o-/ora-* is used more than *bu-/bıra-*, $U = 48.000$, $p < .001$ (Table 9)

Table 9

Mann-Whitney U test for comparing the number of bu-/bura and o-/ora usage for 5-year-olds

Mean rank		Mann Whitney			
bu-/bura-	o-/ora-	Mann Whitney U	Wilcoxon W	Z	Sig.
11.82	23.18	48.000	201.000	-3.463	.000*

*p < .05

It was found that there is a significant difference between two terms in 6-year-old group and *o-/ora-* use is significantly more than *bu-/bura-*, $U = 31.000$, $p < .001$ (Table 10)

Table 10

Mann-Whitney U test for the number of bu-/bura and o-/ora usage for 6-year-olds

Mean rank		Mann Whitney			
bu-/bura-	o-/ora-	Mann Whitney U	Wilcoxon W	Z	Sig.
10.44	22.56	31.000	167.000	-3.774	.000*

*p < .05

Again, a Mann-Whitney U test was conducted to see these terms' difference in the adult group and it was found that there is a significant difference between the numbers of *bu-/bura-* and *o-/ora-*. *O-/ora-* usage is significantly more than the number of *bu-/bura-* in adults group's narratives, $U = 53.000$, $p < .001$ (Table 11).

Table 11

Mann-Whitney U test for the number of bu-/bura and o-/ora usage for adults

Mean rank		Mann Whitney			
bu-/bura-	o-/ora-	Mann Whitney U	Wilcoxon W	Z	Sig.
14.30	37.70	53.000	329.000	-4.675	.000*

*p < .05

4.2.5. Use of Ambiguous bu and o as Reference for Entities

It was found that while children used *bu* and *o* ambiguously, there is no ambiguous use of *bu* and *o* as pronouns in adults' narratives. Table 12 shows the number of ambiguous pronouns referring to entities in the narratives by four groups.

Table 12

The number of uses of ambiguous pronouns refer to entities in the narratives by four groups

	Age groups			
Terms	*3-4*	*5*	*6*	*Adult*
bu	9	2	5	0
şu	0	0	0	0
o	2	1	1	0

4.3. Terms Used for Discourse References (Discourse deixis)

The demonstrative pronouns used to refer discourse segments in the data were examined. It was found that only a total number of one child use one of these terms as discourse deixis, and it belongs to the 6-year-old group. Adults use a total number of eleven demonstratives to refer to discourse segments by demonstrative pronouns. Because of these low number of usages, no statistical analyses were conducted for the discourse deictic terms.

4.4. Temporal Deixis

4.4.1. Macro-level Terms

The following table summarizes the macro-level terms and the plot components in which they are used (Table 13).

Table 13

The participants' macro-level temporal term usage in their narratives according to plot components

	Age groups					
	Children			*Adults*		
	Plot Components					
Terms	*Onset*	*Unfolding*	*Resolution*	*Onset*	*Unfolding*	*Resolution*
Sabah	6	0	0	19	1	0
Öğle	0	0	0	1	0	0
Akşam	2	0	0	2	1	0
Gece	6	0	0	19	0	0

As the table indicates, almost all the macro-level temporal terms used in the story-world were used in the onset part in narratives. Adults used more of these terms than all children groups.

A Shapiro-Wilk test was conducted to see the distribution of temporal deixis in the data (e.g. *sabah* 'morning' and *gece* 'night') and the result showed that the normality assumption was violated. Thus, a Kruskal-Wallis test was conducted to compare the three groups of children (3-4-year-olds, 5-year-olds, 6-year-olds) in terms of their macro-level temporal term usages in their narratives. It was found that the number of uses of these terms did not differ significantly between the children group's narratives, $p = .09$.

Since the Shapiro-Wilk test showed that the data violated the normal distribution assumption, to compare the adult ($N = 23$) and the children group ($N = 47$) a Mann-Whitney Test was conducted (Table 10). It was found that children and adult groups differ significantly in terms of the number of macro-level temporal terms they used in their narratives, $U = 129.5$, $r = .-70$, $p < .001$. Therefore, adults used significantly more macro-level temporal terms (e.g. *sabah* 'morning', *gece* 'night'…) than children (Table 14).

Table 14

Mann-Whitney Test for macro-level temporal terms used by children and adults in their narratives

Mean rank		Mann Whitney			
Children	Adult	Mann Whitney U	Wilcoxon W	Z	Sig.
26.76	53.37	83.5	1257.5	-5.836	.000*

*p < .05

4.4.2. Micro-level Terms

Table 15

The participants' micro-level temporal term usage in their narratives according to plot components

	Age groups					
	Children			*Adults*		
	Plot Components					
Terms	*Onset*	*Unfolding*	*Resolution*	*Onset*	*Unfolding*	*Resolution*
Bu/şu/o sırada	0	3	0	0	37	1
Bu/şu/o arada	0	0	0	2	42	3
Bu/şu/o esnada	0	0	0	0	11	2
Bu/şu/o anda	0	0	0	0	4	1

The micro-level terms like *bu arada* 'by the way' and *şu anda* 'at the moment' were used so few (3 times in whole children data), for this reason, they were not analyzed statistically. All the terms belonged to the 6-year-old children group.

As it could be seen in Table 15, the children almost used no micro-level temporal term. However, adults used these terms much more and they are mostly in the unfolding part of the story.

Because the difference between adult group and children, no statistical test was needed.

4.4.3. Now and Then

A Shapiro-Wilk test showed that the data for *now* and *then* was not normally distributed ($p < .05$). A Kruskal-Wallis test was conducted to compare the three groups of children (3-4-year-olds, 5-year-olds, 6-year-olds) in terms of the number of *sonra* 'then' and *şimdi* 'now' in their narratives (Table 16). The results showed that there is a significant difference between groups, $\chi^2(2) = 9.968$, $p = .007$. Mann–Whitney tests were used to follow up this finding. A Bonferroni correction was applied and so all effects are reported at a .0167 level of significance. The results showed that 5-year-old and 3-4-year-old children groups did not differ in terms of the number of uses of *şimdi* and *sonra* in their narratives ($U = 106.5$, $r = -.08$). However, it was found that these terms were used more by 6-year-olds than 3-4-year-old children ($U = 42$, $r = -.53$, $p = .004$). Also, the difference in the number of uses of *şimdi* and *sonra* by the 6-year-old and 5-year-old children was marginally significant ($U = 67.5$, $r = -.43$, $p = .013$), The 6-year-olds used more of the micro-level lexical terms *şimdi* and *sonra* in their narratives.

Table 16

Kruskal-Wallis Test for children's use of şimdi and sonra in their narratives

Mean rank			Kruskal-Wallis Test		
age 3-4	age 5	age 6	χ^2	df	Sig.
18.11	20.71	32.66	9.968	2	.007*

$p < .05$

Since Shapiro-Wilk test was significant ($p < .05$), a Mann-Whitney test was conducted to compare the adult ($N = 23$) and the children ($N = 47$) groups' use of *şimdi* and *sonra* in their narratives (Table 17). It was found that children used these terms more than adults in their stories, $U = 359$, $r = -.27$, $p = .023$.

Table 17

Mann-Whitney Test for use of şimdi and sonra used by children and adults in their narratives

Mean rank		Mann Whitney			
Children	Adult	Mann Whitney U	Wilcoxon W	Z	Sig.
39.36	27.61	359	635	-2.273	.023*

*$p < .05$

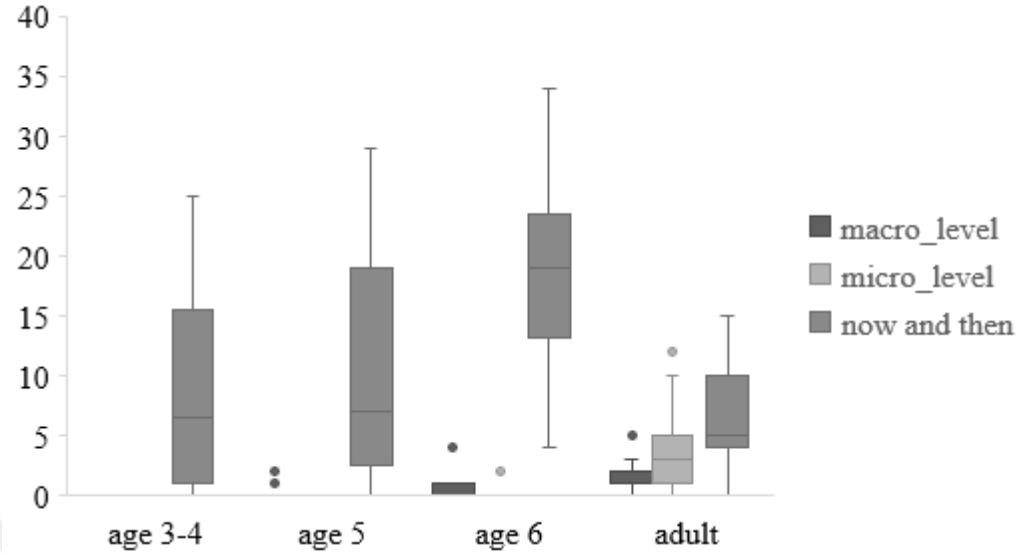

Figure 3 *Mean number of temporal terms used by four groups*

4.5. Come and Go

The age groups in the study (3-4-year-olds, 5-year-olds, 6-year-olds, adults) are examined in terms of their usage of *gel-* 'come' *and git-* 'go' in their narratives.

The number of *gel-* used by the groups and the part of narrative in which they were used are provided in Table 18.

Table 18

The number of gel- used by the groups and the chapter of narrative in which they were used

Age Group	*Onset*	*Unfolding*	*Resolution*	*Total*
3-4	1	7	2	10
5	0	1	9	10
6	0	16	1	17
Adult	0	26	3	29

In children's narratives; 6-year-olds' 6 of *gel*s are for the first mentioning of the characters in the story, other 11 usages are for showing a movement of the characters from one place to another and the putting the already mentioned characters into the story again.

5-year-old children use 4 *gel*s to illustrate a character's joining to the story, and the other 6 uses are for showing the movements inside the story-world and appearing of the characters which are already mentioned.

In 3-4-year-old children group, 3 of the *gel*s were used to indicate a character's first mentioning in the story. Other usages include the movements of the characters from one place to another and mentioning the characters again after introducing them before in the story.

Adults used only 3 *gel*s to state a character's introduction to the story world. For most of the story, the verb was used in the event descriptions and the character's movement between the places inside the story-world.

The other term *git-* 'go' was calculated in the same way as the verb *gel-* was. The number of the verb *git-* used by the groups and the part of the narrative in which they occurred are demonstrated in the Table 19.

Table 19

The number of git- used by the groups and the chapter of narrative which they were used in

Age Group	*Onset*	*Unfolding*	*Resolution*	*Total*
3-4	3	5	0	8
5	4	9	4	17
6	2	11	5	18
Adult	10	18	10	38

In all children's narratives; 6-year-olds used 5 of *git*s to indicate frog's disappearance or leaving, 13 of them to show characters' movement and changing the place inside of the narrative world and showing the movement act of the characters.

5-year-old children used 4 *git*s to indicate the frog's disappearance or leaving. Other 13 uses include the character's moving and changing their places from one place to another into the story-world.

3-4-year-old children used 2 of the *git*s to state that the frog is lost and its leaving act. Other 6 usages of *git*s were for the movements of the characters from one place to another, and their moving activity.

Adults used 8 *git*s to state the frog's disappearance. 5 usages of the verb indicate a movement of the frog or the frog family at the end and this shows the story's ending. Lastly, 23 usages of *git* are related to a movement of the characters from one place to another in the story-world context.

In adults' narratives, there are 18 uses of light verbs with the verb 'come', and 3 light verbs with the verb 'go'. Some of the examples with the 'come' are; *ses gelmesi* 'hearing a sound', *koku gelmesi* 'something's smell', *dizlerine kadar gelmek* 'come up to his knees', and *mutlu sona gelmek* 'coming to the happy ending'.

In children narratives all 3 uses of ‘go’ with light verbs are the same in adults’ narratives: *hoşuna gitmek* ‘like’.

CHAPTER 5

DISCUSSION

Within the research field of narrative, children's narrative abilities are one of the most studied topics. Especially in Turkish, in the scope of psychology, linguistics and language acquisition, it is a very important domain to study. Telling a fictional story indicates a milestone in this development; thus, in the current study, deixis in narrative has been explored in the scope of a fictional story.

As it is explained by Galbraith (1995), Deictic Center and Deictic Shift in fictional narrative is a different phenomenon than the real-world conversations. Cognitively, both the subjectivity and the perception of a fictional world must be used in storytelling activity. These are closely related to linguistic competence and cognitive development. Also, when we look with a philosophical perspective, individuals need to shift from the subjective environment and construct a fictional context. Moreover, to stay in a Deictic Center of a fictional narrative, subjectivity must be shifted to that of the fictional world. These activities also necessitate a theory of mind. The development of deixis in a fictional narrative and constructing a story-world activity could best be understood with a multidisciplinary approach.

This chapter is about the findings and the implications of this study. Firstly, the objectives and the procedures which were applied to reach the goals are summarized. Then, the findings of the analyses are presented with comparing them to the hypotheses to demonstrate the importance of the study. Finally, the implications to Cognitive Science and other areas are discussed. Lastly, future directions and the limitations of the study are given.

The present study was conducted to contribute to the research in Turkish children's narrative development, particularly from the perspective of their linguistic development in terms of using indexicals. To investigate this research question, preschool children between the ages 3;06 and 6;00 who go to a kindergarten, and a group of adults between ages 20-65 were recorded while telling a picture-based story (*Frog, Where Are You?)*. Their narratives were transcribed and analyzed in terms of their narrative abilities pertaining to the construction of the Deictic Center and establishing a Deictic Shift. Our tools to investigate these issues were the use of personal, spatial, and temporal deictic terms; and referring abilities reflected through such terms.

5.1. Discussion of Plot Component Results

The construction of plot components' results was analyzed with the scoring table of Ayas-Köksal (2011) as it is explained in Section 3.5.

We expected that the three groups of children's scores would be different from each other, and the older children would have higher scores. Also, it was hypothesized that the adult group would have higher scores than all children participants.

As expected, the overall plot construction scores of younger children are lower than the older children. It was found that children at ages 3-4 were not fully capable of telling the fictional story as older children. However, 5 and 6-year-old children did not significantly differ in terms of their narrative abilities. Moreover, adults have higher scores in their narrative plot components which means that their cognitive ability to tell a fictional story is fully developed compared to preschool children. These results are in the same direction as most of the studies about narrative development such as Berman's (1988). She found that children reach a point as adults in terms of development in plot components in their narratives at ages between 7 and 9. And after 9, their narrative abilities are mostly the same as adults.

5.2. Discussion of Deictic Terms

We expected that the younger preschool children would differ from the older children in terms of their deictic term usages. In addition, we also expected that the adults would differ from children, and they would use deictic terms properly to tell a comprehensive story compared to preschool children. The following sections summarize and discuss the story-construction of participants with their deictic term usages.

5.2.1. Demonstrative Reference

The results given in 4.2. shows the counts of *bu*, *şu* and *o* used as a pronoun which refer to entities in the narratives and their statistical comparisons between groups.

To begin with, *bu* and *o* were separately counted in the same group for both personal and demonstrative pronouns. The reason for that is the use of these terms both for people and for other entities in terms of proximity. Therefore, the results include *bu* conveying both 'this' and 'he/she/it', and *o* conveying 'that' and 'he/she /it'. When the term *bura-* 'here' as place reference is included in this group, the results show that 3-4-year-old children used more *bu-/bura-* than 5 and 6-year-olds in their narratives. However, there is no difference between 5- and 6-year-old groups in their use of these terms.

Firstly, this result is expected when we think about the Deictic Center construction and making a Deictic Shift. Young preschoolers cannot focus on the story-telling activity when their narratives are elicited by a picture-based book. During the task, we observed that they mostly focus on the pictures, and they have difficulties in getting in the story-world. We conjecture that; because the picture-book displays concrete objects similar to those in the real-world environment, they tend to use a deictic term which is generally used to refer to close objects and places (Küntay & Özyürek, 2002, 2006). On the other hand, older children might be thinking of the story-world as a different environment than the real-world-like context represented in the pictures.

Thus, their use of *bu-/bura-* is lower. In other words, this might be an indication that they are shifting their Deictic Center to tell a story to the listeners.

Our findings about the older children suggest that demonstrative usage cannot only be related to physical proximity. And, they are consistent with Peeters and Özyürek (2016), who object to the idea that referring is an autonomous activity, where only the speaker has control over the terms independent from the addressee. They argue that demonstrative choice not only depends on the physical proximity of the referent to the speaker or the addressee, but also on the perceived proximity.

It could be the case that 3-4-year-olds in our study are not fully developed in terms of perception of the psychological proximity, and they only take the pictures in the pages into account, using *bu/bura-* frequently and *o/ora-* or *şu/şura-* less. When we consider the use of *o-* and *ora-*, although there was no significant difference between the children groups, adults use more of these terms in their narratives. This suggests that adults are fully developed in terms of shifting the Deictic Center to a story world from a real-world context and they assume that the entities and places in the story belongs to a distal environment. They could make the inference that the places in the story are psychologically distant from the narrator and the listener.

The comparison of adults and the children show that the use of *bu-bura-* is not different between the two groups. However, adults could be using them by making Deictic Projection (Lyons, 1977), ie. they project themselves in the story-world, so that they can act like they are a character in the story-world and refer to the entities and places with *bu-/bura-*. However, it is expected for children to use *bu-/bura-* together with gestures like pointing to the pictures since it is a common process in children's development (Section 2.2)

Secondly, the results of *şu-/şura-* 'that/yonder' were not suitable for statistical analysis because the number of times they appeared in the data was too low. We can explain this situation by the study of Küntay and Özyürek (2002). According to them, *şu* is not only used for both close and far objects to the speaker, but also when the attention of the listener is not on the referred object. In this study's storytelling environment, there is only one listener, and the storyteller already knows the listener is focused on listening to the story. Thus, the lack of a listener could be why *şu-/şura* was not used in the narratives.

The terms *o-/ora-* were analyzed and it was found that none of the children groups differ in terms of the number of *o-/ora-* in their narratives. Adults have been found to use more of these terms than all children. Again, these findings could be interpreted along the same lines as the results regarding *bu-/bura-*. Contrary to younger preschool children, adults can shift their Deictic Center easier; and they set the story-world when they are telling the story. Thus, because *bu* is normally used for proximal objects, they prefer to use *o* 'that' for the referents, although they have a concrete picture-based book just as all the other participants. It can be concluded that adults are aware that they are telling a fictional narrative, and hence their use of *o* reflects the fact that they have the notion of telling about a different world than the real-world. An example is:

(1)	Geyik	o-nu	boynuz-lar-ı-yla	taşı-yor
	Deer	him-ACC	horn-PL-POSS-COM	carry-IMPF
	'The deer carries him with its horns.'			

(adult)

In example (1), adult use *o* as a referent for the boy. It does not show physical proximity but rather perceived proximity.

These results also show that children learn gradually how to construct the Deictic Center of a fictional narrative. The findings support the findings of Duchan (1995) who studied children's spontaneous narratives and analyzed their specific deictic terms which are used with the characters in the story (explained in Section 2.6.4.). Little children are found to be different in terms of placing themselves in a structured environment (Galbraith, 1995). They rather tell the narrative in the self-world orientation. It could be understood by their significantly more use of the pointing for the close-demonstratives than the other age groups. Older preschool children and adults can adapt to an imaginative construction better than the younger ones.

These results are enlightening from the perspective of cognitive science since they illuminate the role of demonstrative reference in shifting the Deictic Center, and its interaction with the notion of psychological proximity.

Competency in pronouns must be strongly related to the competency in the narrative's plot components. Just as we found lower scores for little children's (ages 3-4) use of plot components than the older children's use of plot components, we found that they use pronouns in lower frequencies.

Moreover, when we look at the general usage, we find that *o-/ora-* was used more than *bu-/bura-* but the 3-4-year-old children used more *bu-/bura-* than *o-/ora-*, while other groups used more *o-/ora-* than *bu-/bura-*. This suggests that the use of distal forms appear later in the context of a fictional narrative.

At this point, it is important to repeat that, in this study we have only been concerned with transcribed texts, where ambiguous reference could not be detected. Pictures in the book, gestures, and also gaze are important aspects and could have been used for determining the referent of the deictic terms. Thus, although it was not examined, we would expect children to use fewer gestures as they grow older.

In Berman's (1988) study with different age groups of children, it was found that little children mostly talk about the entities in the pictures in utterances such as: *Burada çocuk var* 'There is a child there', *Sonra bu gitmiş* 'Then he went', which give no specific place information by 'there' or a specific person by 'he' (note that, *bu* was used instead of *o*). This is similar to our study, where we find ambiguous referents, particularly in younger children's narratives. Moreover, this aspect is also important for organizing the story because without successfully setting the necessary referents in the story, i.e. with ambiguous reference, the story may become incomprehensible for listeners.

So, Demir & Goldin-Meadow (2010) find in their study that children often use gestures when the referents need to be specified. Moreover, it was found that gestures act as clarifying acts for ambiguous speech. Although we have not made a controlled

examination; from our observations in the narration process, children have difficulties in referring back to the already mentioned entities and places; i.e. they have difficulties in disambiguation. We have observed that, children tend to use *bu* even for entities they are mentioning for the first time in the story. It might be the case that such uses of *bu-* and *bura-* are accompanied with gestures pointing to the pictures in the book, thus helping them to disambiguate the pronoun. We cannot be sure of this process since we do not have the video records of the narrations.

According to Hickmann (2017), in early ages, children's references in a text are mostly exophoric and unorganized. Exophoric use of a term is defined as reference to something that is extralinguistic (Halliday & Hasan, 1976). In our case, the common use of ambiguous terms to refer to entities and places, especially in 3-4-year-old children's narratives is aligned with Hickmann's ideas. As children get older, their references have specific referents in the text, as we observe less ambiguity in older children's narratives.

It is also the case that difficulty of disambiguating decreases with child's increased proficiency on language (So et al., 2011). Therefore, it could be the case that *bu-/bura-are* used less in older ages. We can predict that since children do not use gestures any more to avoid ambiguity, they can perform in the story world using clear references; hence, their *bu-/bura-* use decreases.

5.2.2. Temporal Terms

Temporal terms in the narratives were divided into three groups. Firstly, the terms which are called macro-level temporal terms were analyzed. These terms include the deictic terms which could be interpreted in the context of the story world. The four terms were included in the analyses: 'morning', 'afternoon', 'evening' and night'. Three children groups did not differ in terms of using these terms in their stories, but adults used significantly more of these terms than the children. Once again, given the role of these terms in temporal ordering, the use of these terms is closely related to plot organization, which crucially involves temporal development. (Recall that the plot component scoring code used in this study (Ayas-Koksal, 2011) has a subcomponent for the onset part of the Frog Story: Temporal location. Thus, using temporal terms in the onset demonstrates the ability of constructing a plot for a fictional narrative.)

We looked at the plot components in which the macro-level temporal terms were used by the participants, and as expected, they were mostly used in the onset part. This is due to constructing the story-world when beginning to a narrative. Both children and adults used these terms mostly in the onset part of the narratives. However, adults seem to be use more of these terms which could be related to their Deictic Center construction abilities for creating a fictional narrative. This finding is in the same direction with Berman's (1988) research about children and adults' narratives and their event descriptions with temporal terms (See section 2.4.2.).

Thus, both children and adults have the notion of setting the story world, and this necessitates a temporal construction. There must be a special timeline in the story which is different than the time for the real-world. Terms like 'morning' and 'night' set the story-world in the beginning and ensure that the listeners understand that they are getting in the story-world.

The micro-level temporal terms were also analyzed. These terms include *bu/o arada, bu/o sırada, bu/o esnada* 'meanwhile'; and *bu/şu/o anda* 'at the moment'. These terms are used to link clauses, and they were found to be used mostly by adults (four times in the whole children data). Only 6-year-old children used them while adults used them much more frequently. Possibly; these terms are acquired lately, after preschool years. When we look at the micro-level temporal terms in the plot components of the story, they were mostly used in the unfolding part. It is not surprising because these terms function for explaining the events' relation and sequence in the scope of a narrative. In the Frog Story, the main events and relation between characters are taking place in the unfolding part. Hence, usage of these terms in the unfolding part demonstrate a shift to a story-world after constructing it, and children are not fully developed to use these terms in their fictional narratives.

Lastly, the micro-terms *sonra* 'then' and *şimdi* 'now' were analyzed. They are found to be used significantly more by 6-year-old children than the younger children groups; and also, children used these terms more than the adults in their narratives. This raises the hypothesis that children use these words, particularly 'then' as an all-purpose connective to connect events, i.e. to indicate that the story continues. *Sonra* 'then' is a term to be important in terms of providing cohesion in the story. In our data, 6-year-old children use 'then' excessively; this can be linked with older children's attempt to link events more tightly. Also, 'then' could be having the same conjunctive role with the conjunction 'and' (Bliss, McCabe, and Miranda, 1988).

'Then' is also used as an all-purpose cohesive device which indicates temporal sequence. It is used by little and older preschool children approximately in the same amount for the same purposes. It could be concluded that it is acquired at an early age and shows the child's ability to temporally link events together. Therefore, children are capable of telling a story emphasizing its temporal sequence.

Use of 'now' is very common in storytelling as it is in the present study. In fictional narration, the adverbs used for past and present tense are often used together. Galbraith (1995) argues that this is normal in a novel although it contrasts with the traditional meaning of deixis. In a fictional story, as in our study, the use of 'now' should also be interpreted within the act of storytelling, not by the speaker's position.

To summarize, our study suggests that macro-level temporal terms develop earlier then micro-level temporal terms, suggesting that plot organization (coherence at the global level) develops earlier then cohesion (as shown by the fewer use of micro-level temporals). Moreover, this is also about the construction of the story. Macro-level terms are necessary for the Deictic Center which is explained as I-HERE-NOW of the utterance. NOW, which is the temporal information in the context of the speaking activity is shaped according to the story-world. Therefore, macro-level temporal terms are important structures for storytelling.

5.2.3. Discourse Deixis

In our data, there is no use of *bu, şu,* and *o* used as discourse deixis in the narratives of 3-4 and 5-year-old children's narratives. In 6-year-old children's narratives, there is only one discourse deictic term.

On the other hand, although it is not sufficient to make a statistical analysis, there are more instances of discourse deixis in the narratives of adult participants, suggesting that discourse deixis is a late development within the context of narratives. These results show that discourse deixis is a complex process, and even more difficult to use in a fictional narrative. Making references in speaking deems to require developed linguistic skills. When we look at our data, we could conclude that this competency is acquired at or around age 6 or in older ages in primary school

5.2.4. Come and Go

The verbs 'to come' and 'to go' were provided descriptively in Section 4.5. As in the study of Duchan (1995), these verbs were analyzed in terms of their purpose of use in the narrative. It was found that 'come' is often used to indicate a character's joining to the story-world. This is similar to our study. Other uses of 'come' show that the verb indicates a movement of the character, or a movement to a specific spatial center in the story world. In other words, all the instances of the verb 'come' are used to show a movement towards a Deictic Center (first mention or not) in the story-world environment.

The verb 'go' is used to indicate a movement from one place to another in the story world, or for stating the disappearance of the frog. Since losing the frog is the main theme in the story, this verb is as important as the other verbs such as 'escape', 'run', 'get lost'. Like 'come', 'go' also indicates a change in the spatial center in the story-world by stating that a character changes place.

As Fillmore (1997) and Rapaport et al. (1989) state, these verbs should be interpreted in the context they are used in. The characters' introduction to the story, movements in the story-world's context, and their leaving the story could be understood in the narrative context. As Duchan's (1995) work suggests, children are able to use these deictic terms to indicate these events in the story-world. In the present study, preschool children can use these verbs to introduce the characters in the story, to indicate that they move, and leave.

Gradually, children's use of these verbs increases with age. They are used by 3-4, and 5-year-old preschool children for deictic purposes as it is explained in Section 4.5. These results suggest that 'come' and 'go' develop early in children's narratives (fictional for this study), and children are aware of the terms Deictic Center of a story and the Deictic Shift.

5.3. General Discussion

Galbraith (1995) suggests that deixis is about self-world orientation. The terms which are used could be understood according to the world of the speaker. It is about particular times, places and persons. Although their origin is I/here/now, deictic words are not limited to these. Because a fictional story necessitates a specific world orientation, it must be different than the self-world orientation of the speaker. Therefore, the deictic words that the speaker uses could only be interpreted in this specific environment. The discourse context of a story is a structured environment, so, the terms operate in imagination and in memory.

In a fictional narrative, the deictic origin is the story-world environment. The orientation must be shifted to its context for the story-telling activity. As it is explained

in previous chapters, this necessitates a combination of linguistic development, cognitive skills, subjectivity, the notion of psychological proximity and theory of mind. Individuals need to imagine a fictional environment, and they need to construct this context with the suitable linguistic devices in a cohesive way. Although preschool children seem to be linguistically developed, story-telling activity is a more complex aspect than speaking in a daily context. Therefore, this study investigated the development of preschool children's progress in terms of language use in a fictional narrative context. It was found that younger children, 3 and 4, also some of 5-year-olds, are not fully developed cognitively and linguistically for performing in a story-world environment. They seem to adhere to the subjective role of the language and cannot place themselves easily to the story context. Since imagination is important for using the language according to the context of speaking, younger children also lack this feature. Especially 3-4-year-old children are not able to move away from the real-world context in their imagination, and they focus on the concrete objects such as the picture-based story book. However, as children grow older, they become aware of the fictional narratives and place themselves in the story-world. They do not get affected from the concrete objects in the real-world while telling the story, and their linguistic devices in the narratives are more cohesive.

As far as we know, there is no other study which examines the Turkish children's narratives in terms of the Deictic Shift Theory, and the story-world construction. Thus, this study is hoped to fill a gap in the development of children's cognitive abilities in terms of shifting the Deictic Center.

This study shows that the Deictic Center of a fictional narrative is a developing process; and even at early ages, they can perform deictic shifts (though less than the older children and adults) from the real world to a different fictional world.

5.4. Limitations and Future Directions

Firstly, considering the data of the present study, almost half of the data were taken from an archival database. While we have controlled the instructions given to the participants in our study, we do not have access to the instructions of the elicited narratives in the CHILDES. Although the participants' education level and the material are the same in both data sets, and the age groups could be categorized together; we cannot be sure of the homogeneity of the participants and the grouping. Therefore, using an archival data has been a limitation in the scope of this study.

Another limitation is related to the recording type. With only audial information, the gestures and gaze could not be considered for the analyses of pronouns especially *bu-/bura-*. As it is explained in the Section 5.2.1, video recordings and their analyses could give different and more accurate results for the referents and for ambiguous references in the story. We would then be able to understand the gestures of the participants (if any) and be sure whether they refer to the story-world environment, entities and places, or they refer to the pictures in the book.

Thirdly, even though children are told that they are being recorded, according to our observations, they do not really take this into account and tell the story without any inhibitions. However, when adults know that they are being recorded, some of them get nervous and might be afraid of making a mistake. This could influence their storytelling. Telling a story knowing that you are being recorded would not be the

same as telling a story to a child without being recorded. In future studies, a different set-up could be planned to record the participants.

A related limitation concerns the fact that this study was conducted with only an experimenter who listens to the children's narrative. Children's narrative skills have been demonstrated to be affected by the audience (Shatz & Gelman, 1973). In our data collection method, the child might assume that the listener already knows what the story is about. Moreover, the child might feel that he/she is being tested for storytelling. Future research could be conducted by comparing the effects of different types of listeners. For example, a new study could be conducted by using different listeners: younger children, family members (especially care-takers), teachers, and a stranger such as the experimenter.

Fifth, having a preschool education would affect children's fictional and autobiographical narrative abilities. For example, in the kindergarten where six of the 6-year-old children's data were collected, children had special hours in a week for storytelling. Children tell a story from a book with pictures which they bring from their home, or they tell a story from another child's book. Within the research of narrative development, this kind of practices in preschool education are very important to consider when collecting data from children. This issue can be taken into consideration and investigated in further studies.

Yet another limitation is about the sample size of the research. With more data, the terms such as *bu-* and *bura-* could be analyzed separately to have more specific results. In addition, more clear separation of the age groups is necessary to see the age differences better. The age separations in this study is not very distinct and the significant differences might not be shown clearly. In a future study, more participants could be used to overcome this situation. Moreover, this study is about the preschool children because it is the best period to study narrative development. However, older children at ages 7 and 12 could also be used to compare children's use of specific terms and to see their complete development of the story-world.

Lastly, family background and the socioeconomic situation (SES) are known to have an effect on children's narrative and storytelling performance. Language development is said to be strongly affected by poverty. Low SES family children are more likely to have language delays in terms of vocabulary, phonological knowledge, and syntax (Perkins, Finegood & Swain, 2013). In a study by Mozzanica et al. (2016), children from low SES families were found to have poor narrative abilities compared to high SES family children. The parents' educational background and employment have been found to be an important factor for children's narrative abilities. In the present study, the kindergartens where the data was collected are in the districts in Ankara, where mostly the upper-middle class people live. The families' educational background was not asked. According to our observations, in two kindergartens, children were from conservative families with non-working mothers. Because of that, 5 and 6-year-old children groups might not be homogeneous in terms of family background and SES.

A future study might take SES into consideration. Moreover, SES could affect whether children go to the kindergarten or not. Therefore, Turkish children who are educated in kindergarten and children who do not have preschool education could also be compared in terms of their narrative abilities.

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APPENDICES

APPENDIX A: FROG WHERE ARE YOU (MAYER, 1969) SCRIPT

1. There once was a boy who had a dog and a pet frog. He kept the frog in a large jar in his bedroom.
2. One night while he and his dog were sleeping, the frog climbed out of the jar. He jumped out of an open window.
3. When the boy and the dog woke up the next morning, they saw that the jar was empty.
4. The boy looked everywhere for the frog. The dog looked for the frog too. When the dog tried to look in the jar, he got his head stuck.
5. The boy called out the open window, "Frog, where are you?" The dog leaned out the window with the jar still stuck on his head.
6. The jar was so heavy that the dog fell out of the window headfirst!
7. The boy picked up the dog to make sure he was ok. The dog wasn't hurt but the jar was smashed.
8 – 9. The boy and the dog looked outside for the frog. The boy called for the frog.
10. He called down a hole in the ground while the dog barked at some bees in a beehive.
11. A gopher popped out of the hole and bit the boy right on his nose. Meanwhile, the dog was still bothering the bees, jumping up on the tree and barking at them.
12. The beehive fell down and all of the bees flew out. The bees were angry at the dog for ruining their home.
13. The boy wasn't paying any attention to the dog. He had noticed a large hole in a tree. So he climbed up the tree and called down the hole.
14. All of a sudden an owl swooped out of the hole and knocked the boy to the ground.
15. The dog ran past the boy as fast as he could because the bees were chasing him.
16. The owl chased the boy all the way to a large rock.
17. The boy climbed up on the rock and called again for his frog. He held onto some branches so he wouldn't fall.
18. But the branches weren't really branches! They were deer antlers. The deer picked up the boy on his head.
19 The deer started running with the boy still on his head. The dog ran along too. They were getting close to a cliff.
20 – 21. The deer stopped suddenly and the boy and the dog fell over the edge of the cliff.
22. There was a pond below the cliff. They landed with a splash right on top of one another.
23. They heard a familiar sound.
24. The boy told the dog to be very quiet.
25. They crept up and looked behind a big log.
26. There they found the boy's pet frog. He had a mother frog with him.
27. They had some baby frogs and one of them jumped toward the boy.
28-29. The baby frog liked the boy and wanted to be his new pet. The boy and the dog were happy to have a new pet frog to take home. As they walked away the boy waved and said "goodbye" to his old frog and his family.

APPENDIX B: PARENT CONSENT FORM

Veli Onay Formu

Sayın Veliler, Sevgili Anne-Babalar,

Bu çalışma Orta Doğu Teknik Üniversitesi Bilişsel Bilimler bölümünde yüksek lisans öğrencisi olan Dilek Deniz Bilgiç tarafından Prof. Dr. Deniz Zeyrek danışmanlığında yüksek lisans tezi kapsamında yürütülmektedir.

Bu çalışmanın amacı nedir? Çalışmanın amacı anadili Türkçe olan çocukların dil gelişimi sürecinde olaydizimi ve değerlendirme karmaşıklığının bağlam ve dinleyiciye göre nasıl değişiklik gösterdiğini incelemektir.

Çocuğunuzun katılımcı olarak ne yapmasını istiyoruz?: Bu amaç doğrultusunda, çocuğunuzun resimlerden oluşan bir kitaptaki hikayeyi sözlü olarak anlatmasına ve bu sırada ses kaydı alınmasına ihtiyaç duyulmaktadır. Kullanılacak olan kitabın adı "Frog, Where are You?" olmakla beraber istediğiniz takdirde önceden inceleyebilirsiniz. Sizden çocuğunuzun katılımcı olmasıyla ilgili izin istediğimiz gibi, çalışmaya başlamadan çocuğunuzdan da sözlü olarak katılımıyla ilgili rızası mutlaka alınacak.

Çocuğunuzdan alınan bilgiler ne amaçla ve nasıl kullanılacak?: Çocuğunuzdan alacağımız cevaplar tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Elde edilecek bilgiler sadece bilimsel amaçla (yayın, konferans sunumu, vb.) kullanılacak, çocuğunuzun ya da sizin ismi ve kimlik bilgileriniz, hiçbir şekilde kimseyle paylaşılmayacaktır.

Çocuğunuz ya da siz çalışmayı yarıda kesmek isterseniz ne yapmalısınız?: Çocuğunuzun cevaplayacağı soruların onun psikolojik gelişimine olumsuz etkisi olmayacağından emin olabilirsiniz. Yine de, bu formu imzaladıktan sonra hem siz hem de çocuğunuz katılımcılıktan ayrılma hakkına sahipsiniz. Katılım sırasında sorulan sorulardan ya da herhangi bir uygulama ile ilgili başka bir nedenden ötürü çocuğunuz kendisini rahatsız hissettiğini belirtirse, ya da kendi belirtmese de araştırmacı çocuğun rahatsız olduğunu öngörürse, çalışmaya sorular tamamlanmadan ve derhal son verilecektir. Şayet siz çocuğunuzun rahatsız olduğunu hissederseniz, böyle bir durumda çalışmadan sorumlu kişiye çocuğunuzun çalışmadan ayrılmasını istediğinizi söylemeniz yeterli olacaktır.

Bu çalışmayla ilgili daha fazla bilgi almak isterseniz: Araştırmayla ilgili sorularınızı aşağıdaki e-posta adresini kullanarak yöneltebilirsiniz.

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Yukarıdaki bilgileri okudum ve çocuğumun bu çalışmada yer almasını onaylıyorum (Lütfen alttaki iki seçenekten birini işaretleyiniz.

Evet onaylıyorum___ Hayır, onaylamıyorum___

Annenin adı-soyadı: _____ BugününTarihi:_____

Çocuğun adı soyadı ve doğum tarihi:_____

APPENDIX C: ADULT CONSENT FORM

GÖNÜLLÜ KATILIM FORMU

Bu çalışma Orta Doğu Teknik Üniversitesi Bilişsel Bilimler bölümünde yüksek lisans öğrencisi olan Dilek Deniz Bilgiç tarafından Prof. Dr. Deniz Zeyrek danışmanlığında yüksek lisans tezi kapsamında yürütülmektedir.

Bu çalışmanın amacı nedir? Çalışmanın amacı anadili Türkçe olan çocukların dil gelişimi sürecinde olaydizimi ve değerlendirme karmaşıklığının bağlam ve dinleyiciye göre nasıl değişiklik gösterdiğini incelemektir.

Katılımcı olarak ne yapmanızı istiyoruz?: Bu amaç doğrultusunda, sizden resimlerden oluşan bir kitaptaki hikayeyi sözlü olarak anlatmanıza ve bu sırada ses kaydı alınmasına ihtiyaç duyulmaktadır. Kullanılacak olan kitabın adı "Frog, Where are You?" olmakla beraber istediğiniz takdirde önceden inceleyebilirsiniz.

Sizden toplanan bilgiler ne amaçla ve nasıl kullanılacak?: Sizden alacağımız cevaplar tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Elde edilecek bilgiler sadece bilimsel amaçla (yayın, konferans sunumu, vb.) kullanılacak; ismi ve kimlik bilgileriniz, hiçbir şekilde kimseyle paylaşılmayacaktır.

Katılımınızla ilgili bilmeniz gerekenler: Çalışma, genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta serbestsiniz. Böyle bir durumda çalışmayı uygulayan kişiye, çalışmadan çıkmak istediğinizi söylemek yeterli olacaktır.

Bu çalışmayla ilgili daha fazla bilgi almak isterseniz: Araştırmayla ilgili sorularınızı aşağıdaki e-posta adresini kullanarak yöneltebilirsiniz.

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İsim Soyad Tarih İmza

APPENDIX D: RAW DATA OF PARTICIPANTS' NARRATIVES

Participant no	Age (years;months)	Source	Recording time
1	6;00	Recording	4.27 min.
2	5;11	Recording	2.26 min
3	5;11	Recording	2.36 min
4	5;11	Recording	4.56 min
5	5;11	Recording	3.44 min.
6	5;10	Recording	1.57 min.
7	5;09	Recording	3.44 min.
8	5;07	Recording	5.00 min.
9	5;06	Recording	2.26 min.
10	5;05	Recording	4.13 min.
11	5;04	Recording	2.05 min.
12	5;03	Recording	3.48 min.
13	5;03	Recording	2.04 min.
14	5;03	Recording	5.30 min.
15	5;03	Recording	4.17 min.
16	5;03	Recording	3.42 min.
17	5;02	Recording	4.17 min.
18	5;02	CHILDES	
19	5;01	Recording	4.29 min.
20	5;01	Recording	2.33 min.
21	5;01	Recording	2.02 min.
22	5;01	Recording	4.03 min.
23	5;01	CHILDES	
24	5;01	Recording	4.23 min.
25	5;00	CHILDES	
26	5;00	CHILDES	
27	4;11	Recording	2.40 min.
28	4;11	Recording	3.57 min.
29	4;10	Recording	3.30 min.
30	4;09	Recording	
31	4;09	Recording	2.47 min.
32	4;08	Recording	3.46 min.
33	4;08	Recording	2.30 min.
34	4;07	Recording	3.00 min.
35	4;07	Recording	2.13 min.
36	4;06	Recording	2.03 min
37	4;04	Recording	3.00 min.
38	4;03	CHILDES	
39	4;02	CHILDES	
40	4;01	CHILDES	
41	4;00	CHILDES	
42	4;00	CHILDES	
43	4;00	CHILDES	

44	3;11	CHILDES	
45	3;11	CHILDES	
46	3;07	CHILDES	
47	3;06	CHILDES	
1	54;00	Recording	3.50 min.
2	35;00	Recording	4.52 min.
3	25;00	Recording	4.11 min.
4	26;00	Recording	3.52 min.
5	27;00	Recording	3.35 min.
6	25;00	Recording	6.45 min.
7	65;00	Recording	2.52 min.
8	35;00	Recording	6.22 min.
9	25;00	Recording	3.38 min.
10	33;00	Recording	3.00 min.
11	24;00	Recording	6.53 min.
12	21;07	CHILDES	
13	20;00	CHILDES	
14	20;00	CHILDES	
15	20;00	CHILDES	
16	20;00	CHILDES	
17	20;00	CHILDES	
18	20;00	CHILDES	
19	20;00	CHILDES	
20	20;00	CHILDES	
21	20;00	CHILDES	
22	33;00	Recording	2.50 min.
23	29;00	Recording	2.30 min.

APPENDIX E: DEFINITIONS OF THE PLOT COMPONENTS AND SCORES (Ayas-Koksal, 2011)

Core Plot Components	Plot Sub-Components	Examples and Explanations
Plot Onset	**Precedent event**	The boy wakes up
	Temporal Location	In the morning/evening/night
	Characters	The boy/child, the dog, the frog Scoring ranges between 0-3. Only one character=1; Two of the characters= 2 Three characters=3
	The main characters learn something	The boy discovers/realizes that frog is gone away Child looks to the frog and could not find the frog When the boy and the dog wake up and look for the frog, they could not see the frog
	Depiction of inference about the frog's disappearance	The jar is empty The frog run away from the jar The frog left its jar The frog disappeared
	The response of protagonist	The boy gets surprised/worried
Plot Unfolding	**Seeking for the lost frog in the home**	Child looks for the frog somewhere in the house
	Encountering with bees	The bees attack to dog, child The dog wants to catch the bees
	Interacting with gopher	Gopher bites the nose of the child Gopher becomes angry to the child Gopher comes while child is calling for the frog

	Interacting with owl	Owl attacks to the child Child is afraid of the owl
	Interacting with deer	Child gets on to the deer Deer throws the child to the lake
	Falling down	Child and the dog fall down into the lake/pond/pool/sea Child falls down to the ground
Resolution	**Protagonist finds the lost frog**	The boy found the missing frog