Doctoral Dissertation

THE LINGUISTIC BEHAVIOR OF TURKISH CHILDREN IN JAPAN: A SOCIOLINGUISTIC STUDY

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日本在住トルコ人児童の言語行動

－社会言語学的視点より－

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ABSTRACT

This is a sociolinguistic study on the multilinguistic behavior of Turkish children living in Japan with an emphasis on code switching. The ultimate aim of this research can be summarized as to make a systematic explanation within a sociolinguistic framework on *which language is used by which children in what frequency for what purpose under what circumstances.* To this end, the natural linguistic behavior of Turkish children, who have spent a large span of their life or were born in Japan, was audio or video-recorded and transcribed for corpus analysis. With a quantitative sociolinguistic approach in mind, a large speech database (around 20000 utterances from 17 hours of voice and audio recording) has been formed in order to make solid generalizations on the above questions. To create this database, the speech of Turkish children, who speak Japanese, Turkish and English with varying amounts and abilities, was surreptitiously recorded for a period of 2 years in various environments such as school, the home, parks etc. By using language-archiving software, the raw data was transcribed into a statistically-analyzable corpus. From there, a series of analyses have been conducted. First, the data was transformed into lists of utterances and words. These utterances were tagged with a series of information such as language, utterer, interlocutor, duration, setting and so on. The results are given in the form of tables with statistical data. Other than the statistical analysis, some parts of the data were also given as examples in the form of dialogue texts to support or elaborate the discussion points.

CONTENTS

Introduction 1

1. Literature Review 4

1.1. Bilingualism 4

1.2. Code switching 5

1.3. Utterances 6

1.4. Functions of code switching 8

1.5. Comparative research on Turkish and Japanese native speakers 13

2. Methodology 15

2.1 Participants 15

2.2. Data collection 21

2.3. Data collection summary in chronological order 22

2.3. Data Transcription 28

2.3.1. Notes on transcription 28

2.4. Data Organization 29

2.4.1. Utterance and word listing 29

2.4.2. Utterance marking 30

2.4.2.1. Utterer 30

2.4.2.2. Interlocutor 31

2.4.2.3. Language 31

2.4.2.4. Base language 32

2.4.2.5. CS type 33

2.4.2.6. Settings 34

2.4.2.7 Topic 35

2.4.2.8. Duration 35

2.4.2.9. Word count 35

2.4.2.10. Participants 36

2.4.2.11. Presence of adults 36

2.4.2.12. Groups 36

2.4.2.13. Word labeling 37

2.4.2.14. Grammatical category 37

2.4.2.15 Grammatical mistakes 37

2.4.2.16 Objective 38
3. Analysis 39
3.1. Preliminary discussion on the data statistics 39
3.1.1. Total utterance duration 39
3.1.2. Days and sessions 40
3.1.3. Average, maximum and minimum durations 40
3.2. The linguistic competence of the participants 43
3.2.1. Tokyo group 44
3.2.2. Yokohama group 47
3.2.3. School group 48
3.3. Utterance Duration Analysis 55
3.3.1 Discussion on some individuals 58
3.3.2. Discussion on groups 58
3.3.3. The utterance rates based on addressee 60
3.4. Utterance Totals Analysis 63
3.4.1. Discussion on groups 64
3.4.2. Discussion on some individuals 66
3.5. Language Choice Analysis 68
3.5.1. Group statistics 69
3.5.2. The parent's linguistic background 70
3.5.3. Participant composition in a given setting 72
3.5.4. Individual variations 73
3.5.5 Language choice rates based on settings 78
3.6. CS Analysis 81
3.6.1. CS within utterance 83
3.6.2. CS between utterances 85
3.6.3. CS rates based on addressee and setting 89
3.6.4. Marginal CS cases 96
3.6.5. CS rates based on settings 111
3.7. Word Analysis 112
3.7.1. Vocabulary preferences 113
4. Conclusions 124

Bibliography 127
Appendix 1. Ccontents of transcript data, and transcription notation 131
Appendix 2. The transcript data 132 - 411

ABBREVIATIONS

T:	Turkish	LB:	Lunch Break
J:	Japanese	FT:	Free time
E:	English	Sup	Supervisor
U:	Undefined or multilingual	CS:	Code switching
N:	Inaudible or incomprehensible	CSu:	CS within utterance
TL:	Turkish lesson	CSt:	CS between utterances
CG:	Computer game	OCD:	Ongoing conversation duration
GM:	Game	OFCD:	Ongoing free conversation duration

INTRODUCTION

Research on multilingualism in Japan has so far focused mainly on a limited number of languages such as English, Chinese and some other East Asian languages, therefore limiting the sociolinguistic scope of interpretation to only what these languages can offer. In addition, little has been done so far on the quantitative characteristics of these multilinguistic phenomena such as code switching. Research on different language pairs −and therefore in different sociolinguistic environments− would potentially help shed more light on both the structure and functions of CS in Japan.

To date, there seems to be two main types of data collection procedures that have been utilized in research aiming at a sociolinguistic analysis based on a satisfactorily large amount of data. One of these methods is the so-called case study method where the researcher records the utterances of the subject (who is for most cases the researcher's own child or children) for a relatively long period of time. This kind of data is extensively used, especially in research on first language acquisition, and can provide very deep insight on linguistic development, choice, changes and the inclinations of a certain subject or subjects. Examples to these types of research are those of, Hakuta (1976), Matychuk (2005), Bamberg, Budwig, and Kaplan (1991) and so on. One of the most evident drawbacks of this kind of data is the fact that the results have many idiosyncratic features and lack the proof necessary to make broader generalizations. For example, the linguistic data of a certain child, in a certain family, under certain sociolinguistics circumstances may not be predictive enough to form a hypothesis.

The other way of acquiring a large amount of data is increasing the number of subjects, such as conducting research on a relatively large number of children where the same sociolinguistic phenomenon is observed amongst different individuals. A higher number of subjects means a more accurate representation of their kind, and this, in turn, makes the results more generalizable. However, as the number of subjects increases, so does the depth of the observation and analysis decrease. Namely, unlike in case studies, it would be very hard or almost impossible for one researcher to record, observe and analyze the utterances of, for

instance, one hundred children for even a couple of months. Consequently, researchers working with large numbers of subjects tend to utilize practical techniques of data collection, such as questionnaires or interviews where the same or similar questions are directed to all of the subjects. However, the effectiveness of such methods while researching the very nature of language use, code switching patterns and a number of other sociolinguistic notions is arguable. Furthermore, eliciting reliable answers especially from children poses some technical problems, as well. For instance, as Poplack's (1980) famous research title *"Sometimes I'll start a sentence in Spanish y termino en Español"* implies, it is highly possible for a bilingual speaker to resort to code switching almost unconsciously, and such an inclination may not be understood by merely conducting a questionnaire or interview. Studying children would only make the procedure harder. In addition to this, when interviewed by a monolingual researcher, bilingual children's tendency to adjust their mode of talking according to linguistic background of their addressee may prevent them from talking in their *natural way* when they are with their bilingual peers. Comeau and Genesee (2001) found that the ability to change the speech style in accordance with the feedback from the interlocutor is present from as early as infancy.

Taking all these into consideration, this research's data collection procedures were built on the following three principles.

1. While keeping the observation as elaborate as possible −as it would be in a typical case study− it is also aimed to keep the number of the subjects as manageably high as possible. As a result approximately 17 hours of voice and video recording were conducted for a period of two years on 21 subjects in total.
2. In order to observe the children's natural speech with or without an adult supervisor, the children were not informed about their being observed. There were times some of them noticed the recording device, and were partially informed, but through most of the data collection procedure, they seemed undistracted by being recorded.
3. The voice and video recordings were transcribed and turned into statistically analyzable data of utterances, each of which was tagged by numerical information such as the addressee, the length of utterance, language and code switching patters, etc.

The following is the summary of the structure of this thesis:

In the literature review, first the definitions of some key terminology that is frequently used in this paper are discussed. The next part is on the functions of Code Switching (which will be shortened to CS below) where different classifications are introduced. Following this, a short review will be made on the previous comparative studies on Turkish and Japanese native speakers conducted in Turkey and Japan, and studies on either Japanese or Turkish bilingual children.

Chapter 2 is about methodology. First, the profile of the participants and the groups they belong to are introduced. Next, the data collection timeline, and data transcription procedures are explained. The last phase is the data organization procedure where the data is transformed into utterances that are labeled by a number of tags. All of these labels are explained in detail.

Chapter 3 is composed of seven different analyses. First, a general discussion on the transcription data is followed by a series of analyses on utterance duration, number of utterances, language choice, CS, and word choice.

Chapter 4 contains the conclusion, and a brief summary of the methodology and the ideology behind it.

In the appendix section, the whole transcript data is given.

CHAPTER I

1. Literature Review

Here, different aspects on the definition of terms such as bilingualism, utterance and CS and their determined scope of meanings in this paper will be explained. Following this, some proposals on the functions of code switching will be introduced.

1.1. Bilingualism

The number of bilingual and multilingual people in the world seems to be higher than that of monolinguals (Tucker, G. R. 1999). If we add the number of all the second language speakers of all level of competence, the numbers of multilingual people will be higher by far. If we have a simple reasoning of "the one higher in number is the one more general and therefore natural," multilingualism would have to be accepted to be a more natural phenomenon than monolingualism. Despite this, studies related to multilingual issues could become popular only after the second half of twentieth century.

Any study related to bilingualism would first face a problem of defining what a bilingual means in a practical sense. The second step would be deciding whether the subjects of that specific research can be judged as bilingual or not based on this definition. One of the earliest definitions of a bilingual is that of Bloomfield:

> "In the extreme case of foreign-language learning the speaker becomes so proficient as to be indistinguishable from the native speakers round him. This happens occasionally in adult shifts of language and frequently in the childhood shift just described. In cases where this perfect foreign-language learning is not accompanied by loss of the native language, it results in **bilingualism, native-like control of two languages.**[1] After early childhood few people have enough muscular and nervous freedom or enough opportunity and leisure to reach perfection in a foreign language; yet bilingualism of

[1] Bold texts: author

this kind is commoner than one might suppose, both in cases like those of our immigrants and as a result of travel, foreign study, or similar association. Of course one cannot define a degree of perfection at which a good foreign speaker becomes a bilingual: the distinction is relative. (Bloomfield, 1935: 55-56)."

As understood from the citation above, Bloomfield saw native-like bilingualism as an extreme case of foreign-language learning rather than being a synchronic acquisition of two languages, while acknowledging that "this kind is commoner" than usually thought. Weinreich (1953:5) made another early definition of bilingualism as "The practice of alternatively using two languages." Consequently, a person who does this becomes a bilingual. An example of *fairly broad* definition of a bilingual is that of McNamara (1967: 59-60): "…persons who possess at least one of the language skills even to minimal." This definition covers almost everyone who has learned some part of a foreign language in his lifetime as long as he continues to possess this competence. On the contrary, there are some researchers who narrow down the scope of a bilingual to a smaller area. Poplack (1980), for example, argues the existence of balanced bilinguals differentiating themselves from other types of bilinguals by their ability to "code switch". There are still other types of bilinguals such as receptive bilinguals, secondary bilinguals, horizontal bilinguals and so on. In his table of "a variety of bilinguals" LiWei (2000: 6-7) compiled 36 different types of bilingualism. As one searches the literature the list goes on by making one unifying term of bilingualism even less possible.

1.2. Code Switching:[2]

Another term that will be frequently used in this paper is CS, which can be defined as "the alternate use of two or more languages in the same utterance or conversation" (Gumperz, 1973). Weinreich's above definition of bilingualism as "the practice of alternatively using two languages" is also thought to be one of the earliest definitions of CS. In his later works Gumperz modified his definition to "The juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems" In this new definition, "different grammatical systems" is used instead of "language".

[2] Other forms are "Code-switching", "Code mixing", "Language switching", "Code shifting" etc.

Like “bilingualism” and other similar sociolinguistic terms, there is no consensus among scholars about the definition of CS. At least the following questions must be addressed before deciding what CS refers to: What should be the criteria to decide boundaries between languages that are said to be switched? Can switching between “dialects” or “styles” be considered as a type of CS? Is there a certain competence level for the speaker to call a change in language, CS?

In this paper, an unorthodox approach is followed in terms of what these terms actually mean. Rather than furthering a discussion on what bilingualism, bilingual and CS are, and what is not, a definition that would allow us to consider all of the subjects in this research as bilingual, was preferred. As a result, for a child, to live in an environment from birth or early childhood, where he is exposed to more than one language spoken by its native speakers, and consequently having relatively a high level of oral competence in each one on these languages, is considered enough to call him or her, bilingual. Any language shift, which is made by a bilingual child between Japanese, Turkish and English is called CS. The adults accompanying the subjects (the supervisors and teachers), on the other hand, are not regarded as bilinguals as none of them were exposed to a bilingual environment in their early childhood. They are, instead, considered to be monolingual native speakers of Turkish, who have learnt English and Japanese to varying degrees, as foreign languages.

1.3. Utterance

When trying to make a systematic linguistic classification on a data of “unstructured natural speech”, one confronts a challenge of matching the “speech chunks” with a set of traditional linguistic categories such as words and sentences. This is because daily speech can be full of over-repetitions, incomplete sentences—sometimes disrupted on the way, and sometimes deliberately done so—, phonetic, morphological and syntactic errors, and so on. Some theories such as universal grammar do not base their discussions on these kinds of data.

Breaking down the data into words is a manageable task, and included in this thesis as a part of data analysis. However, assigning “sentences” as the next larger unit to be used brings about some technical problems because a great deal of the data is composed of incomplete sentences lacking either subjects or predicate components. Similar arguments were conducted in the author’s master thesis with the conclusion of preferring “utterance”—not sentence—as the

main unit of corpus analysis. The same method is followed in this paper, as well. As a natural consequence of this, a working definition of what an "utterance" means becomes necessary.

"Turn" is one of the most prominent candidates for utterance unit. David R. Traumand Peter A. Heeman (1997:125)

> Analysts have proposed many different definitions of utterances and *utterance units*. The *turn* is the unit of dialogue that has most often been proposed for study as a basic utterance unit. Fries [7], for example, uses the term *utterance unit* to denote those chunks of talk that are marked off by a shift of speaker.'

While stating this, he also adds that "'there are great difficulties with treating turn as a basic unit of spoken language". One of these problems is that, being a multi-party achievement, turn is not controlled by just one conversant.

Another problem would be the fact that some utterances may not be directed to a specific addressee, or an addressee simply may not be present when the utterance is made. In such cases the boundary between utterances of the same speaker cannot be explained by turn taking. This case can be illustrated by the following example in which the participant Zehra's two utterances are not divided by the taking of a turn but a pause.

Example 1: (Day 2)

Zehra	This is the Barbie game, this is Barbie game, this is Barbie game (0.54)
Zehra	This is the Barbie game

The same strategy that was used for defining bilingualism and CS was also used to decide what an utterance means. Rather than constructing a working definition of utterance, a set of guidelines is constructed. Any chunk of speech, which can conform to one or more of these guidelines, is treated as an "utterance".

In this paper the following cases are considered to be the boundaries that can divide the flow of a speech into utterances:

Turn taking: A point where an utterer stops talking by another interlocutor's utterance
Pause: Although no specific duration is determined, a pause of 0.5 second is usually assumed long enough to be an utterance boundary.

Change of addressee: The point when the utterer clearly changes the target of his message can mark a change in utterance.
Grounding: This refers to expressions marking a change in the utterance.
Change in tones: A change in the tone of an utterance can sign the beginning of a new utterance.

1.4. Functions of code switching

Until the second half of the twentieth century, CS had long been taken for granted as an unusual form of language use which occurs randomly mainly due to lack of competence. One of the most outstanding signs of a change in this attitude can be seen in the studies of Gumperz and Blom (1972) on the language use behaviors of Norwegian villagers who speak two different dialects (Bokmål and Ranamål). This study was one of the first attempts to construct a systematical sociolinguistic explanation of CS behavior. As a result of their observations of these villagers, they came up with two terms—"situational CS" and "metaphoric CS" —as the two main types of CS functions. These terms have often been referred, used, and reinterpreted in sociolinguistic studies of CS. In the sense it was first introduced, "situation" means the observable changes that lead to CS.

Gumperz and Blom divides "situation" into three subcategories: interlocutor, settings, and subject. Thus, they claim that any change in these three may result in CS. An example to CS due to change in interlocutor is the appearance of a monolingual speaker in an environment where two bilinguals are speaking in a language unknown to this new comer. With the appearance of the third person, the two bilinguals may either code switch to the language which can be understood by all of the three (which is a situational CS), or simply ignore the third person by going on talking in the language unknown to him. In the case of "subject" there is change in the topic, which results in CS. For this type of situational CS, Gumperz and Blom give the example of Norwegian villagers who code switch from the local (Ranamål) dialect of Norwegian to the standard one (Bokmål) when the subject changes from a local issue to a political one. The last type of "situation" is "setting" which refers to the change in the social settings of the conversation, which initiates a CS. The situation here has some similar features with diglossia. A group of participants of this research who are observed in an international

school speak mainly in Turkish while they are in the classroom and switch to English in their free times. This can be thought of as an example of Gumperz and Blom's CS due to settings.

Metaphorical code switching, on the other hand, is the type of CS which is not explainable by the change in interlocutor, settings, and subject. This implies that it can be better described not by indicating what it is, but, rather, what it is not. This may lead to the unintended conclusion of seeing all types of CS that are not situational, as metaphorical. Gumperz later (1982) abandoned the term metaphorical CS for the sake of "conversational CS" which he defines as "the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems." He gives the following sentences as examples of conversational CS.

(1) Chicano professionals in California, exchanging goodbyes *(Sp—E)*.

A. Well, I'm glad I met you.

B. *Andale pues* (O.K. swell).

(2) A college student in India, telling an anecdote (H-E):

Mai gay a jodhpur me (I went to Jodhpur). There is one professor of Hindi there, he is a phonetician. *To us-ne pronauns kiya dpne vais-se* (so he pronounced it in his own voice).

(3) Family conversation in a Slovenian village in Austria talking about a visiting peddler *(Sl-G):*

A. *Totd kuarbcQ yd mewa* (she had such baskets).

B. *No na jinyan* (no I don't believe it).

C. Ya ya di mit di kerbalan (the one with the baskets).

A. *Vinarca yd fioa* (she was Viennese).

B. Na (no)! Di mit di kerbalan (the one with the baskets) ?

(Gumperz, 1982:2)

Cases which can be thought to be examples of conversational CS were detected in the author's master thesis, as well.

Example 2[3]:

1)

In a house where the childen have gathered, a monolingual supervisor asks the children to read a certain part in a book. Ahmet says he has already read the first three pages, and will wait untill the others finish.

Supervisor	*Önce biraz Kitap okuyalım da ondan sonra tamam mı?*
Translation	*Before that, let's read some books, won't we?*
Ahmet	Ben *o* SAN PEEJI *oku*DAKARA MINASAN OWATTE KARA YARU
Translation	LET ME DO IT AFTER EVERYONE IS FINISSHED, BECAUSE I HAVE (ALREADY*) read* that THREE PAGES.
Supervisor	UN
Translation	OK

2)

Murat talks to his peers when they are about to eat fruits together.

Murat:	*Elma* KIREI NI SHITETA*den once ...*
	Before CLEANING UP THE APPLE….

3)

Emin talks to a supervisor about the location of a sports center that he regularly visits.

Emin:	CHIKAKU*larda bir yer var da .... diye bir yer*
Translation	*There is a place* AROUND HERE, *a place called ...*

4)

Ahmet tells his body hight to his supervisor on their way to a "game center"

Ahmet:	*Benim* SHINCHO*m* SAN JUU ROKU
Translation	*My* BODY HIGHT (is) (ONE HUNDRED) THIRTY SIX

(Unal, 2010:37,38)

[3] Japanese, in capital, Turkish in italic

In all of above examples there is no obvious change in setting, interlocutor, and subject, which makes their occurence almost unpredictable by situational CS. For CS in these examples, Gumperz (1982,77)[4] suggests the following pragmatic functions for conversational CS.

1. *Quotations:* Code-switching when quoting the speech of the third person.
2. *Addressee specification:* Code-switching when specifying the addressee among others.
3. *Interjection:* CS which occurs while uttering interjections such as "you know"
4. *Reiteration:* Using CS when reiterating the same utterance for emphasis
5. *Message qualification:* Using CS to explicate the main message.
6. *Personalization versus objectification:* Using CS as a way of making a distinction between personal and objective matters.

However, Gumperz says that these six functions may not cover all of the instances. Possibly, Gumperz' another frequently cited terminology, they-code and we-code, can, to a some extend, be used to explain the functions of conversational CS. In his book, Gumperz makes the following description.

> The tendency is for the ethnically specific, minority language to be regarded as the 'we code' and become associated with in-group and informal activities, and for the majority language to serve as the 'they code' associated with the more formal, stiffer and less personal out-group relations (Gumperz, 1982:66)

Changing between the two codes may stem from speaker's intention to set some emotional distance or familiarity to a certain individual or topic. By changing from we-code to they-code, a bilingual speaker may attempt to distance himself from a certain individual. This distancing can further be contextualized into the expression of other feelings such as annoyance, disinterest and dislike.

[4] Short descriptions for each function are made by the author.

Although widely utilized by sociolinguists, Gumperz's ideas and terminology are not without criticism. Probably one of the most significant problems is the fact that the same terminology has been used by different sociolinguists for different meanings. As described by Yohena (2003), following their introduction by Gumperz and Blom in 1972, the terms situational and metaphorical (later, conversational) CS, have been used differently by Stockwell (2002), Romaine (2000) and Holmes (2001). Yohena further discussess the distinctions between metaphorical and situational CS, giving examples where she argues that the same instance can be interpreted as both metaphoric and situational CS. Another criticism is that the examples given by Gumperz are not based on recorded data (Nilep, 2006).

There are other function lists of CS as well, with no explicit emphasis on situational and conversational CS, one of which is that of Appel and Muysken (1987:118,120). They suggest the following five functions. CS may have a (1) **referential function** as it covers the speaker's lack of knowledge in one language, or a specific subject in that language. The fact that some of the participants of this study tend to talk in English when it comes to subjects related to academic matters, can be thought as an example to this function. (2**) Directive function**, on the other hand, refers to the use of CS for specifying the addressee and excluding the others. (3) **Expressive function** is about using CS as a way of expressing or emphasizing the speaker's multicultural identity. CS can sometimes function to sign the change in tone during a conversation, which is called (4) **phatic function** here. Finally, sometimes the speaker code switches simply to comment on languages, which is called (5) **metalinguistic function**.

As the school environment is one of the places of data collection of this research, it would make sense to discuss Eldridge's (1996) list of CS functions, which he based on his observations of English lessons in a secondary school in Turkey. (1) Equivalence here means saying the Turkish equivalent of a concept in English. Similar instances were detected in this research as well. Example 3 shows an instance where the students often give the answers in English or Japanese when asked (and expected to answer) in Turkish.

Example 3: (Day 18)

Teacher *Ne bu?*

Translation (showing Pelin, a picture of sewing machine) *What is this?*

Aynur *Ben biliyorum.*

Translation	*I know (that)*
Teacher	*Sen söyleme sen olmaz.*
Translation	*No, not you. You shouldn't say.*
Pelin	NAN TOKA MASHIN
Translation	A MACHINE OF SOMETHING
Teacher	*Evet* NAN TOKA MASHIN. *Ne* MASHIN *bu*?
Translation	*Yes* A MACHINE, A MACHINE *of what?*
Aynur	"NAN TOKA" haha!
Translation	"SOMETHING" haha!
Teacher	Söyleyin bakalım bilenler
Translation	*Those who know the answer can say it.*
Aynur	*Dikiş makinesi*
Translation	*A sewing machine*

The following four functions of Eldridge, which are (2) "floor-holding", (3) "meta-language", (4)" reiteration", and (5) "group membership" seem to be based on Gumperz's classificiation. "Meta-language" and "reiteration" are exactly the same terms that are used by Gumperz, whereas "floor-holding" and "group membership" look, respectively, similar to "interjection" and "personalization versus objectification". While describing (6) "Aligment and disaligment", Eldridge gives an example of students' use of Turkish when dealing with a task during an English lesson. However, the last function (7), "conflict control", looks somehow different from those functions introduced so far. It refers to the use of foreign language English to alleviate the meaning of some words which otherwise feel too strong in their native language Turkish. The example given here is the use of English word "lier" instead of the Turkish "yalancı", which the speaker later stated would sound unintentionally strong.

1.5 Contrastive researches on Turkish and Japanese native speakers

To author's knowledge, so far, there has been only one research covering the subjects CS, Turkish and Japanese: the author's own "Code Switching in the utterances of Turkish-Japanese Bilingual Children:A Sociolinguistic Study" (Unal, B, 2010) Because of this, it is inevitably necessary to broaden the literature review to sociolinguistic studies on Turkish

and Japanese with no prerequisite of “bilingual” and “children”. Other than being a study of Turkish and Japanese, the following contrastive studies of Turkish and Japanese do not seem to have much in common directly with the author’s research, especially, as far as their subject area, methodology and findings are concerned. However, it would make sense to mention some of these studies so as to have an idea about what has been done so far in similar disciplines.

One of the common features of studies on Turkish and Japanese is their emphasis on the similarities and differences of the two languages or their native speakers (e.g., Deniz 2000; Baykara 2002; Yılmaz, Akdogan & Ohama 2008; Akdogan 2007; Kızılay 2008, 2009; Levent 2011). Based on their research on the Request Behaviour of Japanese and Turkish Students , Akdogan and Ohama (2008) point out that, compared to their Turkish counterparts, Japanese requests house more repetition but less content. They also add that in Japanese conversations, expressions of request are more direct than those in Turkish. In must be noted that the subjects of this research are native speakers of either Japanese or Turkish, and therefore, the results may differ if the subjects were bilinguals of the two languages. Though not a sociolinguistics one, there are other studies on Turkish native speakers studying Japanese. Yasuda (2005) compiled the grammatical errors of Turkish learners of Japanese. Baykara (2002) on the other hand researched Japanese native speakers’ pronunciation errors of Turkish words. His subjects however, had never studied Turkish before.

Lastly, it would be appropriate to mention the name of some sociolinguistic or linguistic researches on either Japanese or Turkish bilinguals. A great number of studies on Turkish bilinguals have been conducted in European countries, such as Backus（1992, 1996, 2000）, Backus & Heijden (2002), Daller, Yıldız, Jong, Kan, Basbağı, & Yilmaz, (2008), Turker (2000), Johanson (1993), Jφrgensen (1988), and Schaufeli (1991). In these studies, the “other languages” of the Turkish bilinguals (German, Norwegian, Danish etc) are mostly inflective Indo-European languages which are structurally different from Altaic agglutinative Turkish. This fact is possibly reflected on the types and variety of CS. For instance, in their study of Turkish Dutch Bilingual children’s “code mixing” Backus & Heijden (2002) found out that insertion of Turkish verb form into Dutch sentences is very rare and with the exception of only one case, no Turkish suffix is attached to Dutch stems, although such cases might only be the result of syntactical differences between the two languages. The syntactic similarities between Turkish and Japanese are expected to yield more CS like the above cases.

CHAPTER II

3. Methodology

2.1 The Participants

For the last two decades, the Turkish population in Japan has increased dramatically from a mere 190 in the year 1990 up to 2,452 in 2010. However, compared to other foreign populations in Japan, this number is incomparably small. As of 2010, Chinese, Korean (North and South) foreign resident's population is around 1.200.000, comprising the half of the whole foreign population in Japan. Adding, Brazilians, Philippians, Peruvians, and Americans (U.S.A) would make this number 1881221. That is, foreigners from these seven countries make up more than 80 percent of the whole foreign population in Japan leaving the other 183 counties, -which include Turkey as well- less than 20 percent[5]. Most of the Turkish population lives in the big metropolitan cities with Tokyo housing the majority. However, within Tokyo, there is not a specific district where the Turkish population concentrates. Within this small and scattered population, finding sufficient numbers of Turkish families who have children living in Japan for more than a few years (which increases the probability of multilingualism), is obviously a difficult task.

Another prerequisite of this research is to be able to observe the natural speeches of the subjects. This makes it compulsory to find or set an environment allowing such and observation.

Probably, it would not be an exaggeration to say that, to an extent, it was out of luck to be able to find even two different groups of subjects meeting our research requirements. One of these is a group of Turkish children (which will later be called the house group) who gather in a house to do both indoor and outdoor activities which are supervised by an adult monolingual Turkish foreign student. The activities range from merely eating lunch together to playing computer games or soccer and hide-and-seek in a park. Data gathered from this group was also used in author's master thesis. This group itself is divided into two sub groups according to two different houses they gather, which are in Tokyo and Yokohama regions. Actually, as later understood, these two groups not only differ in terms of the place they gather but also their language choice tendencies.

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[5] All the population data was taken from the official website of Japanese Ministry of Justice. (as of August 3, 2012) http://www.moj.go.jp/nyuukokukanri/kouhou/press_090710-1_090710-1.html

The other one is a group of Turkish students commuting to an International school. The group is attending to a Turkish elective course on Saturdays. The data gathered from this group, was added to the one used in master thesis to form the data of the doctoral thesis. Unlike the house groups which were audiotaped, the school group was videotaped, thereby making it possible to conduct more versatile comparisons.

To sum up, for convenience's sake, throughout this paper, the observation groups will be called the school, Yokohama and Tokyo groups. The groups are shown in the following tree diagram.

Scheme1: The participant groups

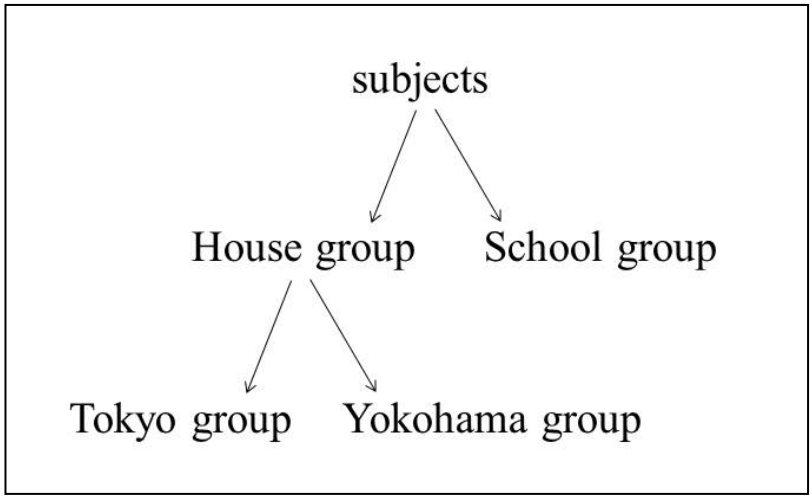


Table 1: Information on the subjects[6]

	alias	sex	age	Year in Japan	Turkish level	Japanese Level	English level	School type	School Language	Father	Mother
1	Emin	male	11	5	Native-like	Native	Poor	Japanese	Japanese	Turkish	Turkish
2	Erkan	male	9	5	Native-like	Native	Poor	Japanese	Japanese	Turkish	Turkish
3	Vahit	male	11	11	Fluent	Native	Fluent	Japanese	Japanese	Turkish	Turkish
4	Selim	male	9	9	Fluent	Native	Fluent	Japanese	Japanese	Turkish	Turkish
5	Mert	male	7	7	Fluent	Native	Intermediate	Japanese	Japanese	Turkish	Turkish
6	Ahmet	male	10	10	Intermediate	Native	Fluent	International	English	Turkish	Turkish
7	Murat	male	8	8	Fluent	Native	Fluent	International	English	Turkish	Japanese
8	Kemal	male	10	2	Native	Intermediate	Fluent	International	English	Turkish	Turkish
9	Ali	male	10	4	Native	Intermediate	Fluent	International	English	Turkish	Turkish
10	Osman	male	12	12	Native-like	Fluent	Fluent	International	English	Turkish	Turkish
11	Mustafa	male	8	8	Poor	Native	Native-like	International	English	Turkish	Japanese
12	Esra	female	7	7	Intermediate	Native	Fluent	international	English	Turkish	Japanese
13	Pelin	female	7	7	Fluent	Native	Fluent	International	English	Turkish	Japanese
14	Zehra	female	7	5	Intermediate	Intermediate	Fluent	International	English	Turkish	Korean
15	Aliye	female	5	5	Intermediate	Intermediate	Fluent	International	English	Turkish	Korean
16	Sevil	female	7	3	Fluent	Intermediate	Fluent	International	English	Turkish	Turkish
17	Aynur	female	8	5	Native-like	Intermediate	Fluent	International	English	Turkish	Turkish
18	Leyla	female	10	10	Intermediate	Native	Fluent	International	English	Turkish	Japanese
19	Feray	female	7	7	Fluent	Native	Fluent	International	English	Turkish	Turkish
20	Ismail	male	7	3.5	Native-like	Intermediate	Fluent	International	English	Turkish	Turkish

[6] There is one more subject who had only 13 utterances, and therefore omitted in the list. However, in appendix section his utterances were kept for preserving the flow of the speech.

As shown in table:1, the subjects vary in their age, language competence, the length of time they have lived in Japan, their family structure and the type of their school. It would be appropriate to make brief explanations on meaning of some of titles given in this table.

Alias:

As it is the case for similar social studies, each children and adult in the study was given an alias to secure their privacy. As an agglutinative language, Turkish has many suffixes which can be attached to private names, too. Because of this, the last syllables of these aliases were made phonetically similar with the original names.

Age:

In the school group, all of the Turkish students took the same Turkish course regardless of their age. Six out of 9 students were second graders and at the age of 7. The remaining three were a third and fifth grader and a kindergarten student. At the time of the observation the average age of both school and house group was 8.4.

Year in Japan:

This refers to the length of time spent in Japan. Some of the subjects were born in Japan and made occasional visits to Turkey. There are also subjects who migrated to Japan at different ages with their families. Still there are some students going to Japan and Turkey back and forth. Ismail is an example to this, as he stayed in Turkey from birth until the age of three when he first came to Japan. After staying in Japan for two years he, again went back to Turkey where he attended his first year in primary school. Two year later he returned to Japan where he was living till the time of our observation. The case is not this complicated for the rest of the subjects some of whom migrated to Japan at different ages of their life, or simply were born in Japan where they lived their whole life.

Language levels:

The language levels here mainly refer to listening and speaking competence, and are based on the judgments of the teachers and parents of the participants. As discussed under the *terminology* section of literature review, no clear-cut judgments about the subject's being

bilingual were aimed in this paper. However, marked gaps in the linguistic competence among the subjects were not ignored, either. The utterances that were tagged as ungrammatical or mispronounced were used as a reference when determining the language levels of each subject.

Type of school:

The subjects either go to various national Japanese schools which are either for monolingual Japanese native speakers or to an international school. The international school in the table1 refers to the same school to which a dozen of Turkish students attend. In this school, the instructional language is English for most of the lessons. In the school curriculum, there are compulsory Japanese lessons and elective Turkish lessons.

Nationality:

In this paper, all of the subjects are regarded as "Turkish". However, with this word, the author had no intention to connote formal citizenship or feelings of identification. "Turkish" for the children only implies the fact that at least either one of their parents is a monolingual native speaker of Turkish, with varying linguistic competence in Japanese and English. On the other hand, for parents, teachers and supervisors, the words Turkish, Japanese and Korean were used to show their national and linguistic background: the place they grew up and their native language.

Most of the children were accompanied by a monolingual adult who has learnt or been learning Japanese as a second language. In the school environment, the adult is obviously a teacher; at the house gatherings, the children are guided by a university student. Although the ultimate aim was to observe and analyze the children's linguistic behavior, the utterances of these adult speakers were also transcribed to a great extent. As discussed in the results chapter, in both the school group and the house group, the presence of these adult speakers seems to have had a great influence on children's linguistic choice and style. Table 2 shows some of these adults who have made the most frequent appearances during the recording procedure. Among these, Teacher 1 has by far the highest number of utterances in the school group, most of which are recorded during his classes. Supervisor 1 and 2 are the two main accompanier of the house group in Tokyo and Yokohama, respectively.

Table 2: Information on other participants

	participant	**Sex**	**Turkish level**	**Japanese Level**	**English Level**	**Group**
1	Supervisor:1	Male	Native	Intermediate	Fluent	Master
2	Supervisor:2	male	Native	Fluent	Fluent	Master
3	Supervisor:3	male	Native	Fluent	Fluent	Master
4	Supervisor:4	male	Native	Fluent	Fluent	Master
5	Teacher:1	male	Native	Fluent	Fluent	Doctoral
6	Teacher:2	male	Native	Fluent	Fluent	Doctoral
7	Teacher:3	male	Native	Fluent	Fluent	Doctoral

One of the most striking differences between the school group and house group is the fact that all the subjects in the house group are male whereas there is only one male student in the school group. Although, the author had no intention to have this kind of a gender allotment as these groups had had their structure prior to the observation, this situation were interpreted as an opportunity to conduct gender based comparisons.

Another important difference between the two groups is the fact that only the school group was video-recorded. Because of this, the house group data, which is based on voice records only, is not suitable for some comparative analysis types that are newly introduced here. For example, in this study, each utterance is tagged according to its addressee, and the pragmatic intention (as long as they are obvious enough) and it is of crucial importance to be able to see the utterer to understand to whom he is directing his speech and for what apparent purpose it is uttered. There are cases in which such information could be elicited even from a voice records, but there are still other cases making judgments about addressee or intentions difficult even on a video record. Accordingly, a great deal of analysis types were implemented on the school group data thereby making it the main data of analysis and the house group data were used for secondary comparative analyses.

Table 3 summarizes the contrastive information of the house and school groups. The house group can be further divided into two subgroups, namely Tokyo and Yokohama groups. In Yokohama group, Turkish is the most “uttered” language in contrast to the subject in Tokyo group who “mainly” talk in Japanese. The numerical details will be given in the data analysis chapter. The school group can also be divided into two main settings: The Turkish class where obviously Turkish is the main language and the other settings (free time, lunch break, game etc) in which English is used the most. The school group is divided into settings rather than sub-groups because, unlike the house group, the subjects are the same people in all settings. In

summary, we have different groups and settings in which one of the three languages becomes the main means of communication. However, here, it has to be stated that no presetting was aimed about groups and their language use, as it would have been almost unpredictable for the author to know, for example, in the Yokohama group mostly Turkish is used.

Table 3: Two subject groups in general

	The house group	The school group
Gender	All of the subjects are male.	Almost all the subjects are female with the exception of one male subject.
Place of observation	Mainly the house, but other places are also possible, such as game center and park.	Inside the school in different settings such as classrooms, playroom or the computer lab.
Language	Either Japanese or Turkish is the dominant language with scarce occurrences of English.	English or Turkish is the main language depending on the settings.

2.2 Data collection

Two main data, which were collected between March 2, 2009 and June 25, 2011, are used in this study, which, for convenience's sake, are called the house data and the school data. The former is the reorganized version of author's master thesis. House data is composed of around 6-hour voice recordings of a group of male Turkish children who visit a house in every other week and engage in activities supervised by Turkish university students. The supervisor conducts the recording by either holding a voice recorder at his hand (especially when the group goes out) or putting it somewhere close to the children. The children were deliberately not informed about the fact that their voice is being recorded. However, there were times that the supervisor had to leave the place where the children gathered by putting the recorder somewhere visible to children. In these cases, the supervisor usually made some explanations to the children. The children did not seem to be distracted by this fact.

The school data was collected from a group of Turkish students who attend a weekend course in an international school. The course is composed of a Turkish, mathematics, and computer activities. The 10-our video recording took place during these activities and free times and mainly conducted by the teachers. Although a smaller video recorder was used, unlike the house group, the video recorder was visible enough to make it compulsory to inform the students that they were being recorded. There were also times the students asked why they are

being recorded. They obviously did not like this fact; however, as the recordings went on, they seemed to ignore this. During the lessons and lunch breaks (which took place in the classroom), the recorder was put somewhere on the corner of the classroom to be able to cover as many students as possible. Nevertheless, it was not always possible to accomplish this, as there were cases in which one or two students were left out of the screen. The computer room was another challenge as there was not a suitable place and sometimes, half of the students were left out of the screen. Similarly, recording the students in their free times posed some problems. During a game or in their free time, the students frequently entered and exited the room, and moved around as they did not have to remain in the same place.

The total length of the data is 17 hours, which was transcribed into 21,000 utterances of 21 children and 7 adult participants. The quality and length of the recording varies, and some parts of the recordings were not audible enough to be transcribed and therefore were omitted.

Although mostly similar patterns were followed throughout the recording sessions, each recording day had some different features because of which, it is worth giving the summary of every recording session (Table 4) which differs in the name, number of participants, length of recording, and type of activities.

2.3. Data collection summary in chronological order

Table 4: Data Collection summary

1	Date	Length	Group	Participants
	2009/05/23	0:18:14	House	Emin, Erkan
The voice recording starts at the time while the supervisor is preparing the meal for the two siblings, in a flat in central Tokyo. Because there are only two children the room is quite silent, and there are some inaudible parts especially in conversations between these two siblings. The supervisor preparing the food talks to the children from time to time. Some other adults also join the meal. They are mainly talking about what the children's are planning to do after they leave the place, food, juice etc.				
2	Date	Length	Group	Participants
	2009/06/06	2:19:06	House	Emin, Erkan, Vahit, Selim, Mert, Ahmet
The voice recording starts at a chaotic moment when the children seem to be jumping and yelling around. The two supervisors are trying to settle the children down. After a while, the children decide to play a game and start to talk about everyone's role in the game. Then, the group heads to a park. The recording continues while they walk to the park, play there, and return back to the house, as one of the supervisors holds the recorder with his hand. However, because they commute to the park in two groups, the speech of only one group could be				

recorded. Again, while they play hide-and-seek in the park, the voice of only those within the range of the device could be recorder.				
3	Date	Length	Group	Participants
	2009/06/20	0:03:42	House	Emin, Erkan, Vahit, Selim, Mert, Ahmet, Murat
In this relatively short video recording, the children are playing soccer. The utterances of those who are far away from the camera are incomprehensible or inaudible.				
4	Date	Length	Group	Participants
	2009/07/04	0:04:26	House	Emin, Erkan, Ahmet, Murat
This is another relatively short voice recording. The children are yelling and seem to be playing some kind of a play. After this, they start having lunch. During the lunch the main topic is whether the group should go to the park to play baseball and if they do so, what everyone's position should be. They also talk about differences between Karate and Taekwondo, balls and sports in general, and the scenery when they look through the window.				
5	Date	Length	Group	Participants
	2009/09/27	0:39:05	House	Emin, Vahit, Selim, Mert, Murat
A couple of minutes after the recording has started, Emin leaves the house and the remaining four children and a supervisor continue their conversation. After a while the children start to play a computer game in rotation. As they go on playing, some kind of a disagreement occurs about how long they should play and at which order each turn should be. The supervisor leaves the room by putting the recorder in front of the children and telling them to ignore it. The supervisor comes back to the room a couple of times to check everything is alright. The children seem not distracted by the recorder and freely go on talking. When the supervisor comes in the room again, he talks to the children for a while. After the computer game they start playing a kind of card game before the recording ends.				
6	Date	Length	Group	Participants
	2009/10/06	0:16:46	House	Ahmet, Murat
The supervisors accompany the children as they go to a "game center" by walk. First, the kids chat themselves and gradually the adults get involved in the conversation. They talk about thinks like driving a car, Murat's father, and the children's body height. The group arrives at the game center, and the children get on various attractions. The recording ends while they are still in the game center.				
7	Date	Length	Group	Participants
	2009/10/12	1:33:58	House	Kemal, Ali, Osman
From this session to session 9, both the children group and the location of the house are different from the above session 1-6. All of the recording takes place in the room and starts just before the supervisor makes a short leave. While the supervisor is not present, the children				

freely yell and play around. After a while, they start playing a card game and continue until the supervisor comes back. The main topic of their talk to this point is the game characters of their play. After the game, they start eating all together. During the meal, they talk about school friends, club activities and their visit to Turkey.				
8	Date	Length	Group	Participants
	2009/10/18	2:31:20	House	Kemal, Ali, Osman
All of the recording takes place in a room. First the children play a computer game in rotation, and after it, they start eating together. During the game, they talk mainly about computer games in general and game characters. The topic becomes more versatile while they eat. The supervisor joins the group right after the computer game.				
9	Date	Length	Group	Participants
	2009/10/25	0:58:41	House	Kemal, Ali, Osman, Mustafa
Most of the recording takes place while the children play a computer game and talk about computer games in general. Unlike session 6-7, there is one more child, but he does not participate in the talks a lot. There are also other adult monolingual visitors joining the conversation from time to time. From the contents of their talk, it is understood that the children knew these adults. The recording end during the computer game.				
1	Date	Length	Group	Participants
0	2010/11/13	0:31:18	School	Esra, Zehra, Sevil, Aynur
The recording starts just after the Turkish lesson has started. The teacher tells the students to write down the date on their notebooks. The first activity is coloring the drawings of inanimate objects to blue and the animate objects, to red. The teacher also has each student read these Turkish words (such as lamb, spoon, water etc.) aloud. The students seem to have problem in understanding the meaning of proper names. After this activity, the teacher asks the students read again, this time, a passage. The second video recording starts when the children have just started preparing for "play house" in the playroom. Zehra, though in the playroom, prefers to play by herself and joins the rest later. Sevil wants to join Aynur and Esra's role-play, but she is rejected a couple of times until she finds a way to join the "play house" towards the end of the recording.				
1	Date	Length	Group	Participants
1	2010/11/20	1:37:20	School	Esra, Pelin, Zehra, Sevil, Aynur, Leyla, Ismail
Ismail as the only male subject of the school group makes an appearance only on this day .The first part of the session is a Turkish lesson where the students play a game of guessing the opposite word. The teacher leads the game by distributing a deck of cards to each student, and showing a word card at a time, the student having the opposite word of what has been shown				

by the teacher should speak up and give that card back to the teacher. The words appear to be primarily adjective cards (expert, inexpert, fat, thin, open, close etc). The teacher continuously made explanations on word meanings. The second video recording is a very short session of teacher talking to Ismail while he plays by himself and shortly after, leading all the students to computer room. In the third session, the students play computer games for about forty minutes. They are allowed to play the games on an English website designed for kids. The teacher is not present, though making one appearance with a visitor towards the end. Within the frame of the video camera, only Leyla, Esra, Zehra, -and somehow- Ismail are visible. Because of this, it was difficult to detect the other utterers and their addressees.				
1	Date	Length	Group	Participants
2	2010/12/04	0:30:24	School	Zehra, Sevil, Aynur, Leyla
The recording starts at the beginning of a Turkish lesson in which the teacher introduces the names of animals and their voices (barking, meowing etc.). The second session starts while the children play in the playroom. Aynur seems to have gone before this session starts. Zehra and Sevil play with the items (big toys etc.) in the room. At first, Zehra and Sevil look as if they are trying to play together as they keep giving directions to each other. However later on, they seem more independent in what they are playing. The act of playing gradually turns into something more like spending their free time by "idling around" Leyla, being the oldest girl in the group prefers to stand by there and have a look at the books on the shelves. She occasionally talks with the other two girls. The video recorder is fixed on the corner of the room; because of this, there are times the children get out of the visible frame as they move around.				
1	Date	Length	Group	Participants
3	2011/01/15	0:35:00	School	Pelin, Zehra, Sevil, Aynur, Leyla
The whole recording takes place during a Turkish lesson. At the beginning of the lesson, when they notice the video camera, some students state their concerns about being video-recorded. The teacher makes a brief explanation about it, and the children seem somehow satisfied. Later on, they do not show any sign of being distracted by it. The teacher first revises the previous lesson end introduces new animal words. As follows, the seemingly routine steps of showing the children the flash cards and the tries to elicit the right names from the children. The words include, fox, shark, giraffe, gazelle, octopus and so on. The student's competence in Turkish does not seem similar; however, apparently they are all competent enough to form Turkish sentences at varying complexity. In contrast with their communicative skills, their Turkish vocabulary does not seem equally strong. Aynur, having a native like competence in both Turkish grammar and vocabulary, seems to be the only exception to this.				
1	Date	Length	Group	Participants

4	2011/01/22	1:39:42	School	Pelin, Zehra, Sevil, Aynur
The first session is another Turkish lesson in which the teacher follows a similar format. First job names (painter, politician etc.), and later on daily items (toothbrush, ruler, umbrella) are introduced. Towards the end, the teacher revised previously studied words (animal names). The rule is that if a student gives a correct answers she receives one "ticket" and the ones having the most tickets have right to sit in the best chairs while watching a movie. In the second recoding, the children are having lunch in the same classroom that they have had their Turkish lesson. The topic during the lunch is mainly foods as one might expect. At some point a Teacher 2 comes in. He is Turkish, but – as confirmed by later recordings- he always talks to the students in English. The students finish their lunch and spend the rest of their time by chatting and walking around the class. The Turkish teacher comes in and shares his juice and chocolate with the students and talk to them in Turkish. He also frequently warns the students that they should not talk in English.				
1	Date	Length	Group	Participants
5	2011/02/05	0:54:54	School	Pelin, Zehra, Aynur, Leyla, Seray
First, there is a short recording of another Turkish lesson in which new vocabulary is introduced. The second recording starts when the children are about to have their lunch. The topics of the lunch include portable game players, Japanese animation characters (Pokemon, Pikachu etc.), fast food, dieting and food in general. The Turkish Teacher comes in only once and makes a short conversation with the children. The last recording starts in the middle of the free time in the playroom. Zehra is not present, and most probably has just left the school. Feray, Pelin and Aynur play independently by riding small bikes. Like before, Leyla prefers not to play anything and just keep being there. As they move around the children continuously get in and out of visible frame.				
1 6	Date	Length	Group	Participants
	2011/02/12	1:09:13	School	Zehra, Aynur, Seray
The first video recording is another Turkish lesson on Turkish vocabulary. There are parts where the teacher makes long explanations. The vocabulary includes adjectives such as empty, full, happy, sad etc. In the second session, the children are having their lunch. In addition to the usual topic of foods in general, the children also talk about their brothers and sisters and the pictures on the wall.				
1	Date	Length	Group	Participants
7	2011/02/19	0:25:08	School	Esra, Pelin, Sevil, Aynur, Leyla, Seray
First, there is a short period of free time before the teacher comes. Leyla is playing a game with her portable game player and all the other students are watching it. Then the Turkish				

lesson starts. The lesson is about the disease names such as headache, cancer, smallpox etc.				
18	Date	Length	Group	Participants
	2011/03/05	1:17:34	School	Pelin, Zehra, Sevil, Aynur, Seray
The first session is another Turkish lesson on vocabulary. In this lesson, vocabulary on daily items is revised by use of flashcards. The vocabulary does not seem to have a common genre and includes words such as sewing machine, candle, eraser etc. The next activity is on grammar, namely Turkish possessive markers. The teacher asks the children to make the exercise in the handout. Then he checks with the students one by one and assists through their answering.				
19	Date	Length	Group	Participants
	2011/05/21	1:00:57	School	Zehra, Aliye
Due to East Japan Great Earthquake, the Turkish lessons were cancelled for a while. This is the first lesson after this cancellation. The number of students has dramatically decreased to only two. Aliye, who is Zehra's sister, joins the class as the youngest member of the school group. The first recording is a Turkish lesson in which the previously studied vocabulary is reviewed in a game activity. The second recording starts just before the computer game activity supervised by a teacher who speaks to the children in English. It seems Aliye is allowed to play any game wants, whereas Zehra has to choose an educational game, which is suggested by the teacher. Zehra does not seem to like this. After a while, the teacher joins Zehra's game and plays against her.				
20	Date	Length	Group	Participants
	2011/06/04	0:20:05	School	Esra, Zehra, Aliye
The recording starts at the beginning of another computer game session, but this time Esra is also present. Similar to the previous computer game, Esra and Zehra are not allowed to choose their game freely. Especially Esra objects to this insistently and managed to get permission to play the game wants, which is called "Math line".				
21	Date	Length	Group	Participants
	2011/06/25	0:20:19	School	Zehra, Aliye
This last recording is another Turkish lesson to which only two siblings attend. Similar to previous ones the lesson is about vocabulary. Aliye, only at the age of 5, surprises both the teacher and her sister by giving correct answers to the questions her sister is unable to answer.				

2.2 Data Transcription

A language archiving software, which is called Elan (Picture 1), was used for transcription. This software was crucially helpful in accelerating the transcription process and constructing statistical data. Even with the help of such software, data transcription was by far the most time consuming procedure of this thesis. The same thing seems to be the case for other researches based on transcription. For example, in their corpus study in which Elan was used, D. C. Lyu, T. P. Tan, E. S. Chng, and H. Li (2010) state that the time for transcription is 30-40 times more than the actual time of recording. That is, for transcribing a one-hour recording, more than thirty hours were needed. Another procedure, which caused the transcription take more time than usual is utterance labeling, which will be discussed *in data organization*.

2.3.1. Notes on transcription

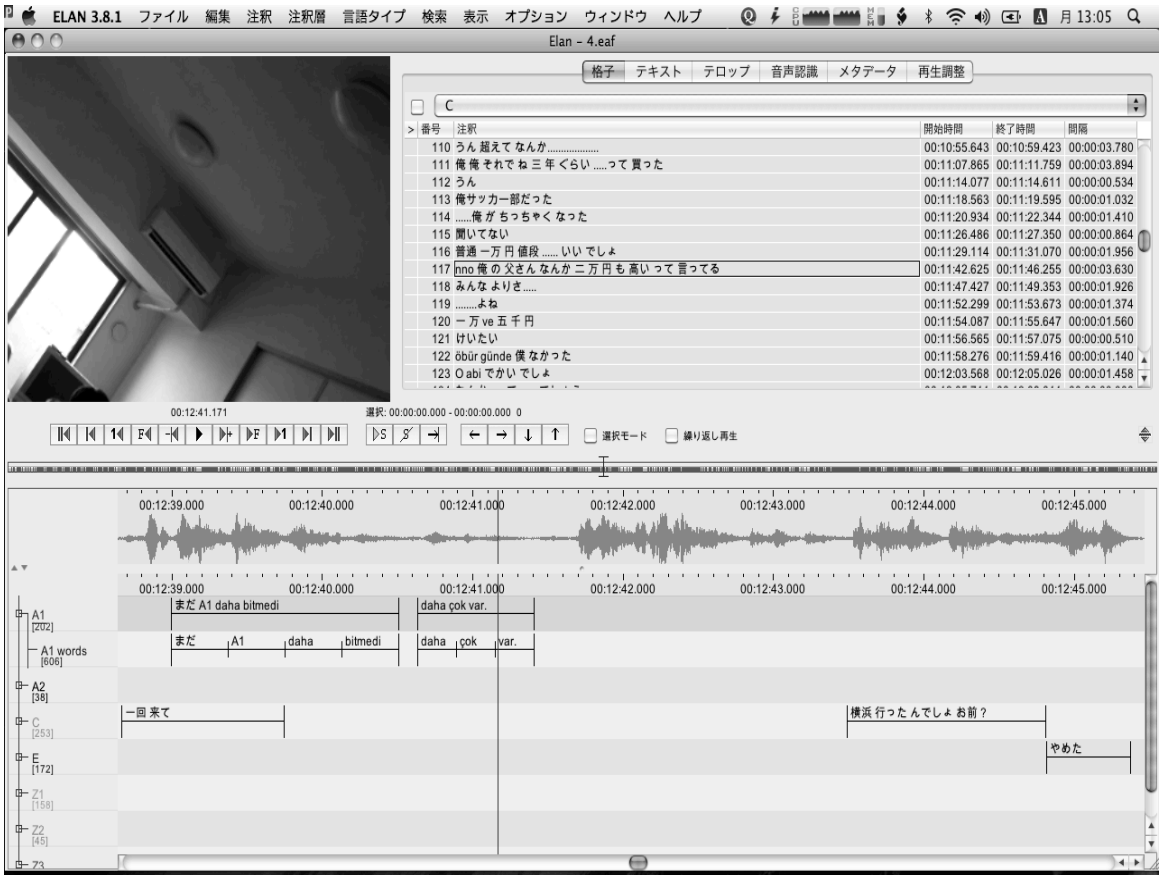
Japanese utterances were transcribed in Japanese characters: kanji and kana. This allowed us to easily differentiate Japanese utterances from English and Turkish ones when, for example, processing the data in Excel. The Japanese characters were used in the appendix section as well. However, throughout this paper, examples of utterances are given in *romaji* (the Roman alphabet) unless there is a need to use kana and kanji. Likewise, special characters from the Turkish alphabet (ı,ç,ö,ü,ş,ğ) were used for utterances in Turkish. The transcription text was kept as plain as possible with minimal use of punctuation. In the examples, the English translation of Japanese and Turkish utterances is given right beneath the utterance. Pauses lasting more than 0.5 seconds were noted. A detailed explanation of the transcription data is given in the appendix section. Example2 shows an excerpt of a typical transcription.

Example 4: (Day 14)
Aynur Going down *(incmp)* Wow! I have to do minus.
Zehra *(incmp)* (2.38)
Pelin EE! MŌ!
Translation HUH! WHAT!
Zehra Sultan Mehmet is dying? Where is Sultan Mehmet is dying? (1.45)
Zehra *(incmp)* Sultan Mehmet died. (3.61)

The inaudible and incomprehensible parts are indicated by *incmp* (The complete list of abbreviations is given in *Abbreviations section*. As expected, the grammatical mistakes such as

the one in “Where is Sultan Mehmet is dying?” are not corrected. The utterances of all the children and most of the adult participants were transcribed.

Picture 1: A screenshot of Elan, The language Annotion Software



2.4 Data organization

2.4.1. The utterance and word listing

Once the transcription process is completed, the whole data was transformed into the list of utterances and words using Excel. One advantage of this is the ability to modify the data easily for some utterance labeling (which will be explained in the following section) and statistical analysis. However, this type of format narrows the scope of analysis to utterances and the word level, as the contextual cues are no more visible through the list view. In other words, in the list view, the flow of utterances of a certain dialogue is broken down into list of utterances and words, which do not allow making any analysis on the discourse level. Although no elaborate discourse analysis was aimed in this paper, some parts of speech will be discussed

when needed. For this kind of analysis, either the traditional transcription text is used or the flows of utterances are skimmed by utilizing the software.

2.4.2. Utterance marking

As stated in the introduction, through corpus analysis we aim at answering the following questions: which language is used, by which children, with what purpose, under which circumstances. Data by sheer transcription would not allow us to do such an analysis unless we work on each one of more than twenty thousand utterances. Making such and analysis would obviously take years. What has been decided, instead, is to "tag" or "label" each one of these utterances with various pieces of information that we call "utterance labels", which in turn allows us to make different types of statistical analysis. With the help of these labels, the utterer, addressee, language, linguistic type and apparent objective of each utterance are tagged. Of course, it was not possible to mark all of the utterances by all of the labels.

One of the main reasons for using this kind of labeling is to reveal some individual differences in terms of language use and CS. In his master thesis the author stated the need for focusing more on individual characteristics of the bilingual subjects in order to understand the differences in language use. The existence of individual factors has already been stated by a number of researchers such as Backus & Heijden (2002 (cf. McClure, 1981; Pfaff, 1999; Moffatt &Milroy,1992)); however, it can be said that there have still been insufficient empirical investigations concerning the link between the individual characteristics of bilingual children and their language use patterns.

The following sub-sections describe the labels, which are used in this paper to mark each utterance.

2.4.2.1. Utterer

This label, which is also present in most dialogue texts, indicates the participant who uttered the utterance. The utterer is a prerequisite label. That is, if the utterer of a specific utterance is not detectable, they are not transcribed. Unlike my master thesis where "codes" were used to indicate the utterers, in this paper, aliases are used. Each child is given a nickname that phonetically resembled his or her original name. The adult monolingual participants, on the other hand, are indicated by "Teacher", "supervisor" and "guest" with a colon and one-digit number attached to the end. If, however, the name of an adult appears in an utterance, an alias is used. For example, a Turkish name Sinan Bey (Mr. Sinan) is used for Teacher 1.

2.4.2.2. Interlocutor

Interlocutor or addressee is the participant or participants to whom a specific utterance is directed. The names of the interlocutors are written down for each utterance. However, it was not possible to detect the interlocutor for all the utterances. This is, in part, due to some technical reasons. For instance, the data which was also used in my master thesis (the house data) is in the form of voice recordings. Though not completely impossible, judging who is talking to whom in a voice record is a very difficult task. In order to avoid any misjudgments, no "interlocutor labeling" was done on the house data. However, even in the video recordings the addressee of some utterances cannot be detected, either because the utterer is not visible in the video screen or the utterer simply does not direct his utterance to any person. If the utterer is judged to be deliberately not directing his utterance, it is labeled as US (Unspecified). If there seems to be an intended interlocutor who cannot be detected, then this label is left empty (X). The utterance might also be addressed to everyone (EV) or the utterer can mumble, mutter or talk to himself (SL). During the Turkish lessons, if the utterance might be directed only to the students by excluding the teacher (CH).

2.4.2.3. Language

The codes T, (Turkish) E (English) and J (Japanese) were used for language labeling. (Other than the three languages, Korean (K) seems to have been used twice.) Inaudible or incomprehensible utterances are labeled with "X" If a CS occurs in an utterance, the language labels are written in chronological order. For example, "Hangisi? Girl mu, boy mu?" (Which one? Male or female?) is labeled as TETET

Still, there are some utterances to which assigning a language is a very difficult task. Utterances composed only of interjections are an example to this. It is because some interjections look too similar to assign a specific language. For instance, the same utterance can be written as Turkish "Aa!" , English "Ah!" or Japanese ああ! If there are no other clues, these kinds of utterances are labeled as "U" (unspecified). U here indicates *neutrality*, and potentially could be from any of the three languages. If these forms are a part of an utterance in any of the three languages, the label U is omitted. For example, the language label for 'Aa! Öğretmen geldi!' (Ah! –or oh!- the teacher has come!) is "T" rather than "UT" Because, UT would imply the possibility of a code switching, which, in this case, is difficult to prove.

Some interjections, however, are relatively more language-specific. Turkish "hıhı! (which roughly means yes), Japanese うん (meaning either yes or no), and English "oops!", are

examples to this kind of interjections. These interjections are marked by language labels so, "うん (yes), I want that one." is labeled as JE.

2.4.2.4. Base language

In this labeling, the "base language" will be specified for the utterances which include CS. In other words, this labeling will only be applied to utterances that contain at least one instance of CS. The "base language" here refers to the language of at least one sentence, into which a component from another language is transferred. Therefore, its meaning can be said to be similar to Myers' (1993) term "matrix language". However, in order to avoid the "grammatical complexity" of her terminology as to what is called "matrix language" and what is called "embedded language", "base language" as a different wording with a broader sense of classification is preferred here. As implied in its definition above, One other difference of base language from matrix language is that it is used not only for a sentence into which a component (or components) from another language is inserted, but also for a strings of sentences in a certain language, which are "interrupted" by components with another language. The following examples illustrate this classification.

Example 5: (Day 11)

Leyla	EE, DATTARA … SOU DATTARA *bedava* PASOKON DE MIRENAI YO! EIGA DE MIRU
Translation	UMM, IF SO, IF THAT IS SO, YOU CAN'T WATCH IT *for Free* ON PC, YOU CAN SEE IT IN A MOVIE.

The base language of example 5 is, Japanese, as the Turkish word "bedava" is inserted into a Japanese sentence. The Turkish word is surrounded by Japanese utterance and acts like a constituent of the Japanese sentence.

The dialogue below, on the other hand, exemplifies a second kind of "base language". In this example, an utterance that contains CV (Turkish-English-Japanese), breaks the flow of utterances in Turkish. The base language of this dialogue is Turkish. Although Zehra utters a sentence which has CV, this does not cause a change in language, and after her utterance, the group goes on talking in Turkish again.

Example 6: (Day 13)

Teacher	*Ama bu zor bak. Bunu bilemez Zehra kesinlikle.*
Translation	*But, look, this is difficult. Zehra definitely can't know this.*

Zehra	*At*
Translation	*Horse*
Teacher	*Aa! Bu da çok zor.*
Pelin	*Panda*
Translation	*Panda*
Teacher	*Bu ne?*
Translation	*What is this?*
Zehra	*Çok* easy KORE
Translation	THIS (IS) *too* easy!
Pelin	*Ya onu istiyorum ben.*
Translation	*Oh! I want that (flash card)*
Sevil	*Aa, kopek!*
Translation	*Um, dog!*
Teacher	*Köpek değil.*
Translation	*It is not a dog.*

2.4.2.5. CS type

In CS type each CS will be labeled by mainly grammatical categories. In this paper, insertion, and alternation as two main grammatical types of CS, which were suggested by some researchers (Backus & Heijden, 2002; Muysken, 2000; etc.) will be used. Insertion means inserting the linguistic elements of one language into the other. (e.g., using an English phrase in a Spanish sentence.) Alternation, on the other hand, is an instance where the components from two or more languages juxtapose at the same grammatical level without getting embedded into one other's grammatical structure. Example 5 which was used to explain base language can also be an example for insertion as the Turkish word "bedava" (for free) is inserted into a Japanese sentence. The following example illustrates an instance of alternation, where constituents from two languages line up, and insertion where one constituent from one language is embedded into other, as well. This utterance of Zehra is taken from a "lunch time chat", when she talks about her younger sister Aliye. First she starts talking in Turkish, switches to English and turns back to Turkish again. However, these are full sentences that are not merged into one another thereby making this switch an instance of alternation. Towards the end of the utterance, though, the sound of a cat is pronounced in English as the Turkish version is pronounced and spelled (miyav) a bit differently. Here, an English word is inserted into a Turkish sentence, which makes this an instance of insertion.

Example 7: (Day 16)

Zehra	*Sevmiyorum* ... She is ... She is like a cat (shows*) Uvaa! maov! Mızmızlanıyo, ondan sonra benim kulağıma çiii, kedi gibi. 'Sen kedi misin?' ondan sonra* 'meow' *dedi.*
Translation	*I do not like (her)* … She is like a cat. (Zehra imitates her sister's acting like a cat) *Uwaa! Meow! She whines and shouts into my ear, like a cat. "Are you a cat" (I asked her), and she said "*meow!*".*

In addition to insertion, and alternation, two more labels are used; the use of short interjections, tags and certain set phrases (you know, I see etc.) from other languages, which is usually called tag switching in the literature.

The last label used in this classification is "proper names". When labeling the utterances by their "language", the proper names are labeled according the way they are pronounced. For example, if the Turkish name of a participant is uttered in an utterance the rest of which is in English, (e.g. "and Feray is thirty two") this utterance is labeled as TE. However, putting this kind of CS into the same category of insertion can be misleading. First of all, the way of calling someone is almost predetermined and this kind of CS seems "lower" in rank than using, for example, "KASA" instead of "umbrella" in an English sentence. Likewise, words like ONIGIRI or KONBU, which have no one counterpart either in English or in Turkish, are also put in the category of proper nouns, although they are not actually proper nouns.

There are also a few cases, like the one shown in the following example, where the proper noun is not pronounced according to the phonemic rules of the language it belongs to. In the following utterance by Aynur, the consonant "r" in "Feray" is not pronounced like the Turkish flap (ɾ) that it is supposed to be, but more like the English retroflex (r) and, therefore, was not counted as an instance of CS.

Example 8: (Day 15)

Aynur	Feray why don't you wear like tights uniform because every time I look at bag I see your ....

2.4.2.6. Settings

This label refers to the social or physical settings in which the utterance is made. Here, the setting is mainly determined by the type of activity. However, it is also the case that certain types of activities usually done in certain places. For example, in the school group, all the

Turkish classes were conducted in a classroom. Because of this, a combination of both physical and social settings is preferred.

The settings used in this paper are: LT (lunch time), FG (Free game), CG (computer game), FT (free time), FL (Free time and lunch) GC (game center), OF (outdoor free), TL (Turkish Lesson), and CR (card game).

2.4.2.7.Topic

This label indicates what the utterance is about. The topic areas (foods, computer games, Turkish language etc.) are kept broad enough to limit the total number of types manageably small. Therefore, topics of, for example, desserts, candies, or dieting are categorized under "food" topic.

2.4.2.8. Duration

The duration of each utterance is calculated in seconds and milliseconds by the help of the transcription software. This information can be used to analyses individual differences. Obviously, the utterances of the monolingual adults last longer than that of the children. Especially during the Turkish lesson, there are times that the teacher goes on talking for more ten seconds without any interruption. There can still be some variations among children, and languages in terms of duration. Among the children, the ability to go on talking for relatively long period of time without interruption may imply the "higher status" of the utterer.

Duration can also be longer due to the utterer's manner of speaking. An utterer who usually speaks slowly or makes frequent emphases on words would need more time than average. Actually the length of an utterance can be calculated, either in terms of the number of linguistic elements (sentences, words, morphemes etc.) or the time spent while uttering it. In this paper another label related to utterance length is "word count". The results of duration and "word count" will be compared in the analysis chapter.

2.4.2.9. Word count

The number of words in each utterance is calculated. This is partially accomplished by an automatic calculation based on spaces between the words, with additional manual corrections. Because there is no space in kana-kanji writing system, the words in Japanese utterances are manually calculated. As will be discussed in the chapters 3.3 and 3.4, the number of words may not indicate "who speaks how much" in the most accurate way. However, counting words might still be helpful, if interpreted together with the duration results.

2.4.2.10. Participants

This label is about the presence of the children (including the interlocutor) in an environment when the utterance is made. This label makes it possible to see the effects of the participants around the utterer. An interlocutor, to whom the utterance is directed, may affect the language choice, style and other dynamics but the existence of other subject may also have similar effects. For example, two utterers who usually prefer to speak in Japanese when they two are alone, may have an inclination to speak in English when a certain subject is present. This may be the case even when this third person is not the direct addressee of the utterance.

This labeling works best in settings such as computer room or classroom, where the subjects remain at the same place for a long period of time. Identifying the presence of participants in settings such as free time and free games is not easy, as the children usually do not remain at the same place and continuously walk, run around.

2.4.2.11. Presence of adults

Though similar to "participants" in principal, a separate labeling was given to adult's presence due to its importance. Without a doubt, the presence of a monolingual adult is one of the biggest reasons for the occurrence of Turkish in the speech of children. There were cases that the adults deliberately tell the children to speak in Turkish. For example, Teacher:1 asked the students "to talk in Turkish" 19 times, not only during the Turkish lessons but also when the kids have their free time. If there is no adult's present in the place, the utterance is labeled as "children only" (CH) Three types of adults are labeled as Turkish teachers (TT), Turkish speaking teachers (TS), Guest (GU) and supervisors (SU).

In some cases the adults are only occasionally present as they visit the children's place from time to time. This fact is also indicated in the labeling.

2.4.2.12. Groups

There are two main groups of subjects: the school group and the house group. The house group itself can be divided into two subgroups: the Yokohama and Tokyo Groups. Each group has its own participants and throughout the data collection procedure a child in one group did not meet any child from other two groups. One of the most striking features of these groups is the fact that in each group one of the three languages (Turkish, Japanese and English) becomes the most frequently used language.

In this labeling, each utterance is marked according to the group in which it is uttered: Yokohama group (YG), Tokyo group (TG) and School group (SG)

2.4.2.13. Word labeling

All the labeling types given above are based on utterance unit. The transcription data is also transformed into a list of words which are going to be labeled as well. The word labels are as follows:

1. Language: Turkish, Japanese, English and for a couple of instances Korean
2. Grammatical category 1: noun, verb, adjective etc.
3. Grammatical category 2: free morpheme (nouns, adjectives etc.), bound morphemes (suffixes, articles etc)
4. Topic area: animal names, food names, colors, feelings etc.
5. Word number: the usage frequency

2.4.2.14. Grammatical category

This label is based on a sentential unit. The basic unit of this research is either "utterance" or "word", however, a great deal of the utterances are in the form of "sentences" which can be categorized as IS (interrogative sentence) OS (one-word sentence), NS (negative sentence) , PS (positive sentence) and so on. Therefore, an utterance like "Can you have this baby, too?" is labeled as PIS (positive, interrogative sentence). If the utterance includes more than one sentence, labeling is done for all of the sentences. If, however, the utterance is not in the form of a sentence, no label is assigned.

This label is for syntactically categorizing the utterances and not related to meaning content. For example, a sentence which is labeled an interrogative may not be uttered with the intention of asking a question but simply for emphasizing a counter fact. There is another label for categorizing the utterances in terms of their pragmatic intention, which includes asking a question (QUE) as well.

2.4.2.15 Grammatical mistakes

Any detectable grammatical mistakes in utterances are labeled according to following three types: grammar, pronunciation and spelling. For example, spelling a Turkish proper noun "Peride" whereas it is supposed to be "Feride" is labeled as TS (spelling error in Turkish),

likewise, “What is talking about?” is labeled as EG (grammar mistake in English). Grammatical mistakes can be good indicators of the children’s linguistic competence.

2.4.2.16 Objectives

Objective here means the apparent reason the utterance seems to be done for. Pinpointing the aim of an utterance is almost impossible, and the accuracy of the assigned objectives here are debatable. It was not possible either to confirm the predictions made, by asking the children. Taking all these into consideration, only the most obvious cases are labeled with broad terms. The objectives used here are Imperative (IM), Suggestion (SU), Asking for permission (AP), Question (QU), Question for eliciting information (QE), Songs etc. (SO), Agreement (AG), Refusal (RE), Denial (DE), Addressing (AD). This labeling is mainly used for utterances where CS has occurred.

CHAPTER III

Analysis

3.1 Preliminary discussion on the data statistics

In this chapter, a series of analyses will be conducted on the data. Before writing the chapter analysis, a great number of different numerical comparisons on different variants were conducted for the aim of finding out generalizable facts or at least tendencies on the linguistic behaviors of the participants. However, among these comparisons, only those which are deemed to have some significance or imply generalizations, will be shown in the analysis.

First, a general discussion will be made in 5.1 on transcription data, the summary of which is given in the table 5,6 and 7. The next chapter will be on the linguistic competence of the participants. The discussion of competence is made in the analyses chapter because the estimations on children's linguistic competence are based on both the collected data and other sources such as teachers, parents' opinions and a placement test. Therefore, the results and analysis of the collected data had all contributions for deciding children's' linguistic levels.

After these preliminary discussions, deeper analysis will be conducted throughout the following chapters.

3.1.1. Total utterance duration

As shown in table:5[7], the total duration time is around 10 hours which roughly corresponds to the half of the total recording time. The gap of ten hours is composed of silent durations, and the pauses between the utterances. Longest silent durations were detected during free times. The table 6 and 7 on the other hand, shows the duration statistics for each participant and adult separately. However, by just looking at these data no conclusion can be made on which subject "spoke" more in terms of utterance number and duration length. It is because of the fact that each child participated in varying number of sessions and within these sessions, there are cases that some of the participants left the recorded area momentarily. Therefore, for each participant, the length of time that is spent in the recorded settings should be calculated. After this, each children's number of utterance and utterance duration can be proportioned to the

[7] Table 5,6,7 are given at the end of this chapter.

length of time they spend in the “conversation area”, to be able to show which “participant spoke more” in a valid way. This calculation will be given in the chapter:3.3

3.1.2. Days and sessions

Out of 21 days of data collection, 12 days were in the school settings. The remaining 9 days belong to the house groups where voice recordings were conducted in different settings. In the same day, and sometimes in the same chunk of recorded data, there were cases that the activity or settings changed. Because of this, 21 days were further divided into 45 sessions based on these change of activity or settings (house group: 20, school group: 25) The general flow of activities were mostly predefined, and the recording sessions were adjusted to these changes. However, not all of them were predictable. There were cases where the group decided to go out with no prior plan. Therefore, the sessions were constructed after skimming through the collected data.

As shown in tables 6 and 7, each child and adult participated in different numbers of sessions. In school group, Aynur, for example participated in 20 sessions out of 25 sessions, whereas Ismail participated only 3 sessions which all took place in the same day. Usually children, about which no enough data could be collected, were omitted. However, the data of Ismail, being the only male subject of the school group, was kept to be used in a data analysis on gender.

3.1.3. Average, maximum and minimum durations

The average duration is 1.7 seconds. However, the average is heightened by Turkish teacher as he, during the Turkish lessons, tended to make long utterances which were not interrupted by the students. The maximal duration of 87.2 seconds is an utterance of the Turkish teacher, telling the students a story during one of the Turkish lessons. The longest utterance durations of the children, on the other hand, are mostly composed of, a counting during one of the hide and seek games. The children were also asked to count their flash cards during the Turkish lesson. Example 3 is one of these instances of long utterances.

Example 9: (Day 1)

The children in the school group are playing hide-and-seek. Zehra, being the “it” counts.

Zehra .... Twenty one, (goes until fifty nine), sixty. Are you ready?

Zehra Are you ready?

Sevil Yes!

Zehra Sixty one, (goes until ninety one), ninety two

Sevil Ok, Zehra, ok!

Zehra Ninety six, ninety seven, ninety eight, ninety nine ... One hundred. Are you ready?

Sevil Yes!

This kind of long durations, are very rare, though. For the children average utterance rate is 1.7. Actually, the Turkish teacher is the only Turkish teacher in the school, and had an average utterance duration of over 2 seconds. This is due to his long expressions and instructions during the Turkish class. If the data of this teacher is excluded, the average for the rest of the participants, including both the children and the other adults are 1.6 seconds.

Aliye, stands out having the longest utterance rate of 2.3 seconds. If we look only at the numerical data, it may imply some peculiarity. However, this high average is the result of Aliye's long durations of incomprehensible utterances. Aliye, being the youngest member of all the subjects, tend to keep continuously talking to herself, especially when playing computer games. Though incomprehensible, all of her utterances were marked in the timeline of the software, which yielded this result[8].

Compared to the school group, the house group has slightly lower average utterance duration (1.5 seconds), with maximum utterance duration of as low as 8.09 seconds. As previously mentioned, the school group has only one male participant whereas the house group consists of only male participants. Nevertheless, allocating a special section for gender comparison allowed us to see that the gap in average utterance duration is slightly higher. The female average is 16.6 percent higher, a result that is worth discussing in the following chapters.

Table 5: Transcription Summary:1

parameters	Total	School group	House group	female	male
Number of days	21	9	12	12	10
Number of sessions	45	25	20	25	23
Number of utterances	21396	10373	4555	10208	4720
Minimal Duration	0.005	0.22	0.005	0.24	0.005
Maximal Duration	87.2	60	8.09	60	13.7
Average Duration	1.77	1.80	1.49	1.80	1.50
Median Duration	1.37	1.41	1.3	141	1.30

[8] Aliye's 114 utterances out 522 were totally incomprehensible.

Total Utterance Duration	10.55	5.19	1.89	5.11	1.96
Total recording Duration	16.5	10.5	6.5	10	6

Table 6: Utterance Duration Summary (the subjects)

Participants	Number of sessions	Minimum Duration	Maximum Duration	Average Duration	Median Duration	Total Utterance Duration
Ahmet	6	0.138	5.57	1.493	1.314	759.898
Ali	5	0.005	7.09	1.561	1.375	905.105
Aliye	4	0.42	27.108	2.381	1.731	1243.119
Aynur	20	0.24	60.059	1.944	1.51	4705.899
Emin	13	0.27	4.96	1.412	1.26	727.327
Erkan	5	0.312	4.3	1.394	1.27	450.234
Esra	8	0.43	10.93	1.856	1.58	1507.451
Feray	9	0.31	17.56	1.676	1.32	1858.914
Ismail	3	0.22	13.762	1.636	1.33	270.015
Kemal	5	0.25	7.01	1.619	1.3	573.03
Leyla	13	0.3	17.432	1.494	1.265	764.879
Mert	3	0.27	4.03	1.515	1.375	87.85
Murat	12	0.155	5.455	1.475	1.3	1265.802
Mustafa	1	0.36	3.5	1.586	1.46	71.35
Osman	7	0.27	8.09	1.594	1.35	1028.281
Pelin	15	0.253	20.235	1.637	1.34	2644.535
Selim	11	0.155	7.08	1.509	1.28	574.858
Sevil	16	0.28	33.259	1.68	1.31	2337.091
Vahit	11	0.27	5.29	1.291	1.182	353.605
Zehra	20	0.32	35.265	1.843	1.4	3365.144

Table 6: Utterance Duration Summary (the adults)

Participants	Number of sessions	Minimum Duration	Maximum Duration	Average Duration	Median Duration	Total Utterance Duration
Teacher:1	23	0.25	87.2	2.088	1.39	10021.754
Teacher:2	6	0.47	6.343	1.714	1.445	653.094
Teacher:3	1	0.398	3.411	1.365	1.255	98.309
Teacher:4	3	0.74	4.2	1.844	1.7	36.89
Superviser:1	7	0.264	5.45	1.394	1.2	975.728

Superviser:2	14	0.275	5.42	1.356	1.18	245.503
Superviser:3	2	0.252	3.22	1.49	1.525	107.312
Superviser:4	6	0.3	8.28	1.411	1.19	165.1
Guest:1	1	0.64	3.06	1.442	1.3	41.82
Guest:2	1	0.44	5.83	1.691	1.55	76.1
Guest:3	1	0.49	3.8	1.27	1.11	36.82
Guest:4	2	0.69	1.56	1.152	1.245	6.91
Guest:5	2	1.82	3.45	2.5	2.23	7.5
Guest:6	2	0.521	2.14	1.115	1.077	15.607

3.2 The linguistic competence of the participants

As discussed in chapter 3.5, the subjects significantly vary in their language preference, which is possibly one of the biggest leading factors of their linguistic levels. A table showing the linguistic levels of the participants has already been given in the "participants" chapter. However, simply calling two children, for example, intermediate, does not mean that they have the same type of competence. In this chapter, attention to such differences will be paid by discussing each subject's linguistic competence separately.

The discussion on the linguistic competence of the house group is partially based on the questionnaire results, which were given in author's master thesis. For the school group, the main source of information will be a combination of the language proficiency test results (table 7) and their teachers' comments. In conjunction with these sources, for both groups, the linguistic behaviors of the participants in the collected data, and the opinions of native monolingual speakers are also used as reference.

Table 7: The placement test scores

Participants	Turkish (out of 35)	Japanese (out of 27)	English (out of 20)
Aynur	29	7	18
Esra	26	18	14
Feray	30	19	11
Pelin	10	18	13
Leyla	16	24	17
Zehra	12		16
Aliye	9		

The placement test the results of which are given above, consists of multiple choice questions prepared in all of the three languages. The Turkish test is originally for the second grader monolingual Turkish students, which contains questions at varying difficulties. The questions for English are also taken from a test that was originally prepared for young learners (primary school second graders) of English. For the Japanese test, questions were collected from an exercise book for preparing for the Japanese Proficiency exam for foreigners.

There are a couple of reasons for not treating this placement test as the ultimate reference for the linguistic level of the participants. First, as stated previously, this test was only applied to the school group. However, not every participant could take the placement test. Sevil and Ismail had already gone back to Turkey at the time of this test. Moreover, Zehra decided not to take the Japanese test as she thought the questions were too difficult for her. Her younger sister Aliye did not take the English and Japanese tests for the same reason. Therefore, these placement tests were used only as one reference amongst others.

3.2.1 The Tokyo group

The participants in the Tokyo group are all male, speaking mainly in Japanese with varying rates from fifties to ninety percent. Turkish seems to be the second most used language, whereas English comes out only from time to time in short phrases. In the author's master thesis, the linguistic competence of members of this group had been judged by their parents. These results are also used here as reference.

Emin, Erkan:

Emin and Erkan are brothers. Their linguistic competence level in Japanese and Turkish is closest among all the subjects. According to their parents, their Japanese and Turkish levels are "native" and "native like", respectively. Their English level, however, seems to be low. This could be partially due to the fact that, unlike the majority of the subjects, they have never attended an international school where English is the main language. Erkan is the younger and almost the same things said for Emin could also be said for him, with a couple of differences one of which is being that he talked "less" during the recording procedure. He also seems to talk Japanese more than his brother does.

Vahit, Selim, Mert:

Vahit, Selim, and Mert are three brothers. Their parents judged their Japanese level as native. According to the same questionnaire, their Turkish levels were all advanced. The recorded data seems consisted with parents' judgments. For all the three brothers the most

uttered language is Japanese (around 80 percent). These utterances were judged as "native" by native speakers of Japanese. Their Turkish, however, could be judged slightly below advanced. Selim had some grammatical errors in his utterances, whereas the Turkish pronunciation of the three were somewhat unnaturally accented. One more thing worth mentioning here, however, is the fact that their listening comprehension looks more advanced than their speaking skills. This could be easily understood by their responding appropriately to to the Turkish monolingual supervisors. Actually this kind of gap between listening and speaking is not a rare, and, in the literature, such bilinguals are named as receptive bilinguals, asymmetrical bilinguals, passive bilinguals or semi-bilinguals (Wei 2000: 6-7). The parents judged the English levels of Vahit and Selim as advanced, and the youngest Mert, as intermediate. At the time of data collection the three were attending to a Japanese school but they were reported to have attended to an English-based international school.

Example 10: (Day 2)

Mert	ice ice ice
Selim	Şey alligator ısırdı diyo
Translation	Umm, he says an alligator bit him
Vahit	I'm Erkan
Vahit	no no! ICHI bardak GURAI MADE
Translation	No, no! up to around one glass.
Vahit	No no!
Vahit	ORE NO turn DA
Translation	It's my turn.

The fact that they do not speak much English could not easily be attributed to other subjects' lack of competence in English. There was one session, only these three brothers and Murat were present, all of whom had attended the same international school, therefore had English education. However, the main language of this session was Japanese. In conclusion, the recorded data gives us not much idea about their level of English.

Ahmet:

By his parents, Ahmet was judged native at Japanese, and intermediate at Turkish and English. According to collected data, 81 percent of his utterances are in Japanese which were judged "native" by monolingual native speakers. Like Vahit, Mert, and Selim, his listening skills in Turkish seem to be more advanced than his speaking skills. Like all the other members of the house group Ahmet does not talk in English much. Out of his 509 utterances only

following three contain “some’ English. Because of this, estimating his English level out of the voice data is almost impossible. According to his parents he has attended the international school before, but now, he commutes to a Japanese school. His not talking in English could be a matter of his or his interlocutors’ preference. It could also be due to his lack of, or decreasing, competence.

Example 11: (Day 4)
Ahmet HORA AITE team
Translation SEE! (IT’S) THE OPPONENT team
Ahmet Speedy
Ahmet No! ORE NO TŌSAN NANKA NI MAN EN TAKAI TTE ITTERU
Translation No! MY FATHER SAID SOMETHING LIKE (IT IS) TWENTY THOUSAND YEN MORE EXPENSIVE

Murat:

Murat has similar linguistic characteristics to Ahmet. His Japanese, English and Turkish were judged to be ‘native, upper advanced, and advanced, respectively. His being native is also confirmed by monolingual native speakers of Japanese. Because only one percent of his utterances are in English, not much can be said about his English level out of the data. Therefore his being “upper advanced” at English could not be confirmed by the data. Murat seems to be another receptive bilingual speaker of Japanese and Turkish as he apparently has no problem in understanding the utterances of monolingual Turkish native speakers but some of his utterances include grammatical and pronunciation errors, two of which are given below.

Example 12: (Days 4 and 5)
Murat Kopabilir… kopabilirsen kop!
Translation Be pulled off if you can! (Said in response to the joke of the supervisor saying “I will pull of your nose!” intended meaning was probably “Pull off if you can!” The grammatically correct form would be “Koparabilirsen kopar!”)
Murat Eveye
Translation To to house (Two adjacent dative case markers are attached to the word house, the grammatically correct form would be “eve”)

Orhan:

Orhan had only 95 utterances 21 of which were not comprehensible, which is not enough for judging his language level. According to his parents, he is native at Japanese. Monolingual Japanese native speakers listening to his small number of Japanese utterances also judged his Japanese, native. According to his parents his English is advanced and his Turkish, poor, and the lowest of all the subjects.

3.2.2. The Yokohama group

The subjects in Yokohama group are all male, speaking in Turkish with an overwhelmingly high rate. English seems to be the second most used language, but, with a rate as low as 1 percent. Japanese, on the other hand, comes out only from time to time in short phrases. In the author's master thesis, the linguistic competence of these group members had been judged by their parents. These results are also used here as reference.

Kemal:

By his parents Kemal was judged to be a native speaker of Turkish, and his English and Japanese levels are upper-advanced, respectively. His speaking level of Turkish was confirmed as native by the author and one other monolingual native speaker of Turkish. Although, he mostly spoke in Turkish, 14 percent of his utterances are in English, which is the highest rate in the house group. However, these utterances are not without grammatical mistakes and some sort of non-native accent. His speaking level of English seems to be somewhere around upper intermediate and advanced.

Ali:

Ali's Turkish is judged by his parents to be native. Like all the other Yokohama group members he mainly spoke in Turkish which was confirmed native by the author and other monolingual native speakers of Turkish. Like, Kemal his English was judged to be upper-advanced, which could not be confirmed by the data. He had only 18 utterances which contained English components. Unlike Kemal's, none of these utterances included English in full sentence. Likewise, according to his parents his Japanese is intermediate

Osman:

Almost the same things that were written for Ali could also be valid for Osman. He seems to be a native speaker of Turkish, his levels in Japanese and English are not easily detectable. For example out of his 13 utterances that included some components in English,

only the following one was in “full sentence”. (“Full sentence” here is used to mean a sentence containing of the three of subject, verb and object.)

Example 13: (Day 7)
Osman: I want to wash this memory clean

According to his parents, his level in Japanese and English are advanced. Born in Japan, Osman’s competence in Japanese is probably high, like his English. However, confirming this with the recorded data is not possible as he uttered almost no Japanese other than a couple of short phrases.

Mustafa:

Like Orhan, there are not enough utterances of Mustafa that would make it possible to do some guess on his levels in any of the three languages. Like all the other three members of Yokohama group, majority of his utterances are in Turkish. All of these Turkish utterances are short and small in number. However, by his parents his Japanese and English and Turkish were judged to be native, upper-advanced, and poor.

3.2.3 The school group

There is only one male participant in the school group. During Turkish lessons the group talk mainly in Turkish. In settings other than Turkish, English is by far the most uttered language. In these settings, Turkish is the second most used language for Turkish dominant students. Some Japanese dominant students such as Leyla and Pelin use Japanese more than the overall average. While judging the linguistic competence of the participants, these results are also used here as reference.

Ismail:

Ismail is the only male member of the school group and participated in only three sessions which took place in the same day. Though small in number, his utterances in Turkish were well formed enough to be assumed as native or native-like. There was a long passage in which he talked to the teacher about his game and toys in Turkish which sounded perfectly native to the author and other monolingual speakers of Turkish. He uttered only 12 utterances which had components from English and no Japanese utterance at all. That is, the data provided almost no data about his Japanese and English levels. In this international school there are two different types of Japanese courses, namely, Japanese as a second language (JSL) which for

those studying Japanese as foreign language, Japanese as a national language (JNL) which is for native speaker of Japanese. Ismail attends the JSL class.

Aliye:

Aliye, the younger sister of Zehra, is the youngest of all the subjects. She participated in the Turkish classes only towards the end of the course. She was born in Japan and her mother and father were Korean and Turkish, respectively. As mentioned in chapter 3.1.3, a great deal (around 25 percent) of her utterances were incomprehensible and probably composed of interjections. All of her Turkish utterances, though high in number, were addressed to, or in the presence of a monolingual Turkish teacher. In other settings she prefers to talk in English. Other than the interjection "Ee!", she had no utterances in Japanese. Her English seems to be around advanced, and Turkish, intermediate. Out of the recorded data, no clue achieved about her Japanese and Korean level.

Aynur:

At the time of data collection, Aynur was the only third grader among the other students who were mostly second graders. Her being apparently more successful in Turkish class must partially be attributed to this fact. This being said, with Ismail, Aynur had the most native-like Turkish in terms of both grammar and pronunciation. This was also confirmed by other monolingual Turkish speakers. Her Turkish utterances are more "appropriate" for the context and also slightly longer in terms of duration and length, with a significant number of full sentences. This difference is illustrated in example 14 and 15. The example 14 is from a Turkish lesson when the children are playing a word game by using flash cards. The teacher tells the children that they are not carefully looking at the cards. Pelin responses to this in Turkish, by saying "Bakıyom!" (I am looking) the colloquial, first person singular form of the Turkish verb. Although it cannot be judged totally ungrammatical in Turkish, the more appropriate form can be said to be what Aynur says "Bakıyoruz"; the unmarked (or formal) first person plural form of the same verb.

Example 14: (day 14)

Teacher	*Siz bakmıyorsunuz…*
Translation	*You* (plural) *are not looking (at the cards).* (The intended meaning seems to be "You are not paying attention.")
Pelin	*Bakıyom!*
Translation	*I am looking (at the cards).*
Aynur	*Bakıyoruz.*

Translation	*We are looking (at the cards).*
Teacher	Concentration
Sevil	*Bakıyoruz.*
Translation	*We are looking (at the cards).*

Example 15, is another instance from one of the Turkish lessons. The teacher wants the students tell something more about the Turkish drama the name of which they have just mentioned. In comparison to Sevil's simple response, Aynur starts to make long explanation only the first of which is given here. There are a number of this kind of instances, which are satisfying enough to reach a conclusion that Aynur's Turkish level is higher than most of the other participants.

Example: 15 (day 21)

Teacher	*Ha! "Sırlar"! Yok, ben ... Nasıl bir dizi o?*
Translation	*Oh! (You mean) "Mysteries"! No, I ... What kind of a drama is it*?
Sevil	*Çok iyi*
Translation	*Very good!*
Aynur	*Yedi ... Yedi yaştan büyüklere olduğu için ben yedi yaştan büyük olduğum için izleyebilirim.*
Translation	*Because ... Because it is a drama appropriate for those aged seven and, because I am over seven, I can watch it.*

The English in her utterances also has similar features but could be ranked around upper-advanced or native-like. A monolingual native speaker of English had also similar impression but had some concerns about calling her a native speaker of English. Her utterances in Japanese are very small and mainly composed of the interjection "Ee!" Her competence in Japanese is probably below advanced. She attends to JSL class.

Esra:

Esra mostly speaks in English, sometimes even during the Turkish lessons. Although, her Japanese utterances are as few as 47, her pronunciation, accent and the way she speaks give the impression that her level is native or native-like. This was also confirmed by the monolingual speakers of Japanese. Her Turkish seems to be around upper intermediate and advanced and her English is around advanced. Her Turkish and English are not without grammatical and pronunciation mistakes, though. Esra attends to the class of JNL.

Feray:

According to collected data, Feray's linguistic level in Japanese, Turkish and English looks closest to each other, in the school group. Her Turkish and Japanese seem to be around native-like, whereas her English is somewhere around advanced. Both her mother and father are Turkish; however, her mother was born and grew up in Japan, and is most probably a bilingual of Turkish and Japanese. There are a few grammatical and pronunciation mistakes in her Turkish such as the following one.

Example 16: (Day 18)

Feray	Sinan Bey'in cüzdanısı var.
Translation	Mr. Sinan has has a purse. (An extra possessive marker is attached to the Turkish root "Purse" Double marking can rarely be seen in the utterances of monolingual Turkish speakers, as well.

The kind of double marking illustrated above can sometimes be used even deliberately in monolingual context for probably emphasis ends. An example to this could be 'Canısı' the name of a Turkish song of 90's which can be roughly translated into English as "my my sweet heart!"

Feray has only a small number of utterances in Japanese, none of which apparently has any grammatical or pronunciation abnormalities. She attends the JNL class.

Leyla:

Leyla, a fifth grader, is the oldest member of the school group. In terms of the number of utterances in the languages, she seems to be the most balanced speaker. She had 158 utterances which include English components, and 198 utterances including Turkish. Japanese, on the other hand, was detected in 82 utterances. In terms of linguistic level, however, she seems to be a native speaker of Japanese, whose Turkish and English is close to advanced. Her being a native in Japanese was also confirmed by monolingual Japanese speakers. She attends the JNL class. Most of her Turkish utterances (around 80 percent) were during Turkish lessons. In other settings (free time and computer game, lunch break), she mainly talked in English and sometimes preferred Japanese when speaking to certain subjects such as Pelin and Feray.

Pelin:

Like Leyla, Pelin seems to be a native speaker of Japanese who prefers to talk in Japanese to certain interlocutors such as Leyla and Feray. However, compared to Leyla, her utterances in Turkish are longer in terms of both length and duration. Her Turkish seems to be

around upper-advanced. In our data there are some clues about her being a Japanese dominated bilingual, one of which is given in the following example.

Example 17: (day 14, setting: Turkish Lesson)

Teacher	*Notlar değil.* (to Aynur)
Translation	*(It is) not "notes"*
Aynur	*Notlar, notlar!* (to the teacher)
Translation	*Notes, notes!*
Sevil	*Notlar* (to the teacher)
Translation	*Notes*
Teacher	*Değil* (to Pelin)
Translation	*It is not*
Aynur	*Niye?* (to the teacher)
Translation	*Why?*
Pelin	*Notlaş dedi.* (to the teacher)
Translation	*She (Aynur) said "notlaş"*
Aynur	*Notlar* (to the teacher and Pelin)
Translation	*Notes*
Teacher	*Değil* (to Aynur)
Translation	*It is not*

In the dialogue above, the teacher asks the students the Turkish word for "musical notes". When hearing Aynur's answer (notlar) Pelin claims that Aynur has said "notlaş" (IPA: not ɫ aʃ), but actually Aynur's pronunciation sounds native and it is not "notlaş". So, why does it sound like "notlaş" to Pelin's ear? Before proposing a reason for this, a brief explanation on Turkish phonology would be appropriate. The "r" in "notlar" is the Turkish flap which is represented by /ɾ/ in IPA. It is pronounced as [ɾ] in intervocalic position, but when in word-final position it sounds more like an alveolar fricative and becomes voiceless. Therefore, its word-final form is [r̥]. However, for a native speaker of Turkish all of these forms are indistinguishable, as [r̥] is simply an allophone of /ɾ/. Consequently, the fact that the word final /ɾ/ sounds different for Pelin could be an indicator of her lacking some aspects of native competence in Turkish phonology.

Her English level, on the other hand, seems to be close to advanced and somewhat slightly lower than her Turkish level. Lastly, Pelin attends to JNL class.

Sevil:

Based on the data collected, attributing a "native" language to Sevil is quite difficult. Among the three languages, her Turkish is the first candidate to be called native-like. However, her utterances in Turkish are not without grammatical errors and this lack of competence becomes visible especially in long utterances.

Example 18: (Day 14)

Sevil *Ben 'Çocuklar Duymasın'ının çok ... çok eski bölümünü izlemesini istiyorum.*

Translation *I like him/her to watch the old episodes of 'Çocuklar Duymasın'* (Here, the third person singular suffix attached to the verb "to watch" looks irrelevant. The intended meaning is probably **I** like to watch the old episodes of 'Çocuklar Duymasın.)

(shortened)

Aynur *Ye... yeni bölümünü izledin mi?*

Translation *Did you see the ne… new episode?*

(shortened)

Sevil *Aa! sadece izledim. Ama şey, diyolar bugün işte Haluk'un doğum günü için*

Translation *Oh! I only watched it. But they said umm, Because today, umm, is Haluk's birthday* (The reason for using Turkish word "sadece" (only) doesn't seem clear. It may or may not be a grammatical mistake. It might also) have been used the way "just" is used in English

Aynur *Hı hı*

Translation *Yes*

Sevil *Parti vericek*

Translation *He/she is going to throw a party* (Again the usage of third person here, does not seem appropriate. The intended form might have been the passive voice of the verb)

Despite sounding natural in terms of grammar and pronunciation to a monolingual Turkish ear, Sevil's utterances were usually short, and she did not initiate a conversation by a long utterance in Turkish. In the example above, Sevil is asked to make relatively a longer explanation in Turkish, namely the last episode of a Turkish drama. Unlike her short Turkish utterances, in both of her long utterances, there is either a grammatical mistake or some other peculiarity which makes it sound *less native*.

At the time of data collection Sevil was attending to JSL class. She had only 34

utterances including Japanese components 10 of which are simply composed of the Japanese interjection “Ee!” and if the tongue twisters such as “jan ken poi” are also excluded, the ultimate utterance will be as low as 14. One more thing worth mentioning is the fact that none of her “only Japanese” utterances are in full sentence. Taking all of these into consideration, her Japanese level is estimated to be close to intermediate.

Zehra:

Zehra is another subject whose “strongest language” is hard to detect. English and Turkish components were used in around half of her utterances. More than two third of her Turkish utterances are made during Turkish lesson. There grammatical mistakes and pronunciation patterns which sound nonnative in both of her Turkish and Japanese, a fact which makes it hard to call her native or native like in either English or Turkish. Although she seems to be more “eager” to talk English (and also initiates more conversation in English) her level in Turkish, seems slightly higher. Her grammatical mistakes in English can be said to be more marked as her utterances sometimes gets somewhat incomprehensible, as shown in the following example.

Example 19: (Day 14)

Zehra	Pelin! while you are doing iii, like ... you are like .... I am dii dii then, you say iii you're doing iii you don't ... you don't need to do.
Pelin	What is talking about?
Aynur	I know, I know (to Pelin). What are you saying? (to Zehra)
Zehra	Like... like, I said iii. Then, you said 'don't do iii'
Pelin	EE? (WHAT?) what is talking about?
Sevil	Aa! she said 'iii' and she... you said 'Don't say iii!'
Zehra	No!
Pelin	Speak well English.
Zehra	I am saying well English
Aynur	What's a iii?
Sevil	Yeah, MOU! What is iii?
Zehra	Like... like eaah! (shows) like the...
Pelin	HAA!? (WHAT!?)
Zehra	First I say ...
Aynur	Blah blah blah?
Zehra	Eaah! Like that. Then you think 'Don't say eaah!' like that
Pelin	It did not happened.

The example above is from a lunch break, towards the end of which the children get absorbed in their chat. Zehra tries to make an explanation, which does not seem to be understood by others. There are also grammatical mistakes in Pelin's utterances; however, unlike Zehra's, these utterances can be said to be more "understandable". Zehra's English is estimated to be around advanced.

Zehra attends to JSL. She had only 41 utterances which had Japanese components more than half of which were Japanese interjection "Ee!' and some tongue twisters. Based on the collected data, her Japanese level seems to be around intermediate.

One important issue here is the fact that Zehra's mother is a Korean monolingual. In her data there are only two utterances that sounded like Korean only one of which was audible. Zehra uttered the Korean word for library (do-seo-gwan) while she was learning its Turkish equivalent during a Turkish lesson. Her addressee was probably her younger sister and the Turkish teacher did not seem to notice the Korean word. In addition to this, the following utterance of Zehra might have one trace of her Korean.

Example 20: (Day 19 setting: Turkish lesson)
Suheda Kirl, you mean girl? (to the Turkish teacher)

It is said that the voicing feature of plosives such as [p] and [k] does not constitute a minimal pair in Korean. In the utterance above Zehra's pronunciation error might be the result of L1 interference.

However, other than these two cases, there were almost no clues about her Korean level from the data.

3.3. Utterance Duration Analysis

A series of calculation has to be conducted for making a statement as simple as, for example, "This participant spoke this much". Table 8 shows the result of such an attempt in which the number of utterances for each participant has been calculated based on the length of time they are present during ongoing conversation. Ongoing conversation duration (OCD) here means the sections of a certain recording where there is a continuous conversation. In order to achieve this, first, long silent durations were extracted. There are some usual late comers such as Zehra, who participates in the Turkish classes around half an hour later than others do. In addition, some participants temporally leave the place of recording for a number reasons ranging from going to restroom to simply walking around. However, if the participants return to the conversation area in less than half a minute, this is not added to calculation.

The numbers of utterances for each participant were divided by the OCD (in minutes) of the same participant. The result of this calculation would show which participant spoke how many utterances in one minute. (Shown in the column "utterance rate for OCD" in table 8.) This would be a more valid indication of how much a participant spoke. However, this number can still be misleading if the ultimate aim is to calculate how much utterance the participants spoke by their own will. A great deal of the recordings in the school group took place during Turkish classes where the language use was controlled or at least less free. During the Turkish classes, the students were expected to talk in Turkish and the teacher usually kept asking questions to each student in turn and eliciting answers. On the other hand, for the house groups (Tokyo and Yokohama groups) there is no Turkish class and any other environment where the participants were asked to talk, and use only a certain language. Although there were instances that the supervisors asked the children to talk in Turkish, the children did not seem to feel obliged to do so.

For the reasons explained above, while the house group data was kept unchanged, in the school group, the durations were recalculated without the data of Turkish lessons, the results of which are given the in column "OFCD" (ongoing free conversation duration) rate ranking. Assuring an environment that the participants are totally free to initiate or continue talking would be utopic; however, it can be said that, compared to Turkish classes, the participants are "freer" in their choice of language and time to speak during lunch or while playing a game or any time when there is no obvious control over them.

Table 8: Duration and utterance comparison

Participants	Utterances	Group	gender	OCD (minute)	OFCD (minute)	Utterances rate for OCD	Utterances rate for OFCD	Average duration	Utterance ranking	Duration ranking	OCD rate ranking	OFCD rate ranking
Esra	812	School	F	174	112	4.67	5.11	1.856	7	3	4	2
Pelin	1615	School	F	349	148	4.63	2.57	1.637	3	7	5	9
Zehra	1826	School	F	487	273	3.75	3.45	1.843	2	4	6	5
Sevil	1391	School	F	396	143	3.51	2.55	1.68	4	5	7	10
Aynur	2421	School	F	490	179	4.93	3.98	1.944	1	2	2	4
Leyla	512	School	F	243	131	2.10	1.79	1.494	12	15	12	15
Ismail	165	School	M	97	77	1.28	0.58	1.636	18	8	17	19
Feray	1109	School	F	227	56	4.88	5.98	1.676	5	6	3	1
Aliye	522	School	F	101	70	5.17	4.07	2.381	10	1	1	3
Emin	515	Tokyo	M	167	167	3.08	3.08	1.412	11	18	9	7
Erkan	323	Tokyo	M	165	165	1.96	1.96	1.394	16	19	14	13
Vahit	274	Tokyo	M	182	182	1.51	1.51	1.291	17	20	16	16
Selim	381	Tokyo	M	182	182	2.09	2.09	1.509	14	14	13	12
Mert	58	Tokyo	M	182	182	0.32	0.32	1.515	19	13	20	20
Ahmet	509	Tokyo	M	164	164	3.10	3.10	1.493	13	16	8	6
Murat	858	Tokyo	M	203	203	2.75	2.75	1.475	6	17	10	8
Kemal	354	Yokohama	M	304	304	1.16	1.16	1.619	15	9	18	17
Ali	580	Yokohama	M	304	304	1.91	1.91	1.561	9	12	15	14
Osman	645	Yokohama	M	304	304	2.12	2.12	1.594	8	10	11	11
Mustafa	45	Yokohama	M	59	59	0.76	0.76	1.586	20	11	19	18

3.3.1. Discussion on some individuals

Allocating a category of OFCD had an effect especially on group statistics, but before moving on to group comparisons; some discussion will be made on individuals.

As understood from the ranking columns, those having a high average of "utterance duration" are also among those who "actually speak more" although there is not a one to one correspondence. Aynur, for example has the highest number of utterance and she has the second place in terms of both the utterance duration and OCD utterance rate. However, she only gets the fourth place when it comes to OFCD. In other words, during free conversations, she speaks "less" than she does during the Turkish classes. This tendency correlates with the fact that, compared to other students, Aynur talks to the teacher more and initiates more talk with him. Another reason for the difference in her ranking comes from her utterance characteristics. As will be discussed in the "word statistics", her utterances generally include more components and are longer. To illustrate, Aynur had approximately 25 percent more utterances then Zehra, but if her utterances are broken down into words, the gap becomes 35 percent.

A counterexample to Aynur, would be Esra, who has the seventh place in terms of utterance number and jumps up to even second place when it comes to OFCD. That is, although ranked seventh in utterance number, Esra spoke more during free ongoing conversation periods.

Another interesting case is that of Aliye's who did not made lots utterances but seem to "talk more" during the ongoing conversations. However, as explained in the chapter 3.1.3, this is due to the fact that she consciously kept making incomprehensible utterances which were all marked and calculated.

3.3.2. Discussion on groups

Table9 shows the group averages for the utterance rates during OFC (ongoing free conversation). One of the most obvious facts understood by this table is that the school group members spoke more than the house group members (Yokohama and Tokyo). Excluding the Turkish classes lessens the rate in the school group, but there is still a significant gap. The house group members spoke less than two utterances per minute whereas the school group spoke more than three utterances during the same period. Here, the words "school group" and "house group" can be exchanged to "females" and "males". That is, the females talked more than the males, as well. Actually, there is only one male participant in the school group, and if his data excluded, the rate of the group goes even higher.

Thinking that Mustafa, who had only 45 utterances, and a rate of only 0.76 utterance / minute, might have caused an "unfair" decrease in the rates for the house group, the data was recalculated without Mustafa's data. However, even if Mustafa's statistics are excluded, the rates for the house group still do not exceed 2.00, and do not change the fact that females spoke considerably more. One of the reasons that can be given for this gap would be the "more active" nature of the house group members, or the male participants. While playing, the male members were physically more active as they kept jumping, yelling, wrestling etc. which may have limited their time to talk. Another reason could be the fact that, compared to females, male participants tended to play computer and portable device game, more silently and speak less.

Leyla, who ranked at or below twelfth in all categories, is the only female exception to the conclusion above. There are also some male participants, such as Ahmet, Emin, Murat who spoke more than some female participants. Interestingly enough, they ranked sixth, seventh, and eighth subsequently.

Table 9: Average numbers of utterances for each group per minute

Groups	Average number of utterance per minute during OFC
The school group	3.88
The school group (OFCD)	3.34
The house group	1.89
Tokyo group	2.12
Yokohama group	1.49
Females	4.20
Females (OFCD)	3.69
Males	1.84
Japanese dominant	2. 65
Turkish dominant	2. 55

A comparison of utterance rate and linguistic dominance was also conducted. The participants were classified as either Japanese or Turkish dominant according to language at which they are judged to be at or above native-like level. There are no native or native-like English speakers, as all the participants started learning English in the school as a foreign language. There are still some participants such as Aliye, about whom there is not much data to judge her either Turkish or Japanese (and maybe Korean) dominant. The Japanese and Turkish levels of Emin and Erkan, on the other hand are so balanced that their orientation is unclear. These three participants were excluded in this classification.

As shown in table 9, the Japanese oriented participants talked slightly more than Turkish oriented participants. One thing that must be stated here is that, as will be discussed in language choice analysis, English is the most uttered language in the school group, which is found to be most speaking group in general. Therefore, one possible conclusion is that being English oriented, rather than being Japanese or Turkish dominant, has an effect on talking more.

The last thing to be mentioned here is the similarities between siblings. In duration, Emin and Erkan brothers are ranked eighteenth and nineteenth respectively. The two sisters Aliye (ranked third) and Zehra's (ranked fifth) utterance rates during OFC are also close. Another interesting result is that of Murat and Esra who are –though in different groups- sisters and brothers, as they ranked sixth and seventh at utterance number. If this kind of similarities also occur in our other comparisons, more courageous statements could be made on the relationship between bilingual children of the same families and the language tendencies of the participants.

The last analysis of this chapter will be on the utterance rate based on the addressee. However, only those utterances that have strong clues about their addressees are calculated. There are some other utterances which were excluded as well such as addressees which are labeled as "self" (which means the utterer talks to him/herself with no obvious intention to address the utterance), "unclear" (the addressee of which is not detectable), and addressees which include more than one participant at the same time. The last but not the least, the data of house groups is also excluded for a reason explained in the chapter 2.1.

3.3.3. The utterance rates based on addressee

In the following table 10, the number of utterances from each participant are broken down according to their addressees and shown in percentages. The percentages here were acquired by proportioning the number of one participant's utterances towards a certain addressee, to his or her total number of utterances towards the children. As shown in the table, participants differ in their choice of addresses considerably. Namely, certain participants talk to certain addressees a lot, while talking to some others only a couple of times. However, as stated in the chapters 3.1.3, the case of Ismail and Aliye can be considered special, and it might be more appropriate to attribute the low rate of utterances towards these two participants to technical matters.

Some of the low flow of utterance exchanges, occur between Esra and Pelin. Pelin's rate of utterances addressed to Ersa is 2.52, but Esra's rate is even lower. This hints the possibility that Esra did not respond to some of Pelin's utterances directed to her. Actually when the context of Pelin's utterances were checked, more than half of Pelin's utterances seems to be

left with no response, or in another word, “ignored” by Esra. The following example shows one of this instances.

Example 21: (Day 17)
Pelin JAA, ESURA ESURA! II, MITE! (To Esra, 0.6)
Translation WELL, ESRA, ESRA! LOOK (AT THIS) WON’T YOU!

In this example, Esra is playing a game on a portable game player while she and the other students are waiting the Turkish teacher come. Pelin tries to show something to Esra but cannot attract her attention. Leyla carries on the conversation by her incomprehensible utterance, as Pelin receives no response from Esra. Esra also addressed only two times by Feray, and she did not respond to Feray in ether cases. Another example to low rates is that of Zehra and Sevil, who talks to Leyla only a couple of times. Leyla’s utterance rates towards the two, are low either.

On the other hand, it is also the case that some addressees receive far more utterances from certain participants. Feray has addressed more than 40 percent of her utterances to Aynur making it the highest rate in school group. Aynur is the most addressed participant for Pelin as well. However, one of the reasons for this could be that Aynur is the “most speaking” participant in terms of utterance number. She is also one of the few participants who regularly attend the classes. Her high number of utterances would expectedly yield high number of responses in return. One way of calculating these rates in a more valid way would be specifying the ongoing conversation durations (OCD) for each utterer based on the time he or she has spent with each one of the interlocutors, but such a complex calculation is beyond the limits of this research.

What could be the reason for a participant’s talking more to one addressee and still less to other in the same group? Would the data have changed if the data collection procedure had taken a longer time? No, ultimate answer valid for each case could be found in this study, but, as will be explained in the following chapters, some tendencies become visible when the linguistic choices are studied. For example, the high rate of utterance flow between Pelin, Leyla, and – to a some extend – Feray and Esra can be attributed to their linguistic competence in Japanese.

Table 10: The utterance rates based on addressee

Adresser ↓	Everyone	Esra	Pelin	Zehra	Sevil	Aynur	Leyla	Ismail	Feray	Aliye
Esra	29.90		1.96	25.49	9.56	14.22	16.91	0.49	0.00	0.00
Pelin	9.35	2.52		15.83	6.47	32.73	20.50	0.36	7.01	
Zehra	17.40	17.64	9.00		14.84	15.57	1.46	9.85	5.47	3.65
Sevil	17.90	9.59	7.20	33.21		21.22	1.66	0.55	4.98	
Aynur	22.16	6.59	16.54	14.81	11.24		8.11	0.22	18.27	
Leyla	14.93	25.00	20.15	2.99	3.73	24.25		1.12	4.85	
Ismail	27.91	9.30	0.00	32.56	2.33	2.33	20.93		0.00	
Feray	15.95	0.46	11.39	12.98	5.47	43.05	7.06	0.00		
Aliye	12.20	0.81		86.18						

Two of more easily understandable rates are those of Aliye and Ismail. Aliye's speech was recorded only on three days and the only participants she could interact were her older sister Zehra and Esra. Esra attended only one session with Aliye and, absorbed in the computer game, she Esra not seem to be interested in talking with her. Because of this, more than 80 percent of Aliye's utterances were addressed to Zehra.

Ismail on the other hand, addresses half of his utterances to Leyla and Zehra. His initiative behind this, is also somehow predictable. His speech was recorded only one day on which he attended the Turkish class and computer game session. Most of his utterances addresses to Leyla and Zehra took place during this game session, when he asked for help on how to play a computer game. One interesting point is that, a considerably number of his utterances were addressed to "everyone". He made a great deal of these utterances while having some problems playing the game. It seems that he first, tried to get the attention of any one in the computer game, but as he could not receive any response, he decided to specify his addressee Leyla, and Zehra. The following table some of his utterances that he directed to "everyone" to seek help during the computer game session.

Table 11: Some of Ismail's utterances addressed to "everyone"

The utterance	**English translation**
Ya, napcaz?	*What I shall do?*
Açamıyom ki	*I can't open (this) ....*
Ya ben bunu oynamıcam	*I don't want to play this*
Ya ben İngilizceden anlamıyom ya	*Hey! I can't understand the English (written here) ....*

Like Ismail some participants seem to prefer not to specify their addresses and make their utterances to all the interlocutors around them. Esra and Zehra have addressed “everyone” more than they have addressed any one individual.

3.4 Utterance Totals Analysis

In this analysis, the number of words in each utterance will be calculated and compared with some other variants. Here, it must be noted that, the number of words in an utterance itself may not be an accurate indicator of the length of it. This is, partially, because of the fact that word boundaries differ in three languages. Compared to English, Turkish, being an agglutinative language, tends to have less words in a sentence (and therefore in an utterance). For example, in our calculation, "to" as a dative marker in English is counted as one word, however in Turkish it is attached to the "content word". Therefore we would end up having two words for "to school" but only one for its Turkish counterpart "okula". In sentence level, the gap becomes even greater. An English sentence such as “I was going to the school” has four words, whereas the sentence in Turkish (Okula gidiyordum.) has only two.

Japanese is also an agglutinative language, but when written in romaji grammatical forms such as case markers are separated from the content words, so “to school” is written as “gakkō he” or “gakkō ni”. In Japanese, this kind of separation does not seem to be a matter of merely a writing rule, as some of these suffix-like forms “behave more freely”. For example, in conversation “da yo ne!” or “ka mo shirenai” may stand alone. If the following dialogue were to translate into Turkish, the word Tokyo preceding “kara” and “he” could not be omitted.

Example 22:
Tarō: TANAKA SAN HA TŌKYŌ KARA IKIMASU.
Translation Tanaka will go (there) from Tokyo.
Hanako: KARA IKUMASU? SORE TO MO, HE IKIMASU?
Translation Will he go from Tokyo or go to Tokyo?
Tarō: KARA IKIMASU.
Translation He will go from Tokyo.

In conclusion, compared to those in Japanese and English, the average word number in an utterance of same length would be smaller in Turkish. One of the solutions might be to count all of the free and bound morphemes as one unit, but accomplishing such a task was beyond the scope of this paper. Consequently, the results of this analysis will be more useful if considered with the results of duration analysis of the previous chapter.

3.4.1. Discussions on groups

One advantage of calculating the utterance totals through word number is to avoid some misguiding results of utterance number due to the difference in utterance length. Some utterances are only composed of one word, and there are others as long as dozens of words. However, each of these utterances are counted as one utterance. Theoretically, a participant who mainly talk in short utterances in relatively high frequency, may seem to "talk more" than another participant who has far longer utterances with slightly lower frequency. Therefore, counting the word number might give more accurate information about the average length of each utterance.

The following table shows the average number of words per utterance for different participant groups. The results show no great gaps between the groups in free settings[9] and the average number of words varies around 3. However, in the school group, during the Turkish classes, the number of word per utterance decreases considerably, namely, from 3.47 to 3.21. During Turkish classes, the rate of female participants is even as low as 2.21. This results are, however; are not surprising, as the teacher is the most speaking figure throughout the lesson. Actually, the teachers have the highest (3.66) average word rate per utterance. This is understandable due to the fact that, teachers are the ones who control the flow of the lesson, talk to each student, explain some subjects in detail when needed, which all make it necessary to talk.

One interesting result of this analysis is that of the Japanese and Turkish dominant students. In the duration analysis (table12) the Japanese oriented participants are found to 'talk' slightly more than Turkish oriented participants. The following table shows that it is the Turkish oriented students who talk slightly more. The gap is not a significant one, nevertheless, If we assume both the duration rate and average word number per utterance, accurate, than the natural conclusion is that Japanese oriented students spent slightly more time for a lesser amount of words; or in other words, Turkish oriented participants speak faster, and therefore, utter relatively more words.

[9] In settings where the use of language is not controlled such as language lesssons

Table 12: Average numbers of words per utterance

Groups	Words per utterance
School (TL)[10]	2.73
School (FT)	3.47
House	3.21
Tokyo	3.22
Yokohama	3.20
Females (TL)	2.21
Females	3.47
Males	3.21
Japanese oriented	3.01
Turkish oriented	3.11
Teachers	3.66
Supervisors	3.06

Both utterance duration and word-number-per-utterance results have their pros and cons. One possible way to reach results that are more accurate could be to merge these two different calculation methods into one table. The following table is the result of this idea as we calculated the number of words which are uttered in a certain period, to be specific, one minute of OFCD.

Table 13: Average numbers of words

Groups	Words per minute
The school group	10.32
The house group	4.72
Tokyo group	5.16
Yokohama group	3.93
Females	11.29
Males	4.53
Japanese oriented	6.36
Turkish oriented	6.63

The results above are consistent with the previous word-per-utterance data, as they both indicate that the Turkish oriented participants talk slightly more than Japanese oriented

[10] The recording data of Turkish lessons

participants do. However, for the rest of the data some differences in numbers are remarkable. Compared to word-per-utterance calculation, differences among groups are far bigger in the table above. In free settings (in all settings other than Turkish lessons) the school group members utter 10.31 words per minute whereas the house group members utter only 4.72 words, that is, less than half of the number of the school group. The gap is even bigger between the two genders, as the average word number of female participants is 11.29 as opposed to that of males, which is only 4.53. These results enable us to reconfirm that the school group (or the female participants) do speak more than the house groups (and/or the male participants). The gap is smaller when we look at the number of word in each utterance. These two results lead us to the following conclusion. Compared to house groups, the school group talk with more utterances containing more words, which are made with shorter intervals.

Yokohama group has the lowest number of all groups and categories. One obvious reason is that Turkish –which this group speak most- has relatively less words in an average sentence.

3.4.2. Discussion on individuals

Certain tendencies might not be visible through data on groups, and this is why we include the individual data in most of our analyses. In terms of total utterances, the differences are notably big enough to make it necessary to check some individuals. The following table not only shows the individual differences but also the amount of utterances in three languages. In addition, juxtaposing the number of words both per minute and per utterance obviously eliminates some misleading data. For example, when we look at his words-per-utterance data, Mert has an average of three words per utterances in English, which is notably high. However, if we look at his word-number-per-minute data, what we can understand is that he uttered only a couple of English utterances.

Table 14: Utterance amount statistics for each individual in English,Japanese and Turkish

	Number of words per utterance				Number of words per minute			
Participants	Total	English	Japanese	Turkish	Total	English	Japanese	Turkish
Esra	3.08	3.87	2.32	2.08	13.34	12.42	0.46	0.46
Pelin	3.44	4.11	3.01	2.60	8.79	6.59	1.47	0.74
Zehra	3.13	3.99	1.53	2.66	9.81	7.62	0.24	1.96
Sevil	3.79	4.33	2.09	3.44	9.92	8.50	0.16	1.25
Aynur	3.96	4.68	1.31	3.47	16.17	12.36	0.12	3.70
Leyla	3.12	4.20	2.26	2.50	4.32	3.37	0.53	0.42

Ismail	3.58	2.83	0	3.96	2.53	0.22	0.00	2.31
Feray	4.15	4.60	2.06	4.36	19.96	13.46	0.66	5.84
Aliye	3.01	3.95	2.33	3.78	8.03	7.44	0.10	0.49
Emin	2.97	0.00	3.05	3.19	7.57	0.00	3.84	3.73
Erkan	2.50	0.00	2.64	2.57	4.18	0.00	2.42	1.76
Vahit	3.40	2.00	3.63	1.33	4.36	0.01	4.26	0.09
Selim	3.30	0.00	3.54	2.92	5.93	0.00	4.87	1.06
Mert	2.24	3.00	2.42	2.22	0.57	0.02	0.44	0.11
Ahmet	3.57	1.00	3.82	2.05	9.21	0.01	8.48	0.73
Murat	3.62	3.00	3.72	2.63	4.33	0.12	3.45	0.76
Kemal	3.25	4.06	2.18	3.23	3.32	0.64	0.08	2.60
Ali	3.29	2.00	2.09	3.54	5.77	0.05	0.08	5.64
Osman	3.17	3.00	2.09	3.40	5.35	0.06	0.08	5.21

The data of word-per-utterance, shows relative more even distribution of numbers, which ranges around 2 and 4. There are some zeros as well. In the school group, Ismail has no Japanese utterances. Likewise, in Tokyo group, Emin, Erkan and Selim have no English utterances, either.

In the word-per-minute column, on the other hand, the most uttered language of each individual stands out clearly with a big gap between the second most uttered languages. The order of languages in terms of words-per-minute calculation is as follows.

School group: English > Turkish> Japanese
Tokyo Group: Japanese>Turkish> English
Yokohama Group: Turkish> English > Japanese

As understood from this list, in none of the groups Turkish becomes the least used language. Japanese, on the other hand, is either the most (once) or the least (twice) uttered language. Among 20 participants, there are 5 exceptions to the patterns above:

Ismail: Turkish> English > Japanese[11]
Pelin, Leyla, Esra: English> Japanese ≥ Turkish
Emin: Japanese ≈ Turkish > English[12]

[11] No utterance
[12] No utterance

The “exceptional” cases of the above are all addressed in previous chapters. Here, a brief summary of these will be given.

Unlike the other participants in the school group, the second most uttered language for Pelin, Leyla and Esra is Japanese. This can be attributed to the fact that all of these three participants are Japanese dominant. Their being Japanese dominant seems to be the result of their mothers’ being monolingual Japanese speakers.

Ismail, on the other hand, talked almost no language other than Turkish, during the day he was recorded. Unlike the other participants, at the time of the recording he had spent three and half years in Turkey, which was equal to the time he stayed in Japan. He is also the only participant who went to school in Turkey. In addition to this, like some of the other participants, both of his parents are Turkish and in Japan he never attended an ordinary Japanese school. All of these facts can be thought as different reasons for his being this much Turkish-oriented.

Lastly, Emin and (partially his younger brother) Erkan are the most balanced bilingual speakers among all the participants. Emin has come to Japan at the age of 6 and went to his first school in Japan. His parents are monolingual Turkish speakers, and he attends a Japanese school where the language of instruction is Japanese. That is, he has spent enough time in Turkey, to be a native speaker of Turkish, and come to Japan young enough to reach a native like competence in Japanese. All of these unique conditions seem to have effect on his being a “balanced” bilingual of Japanese and Turkish. However, he does not speak English at all, simply because he does not receive much English lessons in this school. Emin’s younger brother Erkan had been at the age of 4 when their family immigrated to Japan. This may explain why his Japanese utterances are slightly more than his brothers’. However, compared to other participants in Tokyo group, who use Japanese remarkably more than any other languages, he is obviously a balanced bilingual of Turkish and Japanese in terms of both linguistic level and total utterances.

To sum up, (1), the results show that the school group (or female participants) talk more, and more often than house groups (or male participants). This fact might be attributed to the activity type differences between the groups (or genders). (2) The linguistic amount analysis shows that group characteristics, individual factors and one of the settings (Turkish lessons) are all at work in forming the language use preferences of the participants. Turkish lessons, as a setting, itself seems to be the biggest factor for talking in Turkish more in the school group.

3.5 Language Choice Analysis

This chapter is about the linguistic orientation of the participants. First general statistics will be given for groups and following this, discussions will be done on linguistic choice of each participant and addressee.

3.5.1. Group statistics

Table 15 shows the language choice statistics of three observation groups. In this table, there are two types of utterance classification. The one on the left is the classification of monolingual utterances. Therefore, any utterance containing a CS is excluded. The one on the right contains both the monolingual utterances and CS.

Table 15: Language choice results for each group

	Utterances only in;			Utterances that contains;		
groups	English	Japanese	Turkish	English	Japanese	Turkish
School (FT)	66.77	6.26	19.29	74.10	9.13	24.45
Tokyo	0.40	72.51	19.33	0.77	80.12	26.94
Yokohama	4.85	2.90	88.12	6.37	5.65	92.25
School	35.03	4.40	54.87	39.90	6.49	59.34
Total	31.81	29.18	42.25	35.55	33.69	37.85

One thing that is clear from the data above is that, the use of language is divided into three patterns. Therefore, English, Japanese and Turkish are each the most uttered languages of different groups. The gap between the most used language and the one that comes next is significantly big. In the Tokyo group, Japanese is the main language with a percentage over 70, and Turkish has the second place. In this group, English is uttered only a couple of times yielding the lowest percentage of all groups. In Yokohama group, which is also composed of only male participants, Turkish is the most uttered language, which has the highest rate in the table. For this group, the rates for both English and Japanese are very low. Moreover, as previously mentioned in author's master thesis (Unal, 2010), most of these Turkish and Japanese utterances are short and in the form of words, or phrases.

In this table, there are two lines of data for the school group, one on the bottom shows the total results, and the one above (school FT) contains the utterances made when the setting is **not** Turkish lesson. As also discussed in chapter 3.3, to keep the settings similar for each group, it would be logical to exclude the utterances made during Turkish classes, because, in this setting the language choice is strictly predetermined. In the school group, when the data of Turkish class is included, Turkish becomes the most uttered language, English being the second,

and Japanese having the lowest rate. However, if only the utterances made in the settings in which the student are freer to choose their language (settings such as lunch breaks, free times, game sessions, etc), English becomes the most spoken language, Turkish lowers to the second place, and Japanese remains to be the least used language.

To sum up, Turkish, Japanese, and English are the most spoken languages, in Yokokama, Tokyo, and School groups, respectively. What could be the reason for such a discrepancy? To find an answer to this question, some variants can be compared. One variant could be the settings. Data collection of the school group was conducted only in school settings. This is an international school and all of the lessons (other than Turkish and Japanese language lessons) are conducted in English. Because there are some international students who are not competent in Japanese or Turkish, English becomes the main means of communication even during extracurricular activities and free times. Therefore, when in the school settings, the participants might be preconditioned to keep English as their base language, even when there is no obvious reason for such a choice. This assumption goes in line with one parent's statement that, when he is in the school, her daughter asked his permission to go to restroom unusually in English. This may partially explain the tendency to use English in the school, but the case of the Yokohama and Tokyo groups is more complex. On the surface, the social settings – a house where the children and monolingual supervisors are together- seem similar. However, the Tokyo group uses Japanese over 70 percent and in Yokohama group, other than Turkish, there are almost no English and Japanese utterances in full sentences. Consequently, setting itself is not capable of explaining the language choice tendencies of the participants.

3.5.2. The parent's linguistic background

Family background, as a variant, might have some effects on language choice. We already know that some of the participants are siblings two of whom are Esra and Murat. As will be discussed later in this chapter, Esra, who is in the school group, uses English up to 84 percent, whereas her brother Murat uses Japanese at this rate. Unfortunately, there was no opportunity to observe these two participant in reverse settings, but according to their parents report, at home, both Burak and Esra talk in Japanese. Therefore, making a comparison based on parents linguistic background would yield some explanation on language choice tendencies of the participants.

The following table shows the results of such a comparison in which the language choice of the participants is divided according to their parents' native language. All of the fathers in this research are Turkish (also used in the sense of "monolingual speakers of Turkish"), so the only variant here is the native language of the participants' mothers. Feray's

mother is a bilingual speaker of Turkish and Japanese, so her data is given separately on the third line. Likewise, Zehra and Aliye's mother is a native speaker of Korean who, reportedly, has an advanced level of Japanese.

Table 16: Language rate based on the native language of the participants' mothers

	school group			house groups			total		
Mothers	Tur.	Jap.	Eng.	Tur.	Jap.	Eng.	Tur.	Jap.	Eng.
Japanese	8.66	12.16	70.91	10.56	82.44	1.40	9.56	45.50	37.93
Turkish	24.66	2.31	65.07	45.68	44.82	2.05	39.46	32.24	20.70
Turkish[13]	26.50	6.36	57.95						
Korean	21.60	4.84	67.18						

The results show that the effect of mothers' language background is considerably high. Although groups have their own linguistic choice tendencies, the native language of mothers could still cause some difference. For example, for the school group, the rates of English utterances are the highest in any case, but the rate is slightly lower for the group whose mothers are Turkish. The tendency is even more notably when it comes to the rates of Turkish and Japanese. The participants whose mothers are Japanese simply make more Japanese utterances, those whose mothers are Turkish, speak more Turkish, as well. The fact that Feray's mother is a bilingual of Turkish and Japanese, reveals itself as an interesting result. Feray's utterance rate of Turkish is 26.5 percent, which is slightly above the rate of those whose mothers are Turkish. However, her Japanese rate is around the middle of those whose mother are Turkish and Japanese. Aliye and Zehra, on the other hand, are the two daughters of a Turkish father and a Korean mother. Their utterance rate in Turkish is considerably higher than the Japanese-mother group, but around five percent lower than the Turkish group. Both their English and Japanese rates are between the rates of Japanese and Turkish mother groups.

As for the Yokohama group only Mustafa's mother is Japanese, and he has only 56 utterances, which is too small to make a statistical interpretation. Consequently, in the table above, the data of Tokyo and Yokohama groups are given together under "the house groups" However, the high rate of Turkish in Yokohama did "cover" the actual state in Tokyo group. When the data for the house group is separately calculated (table 17), the Japanese seems to be the most used language in both cases. However, the rate of Turkish is considerably higher in the Turkish-mother group.

[13] This parent is a bilingual of Turkish and Japanese, which has a Turkish origin but has grown up in Japan.

Table 17: Language rate of Tokyo group based on the native language of the participants' mothers

Mothers native lang.	Language rates		
	Turkish	Japanese	English
Turkish	24.61	66.38	0.16
Japanese	8.43	85.17	0.90

3.5.3. Participant composition in a given setting

Both the linguistic settings (the school, a house, etc.) and the linguistic background of the participants seem to have a role in their language choice. However, as in the case of Yokohama, and Tokyo groups, even in the similar sociolinguistic settings, the participants of similar linguistic background can show different tendencies in their linguistic choice. Therefore, there must be at least one more variation to cause such a difference; a variation that determines the base language of a particular setting. One possibility could be the number of participants. That is, in a setting which the use of one specific language also is not covertly implied (such as school) or overtly directed (such as Turkish classes), the base language is determined according to the number of students. Namely, if there are more participants who are Turkish-dominant, than the base language could be Turkish. It does not seem to be possible to sort out enough number of settings out of the collected data, to make a comparative analysis of base language and the number of participants. However, three lunch break sessions from the school group seemingly support this assumption. The following table shows utterances rates during three different lunch break times in the school group. The "participants" column shows whether a particular participant is present on that day. The "utterance rates" column shows the rates of monolingual utterances in each of the three languages[14].

Participants of the day 14, vary in their linguistic competences. Aynur is the only one who has almost native level at Turkish. Both Sevil and Aynur's mothers are Turkish. However, the other half of the group has different traits. Pelin's mother is Japanese and she was judged a native speaker of Japanese. On the other hand, Zehra's mother is Korean, and her level at Japanese is apparently low. Under these conditions, English seems to be the first candidate to be the base language of the day. Actually, as shown in the table, English is the most uttered language on this day. Next to English is Turkish with a percentage of 31.87. On this day, there is only one native speaker of Japanese on the lunch table, so the rate of Japanese is as low as around 4 percent. On day 15 two of the participants (Pelin and Leyla) are native speakers of Japanese. Feray, on the other hand, has a native-like competence in both Turkish and Japanese.

[14] The utterances that contain CS, were excluded in this table.

However, Aynur and Zehra's competence in Japanese is notably low. English, again is the most spoken language in this session. However, this day, Pelin has potential addressees who can, and tend to, talk in Japanese. As a result, the rate of Japanese goes up to 15 percent.

Table 18: Language rates during three lunch sessions in the school group

Lunch sessions	Participants[15]						Utterance rates in;		
	A	S	F	P	L	Z	Turkish	English	Japanese
Day 14	✓	✓		✓		✓	31.87	64.23	3.89
Day 15	✓		✓	✓	✓	✓	5.31	78.94	15.75
Day 16	✓		✓			✓	75.84	21.56	2.60

On day 16, there is a dramatic change in the usage rates of languages. During this lunch break, unusually, Turkish is by far the most spoken language of the three. One obvious reason would be the linguistic profile of the participants; Aynur who is a native speaker of Turkish, Feray who has a native-like level at Turkish, and Zehra who is not a native speaker of Turkish but whose level of Turkish seems slightly over her level at English. Therefore, this time, Turkish seems to be the only language that can facilitate a conversation among these three participants at the highest linguistic level possible.

One thing to be stated here is that, the school settings is where the participants are accustomed to talk in English. In addition to this, on Saturdays (the day the research data were collected) the participants are encouraged to talk in Turkish even in their free times. Therefore, Japanese seems to be the only language, which is not associated with these settings. This could be one of the reasons for the low rates of Japanese during these there lunch sessions.

3.5.5. Individual variations

Classifying the participants as groups can be useful for general tendencies, however; this may hide some notable peculiarities of certain individuals. Because of this, a comparison of each participant's language rates is also conducted. Table 18 shows the results of this comparison. The data of school group in table 19 includes the recording of Turkish lessons as well. For reasons stated in this chapter and chapter 3.3, the school group data without Turkish lessons is also given separately in table 20.

Generally speaking, the group tendencies reveal themselves on individual rates. For instance, each one of the Yokohama group members has a Turkish rate of at least over 75 percent. Likewise, the English – Turkish – Japanese ranking of the school group (when the

[15] Shortenings; A: Aynur, S: Sevil, F: Feray, P: Pelin, Z: Zehra

Turkish lessons are excluded) is valid for each participant (except Ismail whose rate of Turkish is almost 90 percent) However, the data of some individuals are not consistent with the group averages. In the school group when the data of Turkish lessons are included in the results (table 19), Turkish becomes the most uttered language for each participant. Nevertheless, there are two exceptions to this; Esra and Zehra. In both tables, English is the most uttered language for Esra and Zehra. Zehra's rate of English is just slightly over that of Turkish. As for Esra the English is by far the most uttered language whether or not the Turkish lessons are included.

Table 19: Language choice results for each individual

groups	participants	Utterances only in;			Utterances that contains;		
		English	Japanese	Turkish	English	Japanese	Turkish
School	Esra	67.68	4.42	22.26	72.41	7.16	26.07
	Pelin	26.58	9.30	57.88	31.23	13.29	61.73
	Zehra	45.89	3.98	44.00	51.21	5.73	48.85
	Sevil	40.24	2.45	53.11	44.36	2.97	56.96
	Aynur	25.55	1.68	67.09	30.44	3.17	72.07
	Leyla	32.99	14.69	41.49	39.95	21.13	50.00
	Ismail	8.26	0.00	89.91	10.09	0.00	91.74
	Feray	22.03	3.46	69.11	26.78	4.75	73.97
	Aliye	36.14	2.18	45.48	51.40	3.74	47.04
Tokyo	Emin	0.00	47.09	43.72	0.00	56.28	52.91
	Erkan	0.00	53.17	39.79	0.00	60.21	46.83
	Vahit	0.40	84.98	4.74	1.19	94.47	14.23
	Selim	0.00	72.25	19.08	0.29	80.64	27.75
	Mert	2.13	70.21	19.15	2.13	78.72	27.66
	Ahmet	0.21	78.11	12.45	0.86	87.34	21.03
	Murat	0.98	86.15	7.23	1.23	91.54	12.87
Yokohama	Kemal	14.91	3.42	75.78	15.53	8.70	81.68
	Ali	1.52	2.10	92.19	3.43	4.38	96.38
	Osman	1.21	2.22	93.95	2.62	3.43	96.57
	Mustafa	13.16	18.42	60.53	13.16	26.32	68.42
Adult	Teacher 1	0.25	0.34	98.55	0.76	0.72	99.39
	Teacher 2	77.81	0.00	19.31	80.69	0.00	22.19
	Teacher 3	10.34	1.72	84.48	13.79	1.72	87.93
	Superv. 1	0.00	12.07	84.34	0.00	15.66	87.93

s	Superv. 2	0.00	0.00	93.92	0.00	6.08	98.34

Neither Esra nor Zehra has a native or native-like competence in Turkish. Especially Esra seems to be English oriented in all school settings. There are even cases where she responds to the Turkish questions of the teacher, in English (example 23). Specifically, her rate of English utterances when talking to Turkish teacher is around thirty percent. This rate is unusually high when compared to, for example, Aynur's which is just around 1 percent.

Example 23: (Day 1)

Teacher	*Fil ne? Hı?*
Translation	*What is elephant? Huh?*
Esra	ZOU
Translation	ELEPHANT
Teacher	*Ee! Niye onu kırmızı yapmadın?*
Translation	*So, why didn't you color it to red?*
Esra	*Bilmedim! haha!*
Translation	*I didn't know (it) haha!*
Teacher	*Bilmiyorum. Kedi ne kedi?*
Translation	*I don't know it. How about cat, what is it?*
Esra	*Kedi?* … Cat!
Translation	*Cat?* … Cat!
Teacher	*Belki sen atmışsın kafadan gibi geliyor ama …*
Translation	*It seems to me that you are answering just randomly, aren't you?*
Sevil	Is *sincap* is? ...
Translation	Is squirrel (?) …
Teacher	*Sincap ne Sincap?*
Translation	*What is squirrel? What is it?*
Esra	*Sincap*
Translation	*Squirrel*
Teacher	*Sincapın ne olduğunu biliyor musunuz?*
Translation	*Don't you know what squirrel means?*
Esra	Yes, squirrel
Teacher	*Ne o? Sincap?*
Translation	*What is it? Squirrel?*
Esra	Squirrel

In the example above, Esra continuously responds to the teacher in English. His first respond is ZOU which means elephant in Japanese. Following this, she makes a grammatical mistake in Turkish, which was quickly corrected by the teacher. This kind of corrections might also discourage her from using Turkish more. Following this, she keeps on uttering the English word "squirrel" whereas the teacher wants her to explain what squirrel is in Turkish.

Table 20: Language choice results for the school group on "free settings"

	Utterances only in;			Utterances that contains;		
	English	Japanese	Turkish	English	Japanese	Turkish
Esra	84.50	4.80	5.46	89.52	7.64	8.08
Pelin	61.08	18.56	10.82	70.10	26.03	13.40
Zehra	63.69	5.26	24.57	69.80	7.21	29.46
Sevil	75.13	2.94	13.90	83.16	4.01	20.86
Aynur	63.83	2.16	25.78	71.93	4.18	32.12
Leyla	57.69	17.03	12.09	68.13	22.53	23.08
Ismail	11.32	0.00	84.91	15.09	0.00	88.68
Feray	57.95	7.77	26.50	66.78	8.83	33.92
Aliye	84.52	1.94	5.81	90.32	5.16	8.39

Another unusual case is from the Tokyo group. As show in table 19, unlike the other participant in the group, Emin's rates of Turkish and Japanese are considerably close to each other. His younger brother Erkan's rates are also close. (English: 53%, Turkish: 39%). All the other participants in the group has English rates over 70 percent, and a Turkish rates below 20 percent. Not only their rates but also their levels in Japanese and Turkish are close. One of the reasons for their using the two language in a more balanced way could be, their being born in Turkey and living there for long period. Their high level of Japanese, on the other hand can be attributed to the fact that, unlike most of the other students, Emin and Erkan, are attending to a Japanese school where the means of education is English. Their relatively higher rate of Turkish in a group of participants who mainly speak in Japanese would expectedly cause a flow of communications in which some of their Turkish utterances are responded in Japanese, the reverse way around. In this paper such kind of language change between turns of speech is called "CS on turn takings" and will be elaborately discussed in the chapter "CS analysis". To confirm this kind of a language change, it is necessary to know the utterer addressee relationships. Such information could not be elicited out of the audio only data of the house groups which Emin and Erkan belong to. However, there are some instances in which this language change is clearly detectable, one of which is given in the following example.

Example 24: (Day 2)

Emin	*Birinci kat mı?*
Translation	*(Are we going to the) first floor?*
Erkan	*Üç*
Translation	*Three*
Ahmet	NAN KAI?
Translation	WHICH FLOOR?
Erkan	*Üç*
Translation	*Three*
Ahmet	ANOU KIMI HA …. SHITTERU?
Translation	WELL, DO YOU KNOW …. ?
Osman	DARE NO
Translation	WHOSE?
Superviser	*Zaman geçsin diye*
Translation	*Just for killing time*
Osman	ORE HA UE NI ICCHATTE IIN JAN!
Translation	ISN'T IT OK FOR ME TO GO UPSTAIRS?
Selim	EE
Translation	UH
Selim	NANDE UE NI ITTEN NO
Translation	WHY DO YOU (WANT TO) GO UPSTAIRS?
Erkan	*He, zaman geçsin diye de mi?*
Translation	*Oh so it is for killing time?*
Ahmet	MOO …. II
Translation	I AM FED UP WITH ….
Erkan	*Japonlar geçsin*
Translation	*Let the Japanese pass (first.)*
Superviser	*Dur .... bekle öyle*
Translation	*Stop .... Wait there.*

In the example above some of the participants of Tokyo group and the supervisor are on an elevator on their way to a park. First, Ahmet joins the Turkish conversation between Emin and Erkan, by asking the floor number. Erkan answers in Turkish but, after this, the following two utterances are in Japanese and the alternation of Japanese and Turkish continues on through the following utterances as well. The base language of the setting is changed to Turkish by

Emin and Erkan and often by the supervisor, whereas the other participants frequently shift to Japanese.

One other reason for Emin and Erkan's high rate of Turkish is their position of mediator between the supervisor and other participants. Especially, Emin frequently talked to the supervisor in Turkish, to express the will of the participants, to ask for a permission, and sometimes even to translate the Japanese utterances.

When talking about language choice tendencies, basing the analysis on mass data might be the "safer" way, mainly because of the fact that some individual cases do not lead to any clear conclusion. In our data, there are a number of such cases like the one given in the following example, which do not give us any clear hint on the reason for a specific language choice.

Example 25: (Day 11, session: computer game)

Esra	*Sen çok ağırsın sen çok hafifsin.*
Translation	*You are too heavy, you are too light*
Esra	*Sen çok şişmanmışsın.*
Translation	*("Reportedly", or "appearantly") You are too fat.*

Esra, who mainly talks in English sometimes even when addressed in Turkish, makes the Turkish utterances above, all of a sudden, during a computer session in which she does not make any other utterance in Turkish. There does not seem to be any addressee for her utterance and no one responds to her either. Obviously, proposing a reason for her shifting to Turkish (her previous utterance was in English) would be a mere speculation, and this is why we prefer to abstain from focusing on these kind of instances.

3.5.5 Language choice rates based on settings

In some chapters, we made some discussions on two settings that we divide as Turkish Lessons and "others". There are also times we used the "other" settings for our main data in the school group. This distinction was mainly because the use of language in Turkish lessons is strictly controlled by the Turkish teacher. In order to see the relatively freer linguistic choice of the participants, in some analysis we excluded the data of Turkish lessons.

However, there might still be some variations within these settings other than Turkish lessons that are worth studying. Therefore, in this chapter we will further divide the free settings

into lunch breaks, computer game sessions and free times, and look for the language usage rates in these settings.

In the school group, there is a specific time and place for lunch breaks, but for the groups it is mostly irregular and It might be appropriate to use the words meal or branch time instead. In addition to times that the participants are freely acting, "Free times" also cover all kind of games in which the participants interact with each other such as hide and seek, card games, soccer. Computer game session is separated from the other games as each participant plays his or her own game by using a computer or any other portable device.

Table 21 shows the linguistic rates for each group in four different settings. Although the language rate rankings within any group obviously do not change according to settings, the rates do change, in some parts, considerably. For example, compared to free times, the school group members tend to speak more Turkish[16] while playing computer games. The rate gets even higher during the lunch breaks. Japanese also shows a similar pattern with smaller increase rates. What can be said for all the groups is that, the rates of Turkish during the lunch breaks are higher than the Turkish rates of other settings. That is, the participants tend to make more utterances in Turkish than they do in other settings[17]. What could be the link between high rates of Turkish and lunch? In house groups during meal times, the supervisors usually accompany the children, but this is usually not the case for the school group.

Table 21: Language use rates in each group based on settings

Settings	Languages	Rates (%) for each Groups		
		School	Tokyo	Yokohama
Free Times	Turkish	14.39	36.10	95.57
	English	86.78	0.42	3.69
	Japanese	5.73	73.14	3.45
Computer Game Sessions	Turkish	21.87	9.77	86.65
	English	77.44	0.59	10.97
	Japanese	7.68	96.00	8.90
Lunch Breaks	Turkish	32.40	38.88	98.55
	English	64.50	1.46	1.16
	Japanese	12.46	67.24	2.02
Turkish Lessons	Turkish	82.97		
	English	16.77		
	Japanese	4.71		

[16] In table 21 the rates are based on utterance numbers.
[17] The Turkish lessons during which the students are asked to talk in Turkish, are excluded in this judgment.

Table 22: Language use rates for each participant based on settings[18]

Participants	mothers	Free times			Computer Game Sessions			Lunch Breaks			Turkish Lessons		
		Turkish	English	Japanese	Turkish	English	Japanese	Turkish	English	Japanese	Turkish	English	Japanese
Esra	Japanese	10.39	94.81	2.60	6.02	69.92	6.85				67.68	32.83	6.06
Pelin	Japanese	7.41	51.85	44.44	18.75	70.00	5.00	11.99	69.18	29.11	80.69	16.28	8.29
Zehra	Korean	16.22	79.28	7.21	23.90	58.46	6.25	37.50	66.53	6.85	72.89	28.92	3.92
Sevil	Turkish	16.56	88.96	3.07	16.53	69.42	6.61	25.41	67.21	1.64	74.51	25.49	2.47
Aynur	Turkish	7.04	97.89	0.00	26.58	72.78	3.80	41.15	61.73	5.53	93.16	8.55	2.64
Leyla	Japanese	12.50	84.38	12.50	27.35	52.14	15.38	11.11	66.67	35.19	73.79	16.50	19.90
Ismail	Turkish	100	0	0	77.78	17.78	0.00				94.64	5.36	0.00
Feray	Turkish	15.38	89.74	6.84				46.99	50.60	10.24	91.60	9.18	2.95
Aliye	Korean				4.56	49.12	2.81				83.13	15.06	2.41
Emin	Turkish	49.23	0	61.54	23.08	0.00	76.92	57.56	0	50.84			
Erkan	Turkish	36.63	0	72.09				62.50	0	41.96			
Vahit	Turkish	28.13	0	81.25	11.30	2.09	88.70						
Selim	Turkish	49.24	0.76	57.58	13.42	0.00	87.88						
Mert	Turkish	27.66	2.13	78.72									
Ahmet	Turkish	24.57	0.43	86.21				17.52	1.28	88.46			
Murat	Japanese	31.88	1.45	81.16	6.43	0.16	91.93	26.35	4.79	77.84			
Kemal	Turkish	87.50	2.50	12.50	69.19	24.24	11.11	98.91	1.09	1.09			
Ali	Turkish	97.60	3.59	1.80	86.64	4.20	5.34	97.48	2.52	5.04			

However, some other connections similar to one we proposed for the school setting and English might be at work. If we think of the possibility of subconscious connection between the act of eating and a specific language, Turkish and Japanese would probably be the two candidates. The participants probably had had most of their meals with their parents until they started the school, during which they had possibly talked in either Turkish or Japanese. This kind of association may continue to exist in the school settings. Actually, table 22 has some supportive data in this respect. The participants such as Leyla and Pelin make more Japanese utterances when they are having lunch. Likewise, Aynur whose mother (and also father) is Turkish, and who usually has a high rate of Turkish, makes even more Turkish utterances during lunch breaks. In the house group, Emin and Erkan, the children of Turkish parents, who are balanced bilingual of Turkish and Japanese, talk in Turkish more during meal times. However, as said above, this could be due to the presence of the supervisors who usually eat together with the participants. Any further analysis on this kind of subconscious connection between a language and a setting might require dealing with the subject under the discipline of psycholinguistics, which is beyond our scope. On the other hand, there are some exceptions to this correlation, some of which are still explainable. Pelin seems to make more Japanese utterances during free times than she does during lunch breaks. However, she has been to a setting that may be called "free" only for a limited time and made only a couple of dozens utterances, which makes her data, less reliable or generalizable. The fact that the participants talk more in Turkish seems to be less provable in the Tokyo group as the data suggests. One exception in the Tokyo group is that of Murat, whose rate of Turkish is slightly higher during free times compared to that in lunch breaks. When we look at this data in detail, we understand that most of Murat's utterances are made when talking to the supervisors. However, this is also the case for lunch break as well.

3.6 CS Analysis

In this chapter, a series of analysis will be conducted on the CS behavior of the participants. First a general discussion will be made on mainly statistical information and following this, a more elaborate analysis will be made through different statistical comparisons which will be supported by discussions on sample dialogues.

After the data transcription procedure was completed, all the utterances were tagged by a number of labels one of which was "language". If an utterance is tagged by more than one language code, that means, at least one CS has occurred in that utterance (table 22). In some utterances, there is only one instance of CS and in others there are a chain of CS. In this paper, no matter how many they are, as long as they are within one utterance, these kinds of chains of CS are counted as one instance of CS.

Table 23: An excerpt from language labeling

Participant	Utterance	Language code
Emin	ben クロックス	TJ
Aynur	ben ぴょん	TJ
Selim	ben やって誰か…	TJ
Pelin	ben 昆布 yedim	TJT
Ahmet	ben 百三十三センチ	TJ
Aynur	ben, ben ben, "Can I go to the bathroom, please?" diyorum.	TET
Kemal	bende イナズマ落とし var	TJT
Ahmet	benim 身長 m 三十六	TJTJ
Murat	ben こんなれてるよ	TJ
Ahmet	Ben と Murat とは Murat の方が年上	TJTJTJ

As shown in the table 24, throughout the data, the children code switched 1620 times which corresponds to 10.89 percent of their total utterance number. The calculation techniques and the boundaries of CS, vary from scholar to scholar, so as the ultimate number of CS.

Table 24: Summary of CS occurrences

CS occurrences	Number	Rate (%)
School group	1194	11.56
Tokyo group	266	8.08
Yokohama group	123	8.04
Adults	209	3.25
Children total	1620	10.89
Children and adults total	1829	8.59

However, the average CS rate of this study can said to be approximately in consistence with other similar researches. For example, in her study titled “Functions of code switching in schoolchildren's conversations”, out of a ten-hour data, Reyes, I. (2004), found out that CS rate is 13 percent in social talks and 10 percent in science activity (on-task talk), both for 7 year-olds.

The rate for the school group is more than 3 percent higher than that of the house groups. This could also mean - if the data of only one male member of the school group is excluded- the rate for female participants is higher than that of the male participants.

As frequently mentioned in the literature, the monolinguals have also the ability to shift the language of the conversation, which has been interpreted as a form of CS by some scholars, or thought to be different from the bilingual CS, by others. The CS rate for the adult monolinguals of this study is 3.25 percent.[19] As illustrated in the chapter "Occurrence statistics for CSu", in adult monolingual speech, the use of CS is mainly related to clarification ends, and so, compared to children, the reasons for their occurrences are more easily detectable.

3.6.1. CS within utterance

One of the structural classifications of CS is "intrasentential", CS occurring within the boundaries of the same sentence versus "intersentential", CS occurring between sentences. Most of the utterances listed in this paper are each composed of one sentence (thereby making most of the CS an intrasentential one). However, there was no intention of equalizing the utterances unit to sentence. As explained in the chapter 3.3, in the data, there is a wide range of utterances from those shorter than a sentence and to ones composed of multiple sentences. Considering this fact, it was decided to call this type, CS within an utterance which will, from now on, be shorted to CSu.[20] In the following sections another type of CS, which occurs beyond the utterance level, will also be introduced.

As shown in the table 25 the participants made CSu 755 times out of their 14863 utterances in total, which corresponds to a rate slightly above 5 percent. The rate for the Tokyo groups is considerably higher than the other two; school group, which is closest to the average, and Yokohama group which has the lowest rate of all. It must be stated here that Yokohama group is the one where Turkish is used most. Although the tendency is visible enough, claiming a constant inverse proportion between the amount of Turkish spoken, and the rate of CSu would require more supportive data. Claiming a connection between each participant's language choice and the rate of CSu would be even more difficult. One of the most important reasons for this could be the fact that all the participants in the Yokohama group commutes to the same international school where the data of school group was collected whereas, technically it was not possible to observe the Yokohama group member **in** the school. In the school settings, Yokohama group members' main means of communication might have changed to, for example,

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19 In this paper, the same terminology (code switching) is used for both the children and monolingual adults.

20 It was preferred to write "u" not in capital letter here, for the fear that it might otherwise be taken a serious classification, other than a marking for convenience's sake.

English. Therefore, the linguistic choice detected in this research, should be considered setting-specific, or in other words, should not be applied to all settings for all the participants.

In the Tokyo group, the most used language was Japanese. It must also be noted that there are some participants here (such as Murat, Ahmet and Vahit with his two brothers), who attend or have once attended the same international school of the Yokohama and school group members. In the school group, where English was the main language, the CSu is closest to average. To summarize, CSu rate is the lowest in linguistics settings where Turkish is the main language, highest for Japanese and somewhere in the middle for English.

Lastly, the word "adults" in this list refers to the teachers, supervisors and the guests who are all monolingual speakers of Turkish who can speak Japanese and English to varying degrees.

Table 25: Summary of CSu occurance

CSu occurrences	Number	Rate (%)
School group	486	4.70
Tokyo group	212	7.04
Yokohama group	57	3.72
Adults	94	1.46
Children total	755	5.07
Children and adults total	849	3.98

Most of these adult monolingual CSu's are in the form of words or phrases inserted into Turkish and seem to be done, consciously, -or in a more specific term- deliberately, to make an explanation, or clarify what is being said (and thought in the case of Turkish lesson), as shown in the following example.

Example 26: (Day 13)

Teacher	*Bu ne?*
Translation	*What is this?*
Pelin	Kangaroo
Teacher	*Biz Türkler* kangaroo *demiyoruz ona. ne diyoruz?*
Translation	*We Turks don't call it "*kangaroo*" What do we call it?*
Leyla	Haha!
Pelin	Kangaroo
Teacher	*Kan... guru diyoruz kanguru.*
Translation	*We call it "kanguru"*

Pelin	*...guru*
Teacher	*Kanguru*
Translation	*Kangaroo*
Teacher	*Nesi var kangurunun?*
Translation	*What does a kangaroo have?*
Aynur	Haha! (incomp)
Teacher	*Nesi?*
Translation	*What does it have?*
Aynur	*Pu… şey …*
Translation	*Pu… um …*
Sevil	*Cebi*
Translation	*(It has a) pocket*
Teacher	*Cebi he, Siz söyleyin. Bu ne? Cebi. Biz şey* KEITAI*'e ne diyoruz Türkiye'de?*
Translation	*(It has a) pocket, yes. You say it. What is this? Its pocket. What do we call um…* CELL PHONE in Turkey?
Leyla	*Cep …*
Translation	*Pocket …*
Pelin& Aynur	*Cep telefonu*
Translation	*Cell phone* (literally "Cell phone")

In the example above the teacher makes two CS's; first, TET (Turkish – Engilsh - Turkish) and second, TJT (Turkish – Japanese - Turkish). Both of this CS's seem to have been made for the purpose of teaching Turkish. The former was to teach how the pronunciation of the word "kangaroo" is different in Turkish and the latter is about what the Japanese word "keitai" (shortened form of "keitai denwa" which means cell phone) is called in Turkish.

3.6.2. CS between utterances (CSt)

The utterance labeling introduced above, is only capable of detecting the CS's within an utterance; however, there are also CS's beyond utterance boundaries, such as during turn taking. As illustrated in the following example, a participant may respond to his or her interlocutor in a different language than what has been used to that point. In order to detect this kind of CS, the whole dialogue data have to be skimmed through at the discourse level. It is also important to detect who is talking to whom.

Example: 27 (Day 8)

Teacher	*Ne var?* (to all the students)
	What is there? (asking 'intestinal cecum or blind gut')
Aynur	*Yemek* (to the teacher)
	Food
Teacher	*Hayır* (to Aynur)
	No (it is not)
Leyla	MŌCHŌ (to the teacher)
	CECUM (The teacher doesn't seem to hear this)
Teacher	*Mideden popoya giden şeyler ne? yuvarlak yuvarlak böyle* (to all the students)
	What is the (name of the) stuffs going from stomach towards bottom? Like, the round stuffs?
Sevil	haha!
Pelin	*Aa! ya söyleme lütfen!* (to the teacher)
	Oh! Please don't talk (about it)!
Teacher	Neler var? Neler var? (to all the students)
	What are there? What are there?
Esra	Something (to the teacher)
Pelin	haha!
Sevil	....
Teacher	*İngilizcesini biliyor musunuz?* (to all the students)
	Do you know it's English?
Esra	*No* (to the teacher)
Leyla	NIHONGO HA SHITTERU YO! (to the teacher)
	I KNOW IT'S JAPANESE!
Teacher	*Ne?* (to Leyla)
	What (is it)?
Leyla	MŌCHŌ (to the teacher)
	CECUM
Teacher	Evet şey söyle bakiyim (Addressee: Aynur)
	Well, umm, you say it! (The teacher seems have ignored Leyla's Japanese answer here, which is actually correct)
Aynur	Bakteri (to the teacher)
	Bacteria

In the example above, the teacher asks the students the Turkish for the word that is called “intestinal cecum” or “blind gut” in English. There is one response in English and two in Japanese. There is no CS “within” these utterances, however, when put together they include a switch of code in the continuum of utterance exchanges, and therefore, are considered a type of CS in this paper

The following table shows the number of CSt’s and their rates. The Tokyo group which has the highest CSu rates, turns out to have the lowest rates for CSt. At first sight, this may be seen as a very dramatic contrast. However, one of the reasons for such low rates is that it was difficult to detect the addresser – addressee connections for the house group the data of which is composed of only voice recordings. Therefore, a significant number of CSt instances might have not been able to be detected at all. One another reason might be the fact that in the house groups, the children had long sessions of talks of one base language, which was only occasionally interrupted by the supervisors and other adults. Therefore, they could keep talking in one language and tended to make more CS usually within an utterance, and less on turns.

Table 26: Summary of CSt occurrences

CSt occurrences	Number	Rate (%)
School group	709	6.86
Tokyo group	91	3.02
Yokohama group	66	4.31
Adults	115	1.78
Children total	866	5.82
Children and adults total	981	4.60

The table above does not only contain the CS on turn takings but also some other forms in which the speaker changes the language when there is no obvious turn taking. For instance, after a silent period of a few seconds, a participant may start talking in a language different from the one of his or her previous utterance. This could be due to the change of the interlocutor to whom the utterance is addressed, or the reason might be far less “obvious” Before moving on to other statistics, we will discuss some of these CSt’s in the following examples.

Example 28: (Day 11, setting: computer game session)

Zehra: A, otuzsekiz yazdım.

Translation *Oh! I wrote thirty eight.*

Example: 29 (Day 10, setting: free playing)

Esra	(incomp) I put ilaç
Translation	(incomp) I put *medicine* (here)
Zehra	and this is yours
Sevil	I can be, too because I said su... Aynur, okey?
Zehra	(incomp)
Sevil	We ... we like this guys yeah?
Zehra	This is one
Esra	(incomp)
Zehra	(incomp) ah!
Sevil	Oh! She ... she make a pee!
Sevil	Oo! Altını değiştireyim senin bakiim!
	Oh! Let me change the diaper!

Example 30: (Day 11, setting: free playing)

Zehra	*Dur dur!*
Translation	*Wait, wait!*
Sevil	Oh, this is not good Zehra let's make this good, yeah?
Zehra	Yeah
Zehra	How can ...
Sevil	Because ... because see here
Sevil	*Boş* ... you have to make, yeah?
Translation	*(It is) empty* ... you have to make, yeah?

Example 28 is taken from a computer game session where each participant plays games individually. The teacher is not in the room and visits the participants only a couple of times throughout the whole session. In this session, Zehra apparently utters Turkish only when talking to Ismail sitting behind him. When addressing to Esra and Leyla who are sitting next to her, she prefers English. In the example 28, Zehra makes a Turkish utterance which is about the computer game she is playing. There is no obvious clue that she addresses her utterance to Ismail, and it is more likely that she is talking to Esra and Leyla. Her last utterance in Turkish was approximately ten minutes ago. From that point on, Zehra shifts to English as she has started talking to Esra for during these ten minutes. In addition to this, the teacher and his guest came into the room talking only to each other in Turkish. It is during this moment that Zehra uttered her Turkish utterance. Therefore, although not directed to the participants at all, the Turkish utterances might have some sort of "peripheral effect" on Zehra's shifting to Turkish.

Example 29 shows another instance where this so called "peripheral effect" might be present. Here, Sevil starts talking in Turkish, in a setting (free game play in the playroom) where English is the base language. If we go about 20 seconds back, we find the Turkish word "ilaç" uttered by Esra, with no appearent intention to address it to anyone. This Turkish word might have triggered Sevil's "unexpected" Turkish utterance.

The last example is from another game session in which the Turkish utterance of Zehra (dur, dur!) might have some role in Sevil's uttering another Turkish word 20 seconds later. One thing that must be noted here is that the base language of this session is English, and a limited number of Turkish utterances occur in "close distance" to each other.

The idea of "peripheral effect" might have some potential to explain some of the "sudden" language shifts, if further work is done on the subject. For now, our data does not contain enough number of these instances, and consequently, we refrain from making a solid generalization out of these examples.

3.6.3. CS rates based on addressee and settings

As we go further in breaking down the CS occurrences, based on different variants, some other tendencies become visible. Table 27 shows the three types of numbers; CSu, CSt and CS (the total of CSu and CSt) based on two variants; addressee (adult or children) and settings (Turkish lesson or others) and their rates. However, the data for CSt on addressee should be taken with more care because classifying CSt's based on addressees is a more complex procedure and apparently does not always yield valid results compared to CSu's. One of these difficulties can be explained by the following scene. A group of five children; Sevil, Aynur, Zehra, Pelin and Leyla are talking in English, for a certain period, two participants, Leyla and Pelin are talking to each other in Japanese, from time to time. During her utterances in Japanese, the actual interlocutor for Pelin, is Leyla; however, in order to prove the occurrence of CS; that is, the change in language, the existence of other participants who talk in English, as interlocutors, should also be accounted. This type of utterer – interlocutor relationship is different from a relatively simpler case of a CSu where a CS occurs within an utterance while the addresser is talking to a certain interlocutor.

Another point that should be made here, is that, in table 26 there is no data from the house groups (Tokyo and Yokohama groups). As stated in chapter 2.1, the house group data is mostly composed of voice records as a result of which addressee labeling was avoided due to accuracy concerns.

Table 27: CS occurances based on addressee (interlocutor)

Addressee	Settings	CSu	CSu %	CSt	CSt %	CS	CS %
Only adults	Turkish lesson	114	3.34	203	5.94	317	9.28
Only adults	All but Turkish Lesson	21	5.76	32	8.79	53	14.56
Only adults	All	135	3.55	235	6.22	370	9.79
Only children	Turkish lesson	63	5.78	12	11.01	183	16.80
Only children	All but Turkish Lesson	219	7.21	239	7.86	458	15.08
Only children	All	282	6.83	359	8.70	641	15.53

The results show that the children have a higher rate of CSu when they are not in Turkish lessons. However, the case is partially the reverse for CSt. Namely; the rate of CSt during the Turkish lessons is significantly higher when the addressee is "only children". In other settings, there is no significant change in the rate based on addressee's being the teacher or children. Overall for both types of settings and types of addresses, the children made more CSt than they did CSu.

Most of these Cts's during the Turkish lessons are in the form of TE and TJ. Specifically, out of 399 CSt instances, 355 are from Turkish to either English and Japanese. Most of these CSt's are in the form of teacher's asking a question or simply talking Turkish, (e.g. asking the name of an object or animal in Turkish, making an explanation etc.) and a participant's responding it in English or Japanese. When the children did not know the Turkish word or phrase that was asked, they tend to say it's either English or Japanese counterpart, instead of remaining silent. One other reason is the fact that, the children tend to speak in English and sometimes Japanese among themselves when discussing a topic that is initiated by the Turkish teacher. These periods are usually prevented from lasting long by the teacher who took them back to conversation in Turkish. All these instances are counted as CSt. So, the reason for the higher rate during the Turkish lessons can be attributed to the teacher's effort to keep the base language as Turkish as opposed to the children's attempts to change it to either English or –less commonly- Japanese. So, it is as if the children were kept in the boundaries of Turkish, and utilized the turn taking intervals as an opportunity to pass this boundary, sometimes for deliberately compensating their lack of competence, and sometimes unconsciously for a series of sociolinguistic aims. In other settings such as the lunch break or computer game sessions, there are no clear-cut limitations for language choice, or a set base language, and the children seem to have more freedom and can go in one base language as long as they want.

As for CSu one other thing that is notable here is the decrease in the rate of CSu, when the addressee is a monolingual adult speaker of Turkish[21]. It could also be said in the reverse way; children code switch (within an utterance) more when the intended addressee of their utterance is the other children. It is also interesting that when the addressee is both adults and children, the rate is even lower.

When the children of the school group talk to an adult, this adult is for most of the time the Turkish teacher, and the setting is a Turkish lesson. This could be one of the reasons for the low rate of CSu as the students are supposed and encouraged to talk only in Turkish. That is why a variant setting other than Turkish lessons (free times, lunch, computer game sessions etc.) is added to the table above. Though not many in number, there were times when the teacher talked to the children in their free times, while they were having lunch or playing games. As shown in the table above, during these times, the rate of CSu is considerably higher than that during the Turkish lessons.

Among the others, four important conclusions can be drawn from the data above;

1) Children make more CSu when they are in a setting where the use of language is not strictly controlled.
2) They code switch (within an utterance) even more when they are not talking to adult monolinguals. (When the addressee of their utterances is "only children")
3) The children make more CSt than they do CSu.
4) The children code switch (on turn takings) even more when talking to a child (or children) during Turkish lessons, and when talking to an adult (the Turkish teacher) during free times. (lunch break, free game, free time etc.)

In table 28, the dispersion of CSu based on the addressee (other children or teacher) is further broken down into each participant, in order to show how the tendencies proposed above, are reflected in each participant.

[21] All the adult participants in this research were monolingual speakers of Turkish who had varying degrees of competence in English and Japanese. Consequently, it was not possible to observe the linguistic behavior of the child participants, when they are talking to a Turkish Japanese (and/or English) bilingual adult or a speaker.

Table 28: The CS number and rates for each participant

Addressers	To all addressees						When the addressee(s) is (are);											
							Other children						teacher					
	CSu	CSu %	CSt	CSt %	CS	CS%	CSu	CSu %	CSt	CSt %	CS	CS%	CSu	CSu %	CSt	CSt %	CS	CS%
Aliye	9	1.72	5	0.96	14	2.68	5	0.96	1	0.19	6	1.15	2	0.38	4	0.77	6	1.15
Aynur	120	4.96	103	4.25	225	9.29	62	2.56	54	2.23	116	4.79	41	1.69	25	1.03	66	2.73
Feray	50	4.51	52	4.69	102	9.20	39	3.52	38	3.43	77	6.94	2	0.18	9	0.81	11	0.99
Esra	37	4.56	58	7.14	95	11.70	25	3.08	31	3.82	56	6.90	9	1.11	17	2.09	26	3.20
Pelin	88	5.45	146	9.04	232	14.37	42	2.60	75	4.64	117	7.24	30	1.86	49	3.03	79	4.89
Zehra	89	4.87	153	8.38	242	13.25	61	3.34	63	3.45	123	6.74	28	1.53	64	3.50	92	5.04
Sevil	48	3.45	129	9.27	177	12.72	60	4.31	52	3.74	112	8.05	8	0.58	50	3.59	58	4.17
Ismail	2	1.21	9	5.45	11	6.67	2	1.21	9	5.45	11	6.67	0	0.00	0	0.00	0	0.00
Leyla	42	8.24	54	10.55	96	18.75	35	6.86	33	6.45	56	13.28	14	2.75	17	3.32	31	6.05
Average	53.89	4.33	78.78	6.64	14	10.96	36.78	3.16	39.56	3.71	76.22	6.86	14.89	1.12	26.11	2.02	41	3.14

On the left side of table above, the total number of CS's for each participant and their percentages to total number of utterances of that specific participant are also given. For example, Aynur has 120 utterances that contain CSu, and this number corresponds to 4.96 percent of her total 2421 utterances. Ismail, who was observed only one day, and Aliye, who had a great number of incomprehensible utterances, seem to lower the average percentage for both kinds of CS's. For example, all of the remaining participants have a CSu rate of around 5 percent. The only exception to this is Leyla with a CSu rate of as high as 8.24. There is more fluctuation in CSt rates, however, Leyla still has the highest rate here. The data in the table 26, is not enough to claim a reason for such a difference but If we look for other traits of Leyla which may differentiate her from others, one of them is her age, as she is 3 or 4 year older from the rest of the group. One of the frequently mention assumptions on age is that, older bilingual children code switch at a higher rate and for a broader range of sociolinguistic functions (Reyes (2004). If an age comparison of, for example, seven-year olds and 10 year-olds (as was conducted by Reyes, 2004) were to be done, there would only be around 5 participants for each category, which could be considered barely enough to give an idea. However, these participants all differ in their family background, linguistic competence, and school type which would make the data far from being sufficient.

As stated previously, all of the participants have more utterances that contain CSu when they are talking other children as opposed to adults. However, this rate is even higher for Feray and Ismail. Ismail's case might be attributed to the shortage of data, but Feray's tendency to have only 2 instances of CSu when talking to the teacher can be deemed peculiar.

In the previously chapter it was stated that the rates for both CS types are higher when the addressee is also a child (or children). Exceptions to this are Zehra and Aliye. Aliye seems to have made more CSt's when talking to the teacher, however her CS rates are too small to make a statistical discussion. Zehra on the other hand, has the second highest number of utterances in the school group, and her making more CSt's when talking to the teacher is therefore more significant. In addition to this, the fact that Zehra and Aliye are siblings and, therefore, has the same family background, is also important. Likewise, Sevil, has just slightly higher rate of CSt when talking to children, and in this respect, can be considered closer to Zehra and Aliye.

In table 29, even a further comparison is made by listing the CSu rates for each participant based on each of their addressees. Before discussing the results given in this table, it would be appropriate to make a number of preliminary explanations on how to read the numbers.

The vertical line shows the utterers or the addressers and the horizontal line is the list of addressees: the participants to whom the utterances (which contain CSu) are directed. Although not high in number, for a better comparison the data is given in the form on percentiles where the number of CS's uttered by each participant is proportioned (in %) to the total CS number (that are directed to other children) of that specific participant. So, for example, Aynur has 11 CSu's addressed to Feray, and this corresponds to 17.74 percent of her total 62 CSu's which occurred when she talked to other children.

The grey cells mean that no addresser or addressee connection is possible because the two participants have never met each other through data collection procedure. If instead, zero percent is written, it means, although being at the same environment, the addressee has made no CS when talking to that certain interlocutor, or maybe has never talked to that participant, at all.

One last thing that should be mentioned is about the boundaries of "addressee" here. In this table, addressee means the "only person" that the utterance has been addressed to. There are some utterances that are directed to two or more interlocutors at the same time. There are even, some utterances that seem to be addressed to everyone in that setting, and some others with no apparent intention of being addressed to a certain person. All these kind of utterances are omitted in this table. Because of this, if an addresser's all of the utterances are summed up, the number will be smaller than the one given in the "Children" line in the above, which shows the number of all the utterances whether they are individuals or a group of participants.

Table 29: The CS rate according to each participant

Addressee→	Aliye			Aynur			Feray			Esra			Pelin			Zehra			Sevil			Ismail			Leyla		
↓Addresser	CSu	CSt	CS	CSu	CSt	CS	CSu	CSt	CS	CSu	CSt	CS	CSu	CSt	CS	CSu	CSt	CS	CSu	CSt	CS	CSu	CSt	CS	CSu	CSt	CS
Aliye										0	0	0				80.00	80.00	83.33									
Aynur							17.74	11.11	14.66	12.90	3.70	12.90	19.35	20.37	9.48	14.52	16.67	16.38	6.45	11.11	8.62	0.00	0.00	0.00	3.23	9.26	6.03
Feray				35.90	31.58	33.77				0	0.00	0.00	5.13	7.89	6.49	12.82	15.79	14.29	5.13	7.89	6.49	0.00	0.00	0.00	12.82	10.53	7.79
Esra	0	0	0	8.00	12.90	10.71	4.00	0.00	0.00				4.00	3.23	3.57	20.00	6.45	12.50	12.00	0.00	5.36	0.00	3.23	1.79	8.00	41.94	32.14
Pelin				19.05	21.33	20.51	2.38	6.67	4.27	2.38	6.67	5.13				23.81	24.00	23.93	2.38	1.33	1.71	0.00	0.00	0.00	47.62	30.67	35.04
Zehra	0	6.35	3.25	13.11	9.52	12.20	1.64	4.76	3.25	3.28	11.11	7.32	9.84	22.22	16.26				11.48	22.22	16.26	18.03	3.17	10.57	3.28	0.00	1.63
Sevil				5.00	28.85	16.07	1.67	5.77	3.57	15.00	7.69	11.61	1.67	3.85	2.68	25.00	36.54	30.36				1.67	1.92	1.79	0.00	1.92	1.14
Ismail				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				50.00	33.33	36.36
Leyla				5.71	15.15	10.29	2.86	6.06	4.41	17.14	36.36	26.47	14.29	21.21	17.65	5.71	0.00	2.94	2.86	9.09	5.88	2.86	0.00	1.47			

One of the first things that can be said out of the data above is that, there is no even distribution of CS among addressees. Some participants seem to code switch more when talking to certain participant and less, when talking to others. In some cases, the rates of CSu and CSt varies considerably. What is important here is to find any pattern, or rule for such inclinations. To do so, it might be necessary to analyze the connection between this tendency and other variants such as settings, the pragmatic aim of the utterances, the linguistic features of the CSu's and the linguistic orientation of the participants. Before moving on to these analyses, a discussion on some of the participants will be made.

Starting with Pelin, almost half (47.62 percent) of her CSu's occurred when talking to Leyla, and this rate is considerably high compared to other addressees. Her second and third highest CSu rates are around 20 percent (Addressees: Aynur and Zehra). Her CSt rates, also show the same rankings. What is more interesting is the fact that, Pelin made almost all of her CSu's (that are directed to other children), when talking to these three individuals: Leyla, Aynur and Zehra. Feray had a similar tendency of making a great deal of the CS's to a certain addressee (Aynur). Her CSt and CSu rates are close to each other. Sevil is another participants whose CSu's are concentrated on three addressee, Aynur (28.85), Zehra (25.00), and Esra (15.00) One notable feature of Sevil's CS patters is that, there is a considerable gap between her rates of CSt and CSs when talking to Aynur. Namely, in contrast to most of the other participants who have closer CSt/CSu rates, she has remarkably lower rate of CSt towards Aynur. Similar disproportion is also seen, for example, in the rates of Esra when talking to Zehra. Although she has simply no CSt towards Zehra, her CSu rate is 12 percent. That is when talking to Zehra she never changes the language in turn taking boundaries. On the other hand, when talking to Leyla, Esra has a CSt rate over 40 percent, whereas her CSu rate is just 8 percent. The most marginal case is, however, Feray's not making any CS, towards Esra. However, as discussed in the next page, this is due to the fact that Feray talked only two times specifically to Esra.

3.6.4 Marginal CS cases

As stated above, some participants code switch more when talking to one, two or three certain addressees. However, among these, "three addressees" may be considered normal as out of these three addressees there are only three other participants left (if we exclude Aliye and Ismail) in the group. Therefore, rather than making long discussions on two or more most code switched addressees, it might be more effective to focus on only the most and least code switched ones, as summarized in the following table. Table 30 shows the highest and lowest CS

rates of Pelin, Seray, Zehra and Sevil the results of whom are somehow look more peculiar and worth discussing in detail.

Table 30: Marginal CS rates based on the addressee

Addressee	Highest CSu rate			Lowest CSu rate		
	CSu	CSt	CS	CSu	CSt	CS
Pelin	Leyla Rate:47.62%	Leyla Rate:30.67	Leyla Rate:35.04	Ismail Rate: 0%	Ismail Rate: 0%	Ismail Rate: 0%
Feray	Aynur Rate: 35.90	Aynur Rate:31.58	Aynur Rate: 33.77	Esra Rate: 0%	Esra Rate: 0%	Esra Rate: 0%
Zehra	Ismail Rate:18.03	Pelin, Sevil Rate: 22.22	Pelin, Sevil Rate: 16.26	Feray Rate: 1.64	Leyla Rate: 0	Leyla Rate: 1.63
Sevil	Zehra Rate:25.00	Zehra Rate:36.54	Zehra Rate:30.36	Leyla Rate: 1.67%	Leyla Rate: 1.92%	Leyla Rate: 1.19%

Pelin:

As discussed in the part on language statistics, Pelin is one of most Japanese speaking participants of the school group. However, compared to Tokyo group this number is still low as out of her 1615 utterances, she has only 183 utterances which have Japanese constituents, that is, 11.3 percent of all. However, this percentage goes up to 51.7 when she is talking to Leyla (59 out of 114 utterances). As shown in table 30, this percentage goes even higher when the data is narrowed down to CSu's. 16, out of 18 utterances of Pelin, which are directed to Leyla, contain Japanese words, phrase or sentences which are in the form of either the base or (mostly) inserted language.

One clear conclusion is that Pelin, who is judged a native speaker of Japanese, use significantly more CSu's that include Japanese when talking to Leyla, who is another native speaker of Japanese. However, based on the data, reaching a broader concussion such as "Japanese native speakers have more CSu's in Japanese when talking to each other" does not seem possible, as no such inclination is seen in the data of Esra and Feray who are also native at Japanese. However, there is one more similarity between Leyla and Pelin, that is, Leyla is also one of the most Japanese speaking participants of the school group. Actually, with a percentage of 16.2 she is the most Japanese speaking participant of her group. The percentage goes even as high as 53.7 when she is talking to Pelin. Consequently our conclusion can be revised as follows "Japanese native speakers who prefer to speak in Japanese, have more CSu's in Japanese when talking to other Japanese native speakers who have the same tendency".

Although small in number, there are times Pelin unexpectedly prefers to use Japanese even when addressed in Turkish or English. However, unlike her relatively long Japanese utterance when talking to other Japanese dominant participants, these "exceptional" Japanese forms are usually very short. The following example shows one of these instances.

Example 31: (Day 13, session: Turkish lesson)

Zehra	You like to sing, yeah?
Pelin	SOU
Translation	YES

One more thing worth stating is only two CSu have occurred during Turkish lesson. However, the fact that the students are not that much free to choose their addressees and the language, makes this tendency somehow predictable.

Table 31: Pelin's CSu's which are addressed to Leyla

Utterance	**English Translation**	**Lang.**	**setting**
aa! NAZE *sümük!*	aa! WHY *mucus*!	JT	TL
and what was it、NAN DATTE, NAN DATTE, I want NAN DAKKE, NAN DAKKE, MAKUDONARUDO, ... k, NAN TOKA, c DAKKE, k,n,c	and what was it、WHAT WAS IT, WHAT WAS IT, I want WHAT WAS IT, WHAT WAS IT, MC DONALDS, ... k, WHATEVER, WAS IT c, k,n,c	EJEJ EJE	LB
Do you know CHUUGOKU?	Do you know CHINA?	EJ	LB
hayır bunu yapmıcam EE ... ince	*No, I won't do this* UM ... *thin*	TJT	TL
I found you Leyla!	I found you Leyla!	ET	CG
it's TŌNYŪ	it's SOY MILK	EJ	LB
Look, is there .... , then is there chicken you can SASU and eat	Look, there is (?).... , then there is chicken you can STAB (with fork) and eat	EJE	LB
Not *az*. if you eat a little bit you'll get more fatter.	Not *little*! If you eat less you'll get fatter.	ETE	LB
This ... KIMOCHI WARUI NE	This ... KIMOCHI WARUI NE	EJ	FT
This is .... KONBU	This is .... KONBU	EJ	LB

This is... I like KONBU and OKAKA	This is... I like KONBU and OKAKA	EJEJ	LB
We have a not machine but doing like this I used to call it SUTORECCHI	We have an equipment which is not a machine, working doing like this. I used to call it SRETCH	EJ	LB
Yeah, GANDA... there are copying it	Yeah, GANDA... They are (The Chinese) copying it.	EJE	LB
Yeah, POKEMON is coming.	Yeah, POKEMON is coming.	EJE	LB
E! There is?	E! There is?	JE	CG
EE! *Bilmiyo musun bunu?*	EE! *Do you know this?*	JT	LB
MISUTAA .... new one, I like new one I love all, new of them	MISUTAA .... The new one, I like the new one I love all the new ones	JE	LB
CHUUGOKU TTE MOU IYA DA, KOPII, copying guy	I HATE CHINA, THEY COPY (EVERYTHING), Copying guys	JE	LB

Leyla is also the most addressed participant when Pelin code switches between turns. The following table shows some of Pelin's CSt's when talking to Leyla. Out of 23 CSt's 17 were from English or Turkish to Japanese, which took place in different sessions of Turkish lesson. It is also worth mentioning that that the remaining shifts to English took place during the Turkish lesson. So, in general, at speech turns and when talking to Leyla, Pelin has a tendency of code switching to Japanese during lunch breaks or free times and, to English during Turkish lessons. In conclusion, both CSu and CSt data show that Japanese is the most used language, while Pelin code switch in her utterances addressed to Leyla. Moreover, as understood by their data, even though for relatively shorter periods of time, Japanese frequently becomes the base language for their talk.

Table 32: Some of Pelin's CSt's which are addressed to Leyla

Utterance	**English Translation**	**Lang.**	**setting**
No body speak	No body speak(s?)	TE	TL
KONNA CHICCHAI ….	THIS SMALL ….	TJ	TL
Don't take any any that don't take....	Don't take any (of?) that don't take....	TE	CG
DEMO OIISHII	But it's delicious	EJ	LB

AA!, OKAKA MIKKUSU SHITE ARENJI DA	SOME OKAKA IS MIXED (IN THIS.)	TJ	LB
UN, CHIGAU ….	NO, IT IS NOT	EJ	LB
A, AA! JA, KONO KO A… ARU JAN!	OH, WELL, THERE IS THIS GIRL, ISN'T THERE!	EJ	LB
HAA, SUGGOI OISHII YO!	OH! THIS IS REALLY DELICIOUS!	EJ	LB
KORE HA RASUTO	THIS IS THE LAST ONE	EJ	LB
ARE ARE! KAKERARENAI ZO!	THAT ONE CAN NOT BE ATTACHED!	EJ	LB
…. she love pig.	(talking about Zehra) …. She loves pigs.	JE	TL
NI JUU KYUU, NI JUU KYUU NANO? WATASHI YORI MO ….	(IS SHE) TWENTY NINE, TWENTY NINE (KILOS)? (SHE IS) …. THAN ME	EJ	LB
UNKO DE DAIETTO SHIMASITA	I HAVE DIETED BY DOING POO	EJ	LB
DAKARA NI JUU HACHI NI NATTENAI?	SO, ISN'T (HER) WEIGHT TWENTY EIGHT?	EJ	LB

Feray

Feray's CSu's towards Aynur have no Japanese constituents except one instance of a short Japanese interjection. Actually among her 189 utterances which are directed to Aynur, only a couple of them have Japanese constituents. Other than this, all of her CSu's have occurred between Turkish and English. This is, however, not the case for all of her addressees. She has utterances containing Japanese, towards the Turkish teacher, everyone (in the setting), and children (deliberately excluding the teacher in the setting). As for the individuals, she has relatively more Japanese constituents in her utterances addressed to Pelin and Leyla. Therefore, the reason for her low rate of Japanese in her utterances towards Aynur, can be attributed to Aynur's traits, namely her relatively low level of Japanese, or tendency to not use much Japanese. Some of her Japanese utterances might also be seen as the result of pragmatic strategy. Namely, she might switch to Japanese to exclude Aynur from the addresses.

Example 32: (Day 15, session: lunch break)

Feray KAZU GA SUKUNAI

Translation	THERE ARE NOT ENOUGH NUMBER (OF CAKES)
Pelin	OISHII
Translation	DELICIOUS
Aynur	(incomp)
Pelin	I know, it's really yummy.
Pelin	I love it
Leyla	How can I eat your snack?
Aynur	Huh?
Leyla	Huh?
Aynur	No, I am sharing.

In the example above, Aynur decides to share her cakes with the other participants by dividing them into small pieces. Feray seems to fear that there are not enough pieces of cake for everyone, and expresses her concern in Japanese. We may not be one hundred percent sure, but there is a high possibility that she purposefully avoid talking in English here.

Almost half of Feray's CSu's in the following table include proper nouns, a type of CS that we previously (in chapter 2.4.2.5.) called lower in rank.

One important trait of Feray is that she has only two utterances addressed to Esra, none of which contains CSu. There are, of course, times when she addresses everyone in the setting which also include Esra, but in none of this utterances she specifically addresses Esra. Interestingly enough, Feray is the one who called Esra's name most. Esra's name was called 73 times by the children, and Feray uttered Esra's name 22 times, but Esra was not present during 21 times of these. Esra receiving no CSu from Feray, does receive code switched utterances from other participants. Considering the fact that these three participants are all judged native-like or native at Japanese, parameters other than linguistic competence have to be analyzed to come up with a reason for such a gap.

Table 33: Feray's CSu's which are addressed to Aynur

Utterance	English Translation	Lang.	setting
.... that. I have *filim*	.... that. I have *film*	ET	TL
Aynur do you know the story?	*Aynur* do you know the story?	TE	FT
Bak! you put something the same one here. .... like fall down. you put and you	*Look!* you put something the same one here. .... like fall down. you put and you	TE	TL
bu saatten sonra .... one in the	*At this hour*.... one in the school	TE	FT

school			
I give, I give this one to *Esra*	I give, I give this one to *Esra*	ET	TL
I think you are going to bring the snack *bu saatten sonra*	I think you are going to bring the snack *at this hour*	ET	FT
Jasmes and .... *Aynur* today.	Jasmes and .... *Aynur* today.	ETE	FT
Jasmes and .... *Aynur* today.	Jasmes and .... *Aynur* today.	ETE	FT
oh! *benim* two ....*ğim* var.	oh! *I have* two	ETE T	TL
Robin *kim* ....?	Who is Robin ....?	ET	TL
Şöyle, şöyle bi şey var ya sharp .... *kaşlarını alan bişey, onu kulağımın içine soktu da çıkarttı.*	*You know something like that (showing)* sharp .... *something you use to pluck your eyebrows, he put that in my ear and then, got it out.*	TET	LB
with Jasmes and .... *Aynur* today	with Jasmes and .... *Aynur* today	ETE	FT
with Jasmes and .... *Aynur* today	with Jasmes and .... *Aynur* today	ETE	FT
UN! *sadece bu mu?*	Huh! *Is it only this?*	JE	LB

Compared to her CSu's, Feray has more variations in her CSt's, as Feray has shifted the language in almost all directions when talking to Aynur. Namely, the only direction that is not present in her utterances is from English to Japanese. She has 5 English, 4 Turkish and 3 relatively shorter Japanese utterances. Interestingly enough, Aynur did not respond at all, even to these short Japanese utterances. After her Japanese utterance "DOKO" (Where), Feray went on in Turkish to get Aynur's attention. There are three instances of CSt's that took place during the Turkish lessons, all of which were from Turkish to English. These utterances are all not related to the content of the Turkish lesson, so Feray seems to have utilized the CS for a topic shift.

Table 34: Feray's CSt's which are addressed to Aynur

Utterance	**English Translation**	**Lang.**	**setting**
CHOTTO,CHOTTO,CHOTTO!	COME ON, COME ON, COME ON!	TJ	LB
DOKO,DOKO,DOKO?	WHERE (IS IT)?	TJ	LB
O ne?	*What is that*?	ET	LB

I have like this one but I am not cold.	I have like this one but I am not cold.	TE	LB
Can we eat this?	Can we eat this?	TE	TL
Hey bakalım mı?!	*Hey! Shall we have a look?*	TE	TL
.... yaptırdınız?	*.... did you have .... done?*	ET	LB
Yes, brown one	Yes, brown one	TE	LB
Diil	*(It is) not*	JT	LB
I know that. Is look like like this and it is big yeah?	I know that. Is look like like this and it is big yeah?	JE	LB
UN	YEAH	TJ	LB
Do you know where, where those .... ?	Do you know where, where those .... ?	TE	TL

Another notable feature here is that, in the following table more than half of Feray's utterances are in the form of question. Actually, as illustrated in the following example, some of these questions come adjacently.

Example 33: (Day 16)
Feray Can we eat this? (to Aynur, 3.19)[22]
Feray *Hey bakalım mı?* (to Aynur, 0.36)
Translation *Hey! Shall we have a look?*
Teacher *Evet, ... oynamayalım çok.* (to everyone)
Well, …. Let's don't play (too) much.

In the example above, Feray first asks something to Aynur. Not receiving any response from Aynur for more than three seconds, she, shifts both the language and topic and direct another question to Aynur who still did not seem interested. Soon after this utterance, the teacher takes control of the conversation.

In conclusion, as understood by her linguistic tendencies, Feray seems to accommodate her language choice to Aynur's preferences and generally abides by the language chosen by her, and use CSt to reveice responses to her utterances. Unlike, Aliye who tends to keep talking on in the same language Feray seems to manipulate CS to elicit responses.

[22] Addresse and pause duration in millisecond.

Zehra

For some cases, however, it is easy to detect the reason. Zehra seems to have made over 33 percent of her CSu's when talking to Ismail. All of these CSu's have occurred when the two were talking during a computer game session. The list of Zehra's CSu's addressed to Ismail is given in example 34.

Example 34: (Session: Computer game, Addresser: Zehra, Addressee: Ismail, Day 11)

Zehra's Utterances	English translation
(incomp) Poptropican*'iye gidiyor*	(incomp) *It is going to* Poptropican.
Birinci level*'a gidiyorum.*	*I am going to* level *one.*
girl *mu* boy *mu*?	*Is it a* girl *or* boy?
girl *mu* boy *mu*?	*Is it a* girl *or* boy?
girl *mu* boy *mu*? *Yaptım.*	*Is it a* girl *or* boy? *I did (it).*
Hangisi? Girl or mu boy mu?	*Which one is it?* Girl *or* boy?
İkinci level*'a gidiyosun.*	*You are going to* level *two.*
Tropican*'a gidiyoruz.*	*We are going to* Tropican.
Yoksa ikinci level*'a gitmek istemiyon mu?*	*Is it that you don't want to go to* level *two?*
Yukarıya dzz diye pop!	Pop *(jump?) upwords like whoop!*
EE! *neden yok?*	EE! *Why there isn't?*

All of the utterances above were made during the same session where Ismail kept asking questions on how to play a certain game. Zehra, apparently knowing the game, tried to guide Ismail through the levels. When with other children, Zehra usually prefers to talk in English but Ismail speaks almost no language other than Turkish. That may be the reason why Zehra made her explanations in Turkish. Another important point is that, Turkish is the base language of almost all the utterances, and English components are inserted into the syntactic structure of Turkish. Most of the English words that she switched (Poptropican, level, girl, boy etc.) seemed all to be written in the game interface.

To summarize, it seems Ismail was the main cause for the use of Turkish, whereas the game was the primal initiator for the occurrence of code switching to English. Therefore it can be that, like the way a Turkish lesson constructs a Turkish based setting, Ismail here is the determiner for the base language. Computer game sessions on the other hand, can also be considered as the determiner of base language, as, during this session, most of the other children (other than Ismail) spoke in English. However, by insistently keeping on asking questions in Turkish, Ismail might have changed the base to Turkish for a short time.

Zehra made no CSu when talking to Feray. However, unlike the case of Feray who had only 2 utterances addressed to Aynur, Zehra had 45 utterances towards Feray. All of these utterances are in either one of Turkish, English, or Japanese, but not any two of them at the same time. It is relatively easier to come up with reasons for code switching but uncovering the motivation for not code switching towards a certain addressee, is a hard task. Should it be considered a mere coincidence, or are there any sociolinguistics reasons for a choice? If the data were increased some CSu forms might be detected in Zehra's utterances towards Feray. However, as long as the rate is close to zero, or significantly lower than others, the peculiarity would still remain to be explained.

Zehra is the only participant in the school group whose highest rates of CSt and CSu's are for different addressees. This could be partially explained by the "uniqueness" of Ismail's case as he continuously asked for Zehra's help while playing a computer game, which in turn increased the CSu numbers. As for CSt, Zehra has the highest rates when talking to two addressees, Pelin and Sevil. Having two most addressed participants gives us an opportunity to compare the CSt's here. The following table shows some these CSt instances.

Table 35: Some of Zehra's CSt's which are addressed to Pelin and Sevil

Utterance	**English Translation**	**Addr.**	**Lang.**	**setting**
Yeaah, I saw that in this area, it is .... yeah	Yeaah, I saw that in this area, it is .... yeah	Pelin	JE	LB
Can I see what you are doing?	Can I see what you are doing?	Pelin	JE	LB
MOO OWATTA?	IS IT OVER?	Pelin	TJ	TL
What is this dish?	What is this dish?	Pelin	JE	LB
No, what is inside this.	No, what is inside this.	Pelin	JE	LB
Don't hold this.	Don't hold this.	Sevil	TE	FG
SOU	YEAH	Sevil	EJ	FG
UN	YEAH	Sevil	EJ	FG
I know yours	I know yours	Sevil	TE	TL
Yukarda	*It's above*	Sevil	ET	TL

Alhough the same in number, Zehra's CSt's addressed to Pelin and Sevil have some notable differences. Other than Turkish lessons, the CSt's towards Pelin were uttered mostly during lunch breaks, whereas those to Sevil are uttered during free games. The CSt's addressed

to Sevil are in the form of short utterances composed of one or two words as opposed to those utterances addressed to Pelin, which are longer and mostly in the form of full sentences. It is important that the utterances directed to Sevil, contains, no questions, but short answers, or imperative, which are uttered mostly during either Turkish lessons or free times. So, it can be said that most of these utterances are the parts of conversations which are originally initiated by Sevil. One of these instances is given in the following example, where Zehra and Sevil were playing freely with the toys in the playroom. They seem to be playing independently, but there are a number of instances showing Sevil's intention of playing together. In the following example, Sevil initiates a short conversation, in which Zehra had only one short Japanese utterance. After a long period of pause, Zehra, who ignored the previous utterance of Sevil, starts to sing by herself.

Example 34: (Day 2)

Sevil	yeah but … (1.69)
Sevil	you make ....
Zehra	UN (0.12)
Translation	YES
Sevil	I am doing .... (0.48)
Sevil	Now I am going to ....(47.62)
Zehra	.... Italy .... Napoli ....

However, in her CSt's towards Pelin, Zehra is the one initiating a new chain of conversation, or at least eliciting an answer. The example below is taken from a lunch break where Aynur, Feray, Leyla, Pelin and Zehra, sitting around the same table, are both eating and having a chat. From time to time, some small groups of conversation occur within these five participants. The following example is one of these in which Pelin and Leyla talk in Japanese. This conversation is 'interrupted' or, put in other words, redirected to English by Zehra. Pelin, responds to this with an English sentence in which the Japanese word "obaasan" (old lady) is inserted. At this point, Aynur, who usually talk either in Turkish or English, joins the conversation.

Example 35: (Day 15)

Leyla	KENTAKKII? (to Pelin)
Translation	KENTUCKY?
Pelin	KENTAKKII (to Leyla)
Translation	(YES,) KENTUCKY

Pelin	KENTAKKII OBAASAN ARU YO NE? (to Leyla)
Translation	YOU KNOW THERE IS AN OLD LADY OF KENTUCKY, RIGHT?
Leyla	A, SOU NA NO? (to Pelin)
Translation	OH REALLY?
Pelin	OBAASAN …. (To Leyla)
Translation	THE OLD LADY ….
Zehra	Yeah, I saw that in this area, it is .... Yeah? (To Pelin)
Pelin	It's OBAASAN yeah? It's OBAASAN (To Zehra)
Translation	It's THE OLD LADY yeah? It's THE OLD LADY
Aynur	What is? What is? (To Pelin)
Zehra	It's not a .... It's McDonald (To Pelin)
Pelin	Not, McDonald (To Zehra)
Translation	(No, it is) not McDonald's
Zehra	Yeah, that. (To Pelin)
Aynur	What? (To Pelin)
Pelin	KENTAKKII (To Zehra)
Translation	(IT IS) KENTUCKY
Aynur	What are you talking about? (Pelin and Zehra)

Among Zehra's CSt's towards Pelin, there is only one instance of a change to Japanese and all the other instances are changes from either Turkish or Japanese (mostly) to English. In conclusion, when talking to Pelin, Zehra seems to utilize CSt in order to change the base language to English. There might be other functions as well, but this is the one differentiating itself from her CSt's towards Sevil.

Sevil

As shown in the following table, other than just one utterance which has Japanese, all of Sevil's CSu's are between Turkish and English. Among these, -with one exception-, in all instances English is the base language into which Turkish elements are inserted.

One feature of Sevil's CSu's towards Zehra that is different from others (and also similar to Zehra's), is their apparent pragmatic aim. Most of her utterances are in the form of imperatives which she tells Zehra to do, or not to do things. During the Turkish lesson, for example, when the students are asked to work on a task individually, Sevil warns Zehra, who sits next to her, not to copy from her, by saying "Copy *yapma*". Again, when they are "playing house", she suggests or directs Zehra to do things. Although most of these CSu's are not

complex ones as they are only composed of Turkish proper names inserted in English sentences, Sevil's apparent tendency to use her code switched utterances for "manipulating" Zehra is still idiosyncratic, compared to other participants in the school group.

Table 36: Sevil's CSu's which are addressed to Zehra

Utterance	**English Translation**	**Lang.**	**setting**
Boş ... you have to make, yeah?	*It's empty* ... you have to make, yeah?	TE	FT
Come *Zehra!*	Come *Zehra!*	ET	FT
Copy *yapma.*	*Don't* Copy.	ET	TL
Help me *Zehra*	Help me *Zehra*	ET	FT
It's *tekli koltuğu* look.	It's *single chair* look!	ETE	TL
it's … KOKO NI HATTE!	it's … KOKO NI HATTE!	EJ	FT
n, n N, N n	*n, n* N, N n	TJE	TL
Oh, this is not good *Zehra* let's make this good, yeah?	Oh, this is not good *Zehra* let's make this good, yeah?	ETE	FT
Ok, *Zehra*, ok!	Ok, *Zehra*, ok!	ETE	CG
Then you can go to ... *Esra*! you can! ...	Then you can go to ... *Esra*! you can! ...	ETE	FG
This is *tekli koltuk*	This is *a single chair*	ET	TL
Zehra help me!	*Zehra* help me!	TE	FT
Zehra look at this.	*Zehra* look at this.	TE	FT
Zehra, don't look. Ok?	*Zehra,* don't look. Ok?	TE	TL
Two *masa* look!, there is *masa*, too.	Two *tables* look!, There is *table*, too.	ETE TE	TL

Out of Sevil's 19 CSt's towards Zehra, 17 were "to English", and among these, 14 were from Turkish to English, which shows Sevil's strong tendency to change the base language to English. Interestingly enough, a great deal of these CSt's take place during the Turkish lessons where the children's conversation are deliberately kept within Turkish, by the teacher.

Table 37: Some of Sevil's CSt's which are addressed to Zehra

Utterance	English Translation	Lang.	setting
Not copying it	Don't copy it. (?)	TE	TL
Wait, I ... I have a good idea.	Wait, I ... I have a good idea.	TE	FT
This would be third	This would be third	TE	FT
Yeah, what?	Yeah, what?	TE	TL
Can we do this one?	Can we do this one?	TE	TL
Show the picture	Show the picture	TE	TL
I need to do	I need to do	TE	TL
Can I see it?	Can I see it?	TE	TL

Ismail and Aliye

Ismail and Aliye are the two least code switched members of the school group. There are a couple of candidate reasons which are different for each participant. Ismail is the only male member of the school group whose utterances were recorded only through one day. This day, he attended the regular Turkish lesson, the computer game session and had a short free time in between. The time for him to be addressed by the other participants is significantly limited, but probably long enough to make it possible for some CSu instances to occur. However, this was not the case as he had only 2 CSu's and were an addressee of 13 CSu's which occurred in a conversation with Zehra, which was initiated mostly by his efforts.

One of the possible reasons for his not receiving any CSu from the rest of the participants (and also not receiving many utterances in general), could be his being male. The other reason may be his attending this weekend program only once thereby finding it hard to engage in activities and conversations. These reasoning may go no beyond the limit of guessing as there is not much supporting evidence.

Aliye, on the other hand, was observed on three days, had more than 500 utterances, even slightly more than Leyla, a regular attender, had. However, when she was at the school, only her older sister Zehra (3 days) and Esra (1 day) were present, making them the only two sources of CSu towards Aliye. Even from these two participants there was no utterance containing CSu. As discussed in the total utterances section, Esra had no utterance specifically directed to Aliye, and Zehra had only 31.

Aliye is the youngest member of the school group. She attended the same Turkish lesson with her sister. She was also at computer game session with the other participants but she was not asked by the teacher to do the educational games the other two had to do, and was free

to play the game she wanted. One of the obvious reasons for her not receiving CSu is her being "somewhat" ignored. There were times Zehra refused to respond, or go on talking with Aliye one of which is illustrated in the following example.

Example 36: (Day 19)

Zehra	Cute! Penguin (to everyone, 0.17)
Aliye	.... penquin (to Zehra, 0.28)
Aliye	.... penquin (to Zehra, 0. 57)
Aliye	.... penguin (to Zehra, 0. 48)
Aliye	A! you're doing that! (to Zehra, 1.36)
Aliye	A, a, a, a,a, a, a, a, a,a, aa, E, EE! say something! (to Zehra, 0.26)
Aliye	Say something to here ! (to Zehra, 0.04)
Aliye	Say something (to Zehra, 0. 11)
Aliye	Say something to here, say something (to Zehra, 0.31)
Zehra	*İstemiyom* (to Aliye, 0.31)
Translation	*I don't want that.*
Aliye	A, a, a, a,a, a, a, a, a,a, a,a. (to Zehra, 0.08)
Zehra	I can't do! (to teacher:2)

In the example above, Aliye and Zehra are in the computer game session, sitting next to each other and supervised partially by teacher. "Partially" because the teacher leaves the two frequently. Zehra is supposed to complete an educational game whereas Aliye is allowed to choose the game she wants. The excerpt above starts with Zehra's utterance which is addressed to "everyone". In this study the addressee tag "everyone" is used when the utterer apparently does not have an apparent intention of limiting the addressee to one or some of the interlocutors present in the setting. Therefore, for this session "everyone" means the teacher and Aliye. Following this, Aliye repeats the same utterance three times with relatively short silent durations, which were all ignored by Zehra. After this, Aliye changes the topic twice, first by asking a question, and later, by wanting Zehra to talk into a computer microphone she holds at her hand. Zehra ignores this too, but as Aliye insists on his request, Zehra had to express her refusal, interestingly enough, in Turkish. As discussed in the next section, in this paper, this kind of code switching will be called "CS on turn taking" (CSt).

Throughout the session, Aliye kept talking to herself, and the intended addressee of a great number of her utterances was hard to detect. In the cases when she addressed Zehra as in the example above, she was frequently ignored, or refused, which can be thought to be connected to her not receiving CSu.

3.6.4. CS rates based on settings

Lastly, we will touch upon the CS rates of each group on different settings. Because only the school group has Turkish lessons, its CS[23] rates are incomparable with the other groups, therefore, excluded in the table below.

Table 38: CS rates based on settings

	Free times			Computer game sessions			Lunch breaks		
	CS	CSt	CSu	CS	CSt	CSu	CS	CSt	CSu
tokyo	11.54	1.89	9.65	9.18	3.03	6.15	11.98	4.39	7.59
school	12.63	5.58	7.05	13.15	6.23	6.92	22.51	13.67	8.84
yokohama	7.64	5.17	2.46	9.06	2.54	6.52	8.09	6.36	1.73

Lunch break reveals itself as the most code switched setting in our research. Only in Yokohama group it is in the second place. The gap with the second most code switched setting and lunch is the highest in the school group where the CS rate during lunch is as high as 22 percent. One may think that it is the topic during lunch that might trigger the occurrence of CS. However, when each CS occurrence is studied, lunch breaks do not seem to contain peculiar topics which are that much different from the other settings. The participants, especially those in the school group seem to talk more on foods but this does not seem to increase the CS rate. Here, we may propose the same explanation of "unconscious association" that we did in the language choice analysis, while adding that the supporting evidence is not enough for a firm conclusion. According to this explanation, the children may experience an unconscious conflict of language choice during lunch times, which are probably associated to the home settings more than the others.

One last thing to mention here is on the gaps between CS types. Although the Cs rates for the house groups do not vary considerably according to settings, the gap in CS types do vary as it seems higher in the Tokyo group. For example, in free settings the Tokyo group make most of their CS within utterances.

[23] The CSrates for the Turkish lessons is 12.09 (CSu 4.32 CSt 7.77)

3.7 Word analysis

In this chapter, a series of analysis will be made on lexical characteristics of the collected data. Instead of stating a number of statistical information, it was, rather, aimed to give specific word examples and make comparisons about their usage among the individuals. This was partially due to some technical problems. Labeling each word according to its language, grammatical type, addressee and all the other detectably variations, and making an analytical study on this data would probably be a subject of another doctoral thesis. In this paper, the lexical data was labeled according to fairly a limited number of labels, namely, the utterer, settings (Turkish lessons and others), groups (Tokyo, Yokohama, school) and language.

One of the characteristics of the participants, which became visible through word analysis, is the "quality" of their words in a given language. The "quality" here is used in a sense whether or not a certain word is a contend word which is capable of conveying a concrete meaning, expressing an idea or a thing. For example, around forty percent of Japanese words uttered by Pelin, Sevil, and Zehra, are fillers such as "ee!" (wow!, aha! etc.) and interjections "un" (yeah). Another forty percent are nouns such as Japanese food (natto, onigiri etc.), anime characters (pokemon, gandamu) etc. In their lexical data, there are only a couple of Japanese verbs none of which contains any inflection such as past tense. On the other hand, the Japanese words uttered by Leyla, Esra, Pelin and Feray can be called higher in both "quantity " and "quality" Some of the Japanese verbs they uttered include, "iku" (to go), "taberu" (to eat), "ochiru" (to fall down) , and "sasu" (-here-, to stab). Most of this verbs are used as predicates of the sentences they belong to, and with appropriate inflections. The participants of the Tokyo group, where Japanese is the most uttered language, show the same characteristics.

On the other hand, those who have a poor vocabulary in one language, do compensate it with another language. Aynur from the school group, Osman, Kemal and Ali from the Yokohama group, and Emin and Erkan from the Tokyo group uttered plenty of Turkish nouns, and verbs which are inflected with a series of suffixes. For example, Aynur is the only participant in the school group, who uttered a Turkish verb in past continuous tense "zannediyordum" (I used to believe that it was …) or past future "alacaktım" (I was going to take …)

Although, English seems to be the native language of none of the participants, there are still some clues indicating a relatively higher level for some participants. For example, in school group Aynur is the only participant who uses "that" as complementizer (subordinating conjunction), one of which is shown in the following example. All the other participants in the group use "that" only as demonstrative pronoun or demonstrative adjective.

Example 37: (Day 15)

Aynur I thought that there was brocoli inside your ONIGIRI (when talking to Feray during one of the lunch breaks)

In the following example, Zehra seemingly uses "that" for a similar function, but ends up uttering a grammatically incorrect sentence.

Example 38: (Day 15)

Zehra It was party that ... there was jelly ... jelly party. (while talking to the Turkish teacher during one of the Turkish lessons)

Right after uttering "that" Zehra made a short pause which may imply she actually gives up that sentence and starts a new one.

3.7.1 Vocabulary preferences

The participants sometimes use a certain word only in language, and do not use its counterparts in other languages. There are also cases that some participants use three (or more) words of similar meanings from three languages, in different settings or for different sociolinguistic ends. In this chapter some of the vocabulary examples that show such diversification remarkably, will be discussed.

Verbs of "sight"

It is almost impossible to have perfect correspondences about the words that have similar meanings in different languages. Considering this, we still think it would be useful to make such a comparison, as it can imply some sociolinguistic tendencies of the participants.

Table 39 shows the usage distribution of verbs which are related to "seeing" in Turkish, Japanese and English[24]. The semantic differences between the Turkish verbs "bakmak" (to look), "görmek" (to see) and "izlemek" (to watch a play, program etc., to follow) resemble to those of their English counterparts. The Japanese verb "miru" on the other hand, can convey all of the three senses. Generally speaking, the results seem to be consistent with the linguistic tendencies of the three groups (Tokyo, Yokohama and School). However, Turkish words seem to be used almost by all of the participants, though with varying frequencies. Japanese verb "miru" is used mainly by the Tokyo group members. In the school group, only Pelin and Leyla used "miru" whereas in the "Yokohama group" "miru" occurred in no utterance.

[24] For clarity, the results are given as occurrence times, as they are too small to be stated in percentages.

Table 39: The usage distribution of verbs of sight

Participants	Bakmak	Görmek	İzlemek	Look	See	Watch	Miru
Aliye	2			6	1		
Aynur	22	9	3	13	10	3	
Esra	2			4	2		
Feray	16	1	1	12	11	2	
Pelin	7	6		9	11		3
Sevil	4	1	2	17	23		
Zehra	9	4		21	15	2	
Leyla	1	1		1	5	1	6
Ismail	6	1		0	1		
Ahmet	2	0					3
Emin	8	2					2
Erkan	7	2					2
Mert							
Murat	3						15
Vahit							5
Selim	3						3
Kemal	10	1			1		
Osman	13	1	3				
Ali	28	5	2				
Mustafa							
Total	143	34	11	83	80	8	39

Some verbs are usually used in certain patterns. For example, the verb "see" is used mostly in the pattern of "Can I see?". In the data, this verb is never used in the form of third person singular. Its past form (saw) is mainly uttered by Aynur. These tendencies may be the result of the teaching policy in the school. As none of the participants are a native speaker of English, they may tend to use the English forms the way they are taught, and because the verbs are taught in patterns such as "Can I see?" (rather than in isolate verb forms), the participants may stick by what is presented to them. One of the "unusual" features of "see" is that it is also frequently used during the Turkish lessons. For example, Sevil uttered the verb "see" 16 (out of 22) times during Turkish lessons.

Similar things can be said for "look" as well. Both "look" and its Turkish counterpart

“bakmak” are often used in a certain imperative pattern. Therefore, there are many cases that the utterances are composed only of “look!” or “bak!” There are a few cases in which “bak” is used with more complex inflections, such as those in example 39

Example 39:

Feray	*Bakiyor,*(she/she is looking) *Bakalim* (Let’s have a look!, let’s see!)
Aynur	*Bakiyordum* (I was looking)
Ismail	*Bakmadığı icin* ... (Because he/she/it doesn’t / didn’t look)
Leyla	*Baksana!* (look here!)
Pelin	*Bakıyorum,*(I am looking) *Bakma!* (Don’t look!)
Sevil	*Bakabilir miyim?*(Can I see?, Can I have a look?)

As for ‘look’, other than imperatives, there are a few different forms such as “look like” (Aynur, Feray), “look for” (Sevil), “look at” (Aynur). The participants linguistic levels are reflected in their way of using the words. Compared to other participants, Aynur seems to be using English words in a more complex way (e.g. inflections) with more variety (e.g. present and past tense).

One of our reasons to make analysis on vocabulary is to see whether there is any connection between the use of one word instead of another and any other sociolinguistic dynamics. As shown in the following example, one such connection is visible in the use of Turkish “izlemek” English “to watch” and Japanese “miru”.

Example 40:

Leyla	EE, DATTARA … SOU DATTARA *bedava* PASOKON DE MIRENAI YO! EIGA DE MIRU
Translation	UMM, IF SO, IF THAT IS SO, YOU CAN’T WATCH IT *for Free* ON PC, YOU CAN SEE IT IN A MOVIE.
Sevil	*Ben 'Çocuklar Duymasın'ının çok ... çok eski bölümünü izlemesini istiyorum.*
Translation	*I like him/her to watch the old episodes of ‘Çocuklar Duymasın'*
Aynur	I watched Chucky and it was so scary. Do you know Chucky?

The sentences above are all from different sessions where the students talk about movies. These utterances imply that there is a parallelism between the language of the utterance,

and therefore words, and the language or culture that the topic belongs to. That is, when talking about an American movie Aynur chooses to use "watch, and, when the topic is a Turkish drama the verb "izlemek" is used. As for the Japanese utterance, the title of the movie is unknown, so it may not be a Japanese movie, however, it is certain that Leyla is talking about movie theaters *in* Japan.

Verbs of "giving"

The next comparison is on the verbs of "giving". The Turkish verb "vermek" more or less corresponds to English "give", however, there does not seem to be one equivalent sense of "giving" in Japanese. "Ageru", "kureru" "ataeru", "watasu" may all convey the meaning of "giving" with varying senses depending on the position of the giver and receiver. Among these, "kureru" and "ageru" are the most used two verbs. In the data, "ataeru" is never used whereas, "watasu" is uttered only once.

Table 40: The usage distribution of the verb "to give"

Participants	Vermek	Give	Age./kur./wat.
Aliye	1	1	
Aynur	5	2	
Esra	2	1	
Feray	4	5	
Pelin	11		
Sevil	4	4	
Zehra	3	2	
Leyla	1		
Ismail	1		
Ahmet			1 age.
Emin	1		3 kur.
Erkan	2		2age. / 5kur.
Mert	1		2 kur.
Murat	2		8 age./ 1 wat.
Vahit	1		
Selim			4 age.
Kemal	11	1	
Osman	24	1	
Ali	36		2 age.

Mustafa			
Total	110	15	27

However, “ageru” and “kureru” are mostly used with other verbs to mean “doing something as a favor to someone”, a use which is common in daily Japanese as well. To give an example to this, Emin says “Katte kurenai?” (Won’t you buy –ice cream- for us?) to his supervisor. Compared the table of “sight”, in the table of “giving” there is even more clear cut distribution of languages according to the three groups. The Japanese verbs are used only by the Tokyo group members. It is also notable that even the native speakers of Japanese in the school (Leyla, Esra, Pelin and Feray) group did not utter the Japanese verbs. Among these Pelin uttered Turkish “vermek” 11 times, and, interestingly, never uttered the English “give”. Actually, except Feray, all the students used “vermek” more than they used “give”, making “vermek” the most used verb in total.

One of the reasons for the popularity of “vermek” could be the fact that the participants have easier access to this verb. “Vermek” is a relatively regular verb in Turkish, and does not undergo any voice change due to consonant harmony, which is frequently the case in Turkish verb inflections. “Give” on the other hand is an irregular verb whose past and past participle tense forms are all different. This assumption is also supported by the data as, in the school group, “gave” was only used twice, whereas around half of the Turkish verb “vermek” was in past tense. Actually, there is even one marginal case in which the Turkish past tense marker –di is attached to “give”

Example 41: (Day 18)

Zehra Şu senin mi*?*

Translation *Is this yours?*

Feray *Evet ... çıkarttın. Şurası.*

Translation Yes … *You have put it out. Here*

Zehra Wow it's da... it's like Esra NO

Translation Wow it's da... it's looks like it is Esra’S

Feray *Esra zaten* give*'di.*

Translation *In fact, Esra gave (it to me)*

Zehra Give *yaptı?*

Translation *So she* gave *(it to you)?*

Feray *Evet give yaptı diyorum.*

Translation *Yes, I say, she* gave *(it to me).*

Feray *Verdi.*

Translation *She* gave *(it to me)*.

participants were waiting their teacher come. Obviously, both Zehra and Feray do not use the past form of the verb "give" correctly. Here, it is not easy to judge whether Feray uttered the English verb with Turkish suffixation as "give'di" or the ungrammatical English form "gived" as they have very similar sounds. However, re-listening to the data a number of times led to the conclusion that the probability of "give'di" is higher. In any case, the participants do not seem to have fully mastered the irregular past form of the verb "give". Following this, both Zehra and Feray use a form, which is composed of "give" and Turkish auxiliary verb "yaptı" with past tense attached to it. That is, Zehra and Feray seemingly, prefer to attach the past tense marker to a Turkish auxiliary rather than pronouncing "gave".

Verbs of "like/love"

The verb "sevmek" has more or less the same meaning that the English verbs "like" and–sometimes–"love" have. The Japanese word "suki" has also a similar meaning but, unlike its Turkish and Japanese counterparts, it does not behave like a "regular" verb. In some dictionaries, it is classified as one form of the verb "suku" which is not used much in ordinary Japanese. As far as its grammatical use and inflectional characteristics are concerned, we prefer to call it adjectival verb in this paper.

Table 41: The usage distribution of the verb "to like/love"

Participants	Sev	Like/Love	Suki
Aliye	1		
Aynur	9	9	
Esra		5	
Feray	3	6	
Pelin	3	12	
Sevil	3	14	
Zehra	5	35	
Leyla		7	
Ismail			
Ahmet			2
Emin			
Erkan			
Mert			
Murat			17

Vahit			6
Selim			3
Kemal	5	6	
Osman	6		
Ali	1		
Mustafa			
Total	36	94	28

In the table above, unlike the first two tables, the Turkish verb is no more the most common verb. All the members of Tokyo group and three participants from Yokohama and school group didn't use the Turkish verb "sevmek" at all. The English verbs on the other hand, were used only the school group (one exception being Kemal from the Yokohama group). Lastly, Japanese "suki" was used only by some of the members in Tokyo group. Therefore, among the other words analyzed here, the verbs of "liking" are the most consistent with the linguistic choice of the groups. When the Turkish class data is included, the rates of Turkish and English is close to each other, and their use of both "love/like" and "sevmek" is in accordance with this. Likewise, the Turkish oriented Yokohama group, and the Japanese oriented Tokyo group, used only "sevmek" and "suki" respectively.

To sum up, some words seems to reflect the group characteristics more, and some other has more idiosyncratic features in this respect. The question here is, what is the criteria determining this distinction? A satisfying answer to this question could not be given in this study, because no comprehensive study on every one word could be conducted due to time limitations. However, some tendencies stated in previous studies are also confirmed in this study. For example, the words associated with a certain culture or country, are uttered in the language of this country, such as food names (onigiri, konbu, okaka, lahmacun).

First and second person singular subject pronoun

The last comparison is on subject pronouns "I" and "you" There are again, some discrepancies in the way these pronouns are used in three languages, thereby making it necessary to interpret the numbers in the following table with caution. First of all, English is one of those languages that necessitates a subject to form a sentence, whereas Turkish is a pro-drop language, that is, using a subject is either optional or conditional, and even the subject is dropped, there is a subject agreement marker attached to the predicate which shows who or what the subject is. In Japanese on the other hand, it is possible to form a sentence with no grammatically visible subject at all. Because of these, compared to Japanese and Turkish, the number of English subject pronouns is expected to be higher, within the same amount of

utterance.

This assumption is confirmed by the data results as both “I” and “you” are the most used pronouns. If the total five pronouns uttered by Osman and Kemal from Yokohama group is ignored, all of these English pronouns are uttered by the school group.

When compared to English pronouns, the Turkish pronouns, though smaller in number, seem to be the most prevalent, as almost all of the participants used them. Here the school group seems to use “ben” more than the Turkish oriented Yokohama group, but, if results are converted into percentages, the rate is higher for the Yokohama group. In all of three languages, the number of second person subject pronouns are smaller than the first person subject pronouns.

Before proceeding to the results of Japanese pronouns, one preliminary explanation should be made. In Japanese there is, no one to one correspondence of what is called “I” and “you” in English. Although, “watashi” (I) and “anata” (you) can be thought to be the most generic pronouns, depending on the context, politeness of the expression, or gender, age and social status of both the addresser and the addressee, an array of different words can be used. Although the actual number is even more, the Japanese subject pronouns detected in the data are “ore”, “boku”, “watashi”, “atashi” for “I” and “omae”, “kimi” and “anta” for “you”.

Table 42: The usage distribution of the first and second person singular subject pronoun

	Ben	sen	I	you	Or./bo./wat./at.	Om./Ki./an.
Aliye	21		22	12		
Aynur	121	29	208	82		
Esra	9	5	121	56		
Feray	47	21	73	36		
Pelin	54	16	73	48	3 wat. / 1 at.	
Sevil	31	3	161	69		
Zehra	41	10	206	80		
Leyla	9	3	43	29		
Ismail	19	3	2			
Ahmet	12	4			40 or. / 2 wat.	20 om. / 1 ki. / 1 an.
Emin	17	10			27 or.	4 om. / 1 ki. / 1 an.
Erkan	11	4			13 or.	5 om.
Mert					3 or.	1 an.
Murat	16	1			99 or.	15 om.
Vahit					20 or. / 3 bo.	12 om. / 1 an.
Selim	7	1			2 or. /2 bo.	7 om.

Kemal	22	4		3	18 or.	
Osman	41	23	2			
Ali	31	22			2 or.	
Mustafa	2					
Total	511	159	911	415	235	69

The use of Japanese pronouns, is mainly limited to one type, and one group. In the school group, only Pelin used Japanese pronouns for a few times (watashi, twice, atashi, once) whereas in Yokohama group only Ali used "ore" just twice. The rest of the Japanese subject pronouns were all uttered by the Tokyo group members. More than 96 percent of these pronouns were "ore" which were all used. "Ore" is known to be mainly used my males. The finding here are consistent with those of Ono and Thompson's study (2003), which revealed that "ore" is used much more than "boku" by the Japanese monolingual speakers. On the other hand, the most used Japanese second person pronoun is "omae" which is, again, uttered only by the members of Tokyo group. Other than this, "anta" and "kimi" are used four times and twice, respectively.

Although "ben" and "sen" is the most widespread pronouns of all three groups, in Tokyo group, their use differs from the other two groups in one respect. In school and Yokohama groups, the rest of the utterances following "ben" and "sen" occur, are all in Turkish, however, in Tokyo group, there are cases where Ahmet, Emin and Murat use "ben" as the subject of their Japanese sentences. For instance, Ahmet uttered "sen" four times and inserted three of these into Japanese utterances as shown in the following example.

Example 42: Ahmet's Japanese utterances in which Turkish "sen" is inserted
ANTA KOCCHI NI SHIYOU …. *Sen* YATTE
YOU SHOULD BE HERE, …. *You* DO THIS!
Mete Abi sen YORI TSUYOI YO.
Brother Mete (*is)* STRONG THAN YOU.
NANDE *sen* ….NAI DE ….TEN NO OMAE?
WHY DO YOU, WITHOUT you ….?

Besides, the followings are some of the examples of "ben" insertion made by Ahmet and other Tokyo group members.

Example 43: Japanese utterances in which Turkish "ben" is inserted

Ahmet	BETSU NI II YO. *Ben* HA SHITA NI ITTE MO
Translation	*I* DON'T MIND GOING DOWN (STAIRS)
Murat	*Ben* OTOSAN MAINICHI OKOTTE ICHI MAN EN NUSUNDERU
Translation	*I* STEAL TEN THOUSAND YEN FROM (*I* SCREW TEN THOUSAN YEN OF) MY FATHER BY GETTING ANGRY AT HIM EVERY DAY.
Selim	*Ben* YATTE, DARE KA …?
Translation	AFTER *I* HAVE DONE IT, WHO ….?

Though small in number, the reverse case is also detected, namely, Japanese "omae" or "ore" is inserted into Turkish sentences.

Example 44:[25] Turkish utterances in which Japanese subject pronouns are inserted

Ahmet	OMAE GA *ikiyle*
Translation	YOU ARE *(going) to (number) two*
Emin	Abi SOU *ben de* ... ORE *bile ondan hızlı teperim ben*
Translation	*My brother! That's right, me too ... Even* ME can kick the ball faster than him.
Ahmet	*Çekiyim mi* ORE GA *size*?
Translation	*Shall* I *pull it for you?*

However, there is no instance, such as above, that English is included, either as the embedded or base language. That is, in the data, Turkish or Japanese utterances are not found with "I", "you" or any other English pronouns inserted. One possible reason would be the difference in word order. However, in all of these three languages, subject –for most of time – comes first. Therefore, it would not be a matter of word order contradiction. One other explanation would be that Japanese and Turkish resemble each other not only in their word order, but also in their agglutinative nature, the latter of which might have done the exchange of personal subject pronouns easier. This idea is supported with a number of instances -some of which are given below- where the Turkish pronouns or other words are inflected by Japanese suffixes and vice versa.

[25] Each of the utterances below are taken from different sessions

Example :45 Various example of CS at the morphological level.

Murat ORE*nin* (Japanese 1st p. singular pronoun + Turkish possessive marker)
My

Murat *Ben*TTE (Turkish 1st p. singular pronoun + Japanese colloquial topic marker)
I (in the sense of "as for me")

Emin Biz NO (Turkish 1st p. singular pronoun + Japanese possessive marker)
Our

Lastly, it must be stated that the word analysis here is only capable of giving some idea for the word choice tendencies of the participants. The words studied in this chapter are chosen over others because they were found to have some peculiarities. However, the possibility is high that there are a number other word groups that are worth analyzing.

CHAPTER IV

CONCLUSIONS

The main goal of this thesis has been to construct a systematic explanation of the sociolinguistic behavior of Turkish children living in Japan. The ultimate aim was to reach some universality from the specific data to broaden our understanding of bilingual children in general. To this end, the starting point remained simple, focusing on answering some fundamental questions on linguistic behavior: "*Which language is used by which children in what frequency for what purpose under what circumstances".* Certainly, the methodologies, linguistic disciplines, and the theoretical framework to be utilized to find those answers, could not be as simple as these questions themselves were.

The first step, was then, to decide *the way* to find out the answers. One possible way is to conduct a case study on one or two Turkish children for a period as long as at least two years. However, it was clear that the data of a couple of children is not enough to make any valid generalizations on bilingual children. Our solution to this was to increase the number of Turkish children that are studied in this research. Under these circumstances, what we frameworked was a sociolinguistic study manageably deep enough like a case study while also being somewhat broad enough to utilize a statistical method. I observed the natural linguistic behavior of 20 Turkish children, who were born in Japan or stayed in Japan for a long period of their life, and can speak at least two of English, Japanese and Turkish with varying competence levels. Their speech was surreptitiously audio or video-recorded mainly in an international school and two houses and occasionally in places such as parks, playgrounds or game centers. The data of all these observations amounted to 17 hours of audio or video recording, which was than transcribed into more than 20,000 utterances. The language archiving tool, "Elan", was used for transcribing the raw material and turning it into a statically analyzable corpus.

The second step was to organize and classify the transcripted data. For this, all of the speech data was broken down into lists of utterances and words, each of which were tagged with a series of information such as language, utterer, interlocutor, duration, setting and so on. On these organized and labeled sets of data, a set of analyses have been conducted in which the results are given in the form of tables with statistical data, and which were accompanied by

examples in the form of a flow of utterances or a dialogue. There was one more reason for working on some individual dialogues as opposed to numerical data. Breaking down the data to the utterance level prevents us from looking at the data at a discourse level, which is crucial in the analysis process. Consequently, I skimmed through the data by both watching and listening to the recordings and reading the transcript data, of which I discussed some parts of it in detail.

In the analysis chapter , I aboded by the following two principles while dealing with the data.

1. Looking for both general characteristics, and individual cases in each analysis.
2. Making comparison on multiple variables in search until reaching out generalizations—revealing the yet unknown reasons.

Throughout these analyses, I looked for generalizations or tendencies valid for all of the participants or a group of them. However, in almost all types of analyses, there were some individual traits that were too remarkable to be ignored. This is why I kept a dual perspective towards the data as we looked at both the group characteristics and individual cases. Such a dual approach proved effective especially for excluding the "peculiar cases" from the "rule governed" ones. For example, the high rates of utterance traffic between Leyla and Pelin or between Aynur and Feray were found to be related to the linguistic level similarities between the addressee and the addressed. However, looking at each individual let us see that such rules are not valid for every participant. For example, Ismail addressed Zehra more than others, obviously because for pragmatic reasons. Ismail wanted to play a certain computer game, which Zehra seemed to know how to play. The two participants were also sitting next to each other, which can be counted as another reason for the high rate of conversation between the two.

Studying each individual also led us to the conclusion that some linguistic behaviors are too varied to assign as universalities. In the CS analysis, different participants were found to utilize CS for apparently different pragmatic purposes. For example, most of Sevil's CSs that are addressed to Zehra are in the form of imperatives. Feray code switches between Turkish and English when apparently trying to receive a response from Aynur, and occasionally switches to Japanese when she seems to exclude Aynur as an addressee to her utterance. Pelin, on the other hand, seems to code switch mostly to or from Japanese when talking to Leyla, another native speaker of Japanese.

Our second principle also proved useful in searching for the hidden reasons for some

superficial tendencies. One example to this is language choice tendencies during lunch sessions in the school group. If all the lunch sessions were studied as one unite, the usage rate of English would seem somehow to be the highest, with the rates of Turkish and Japanese following it. This data do not look "interesting" until each lunch session's rates are calculated separately, thereby revealing the fact that the rates do vary considerably. The next step, then, is to look for different variables that have connection with these changes in numbers. The analysis showed that the linguistic background of the participants is the first candidate as a reason behind the changes in language choice.

In this study, there were a number of areas that need improving in some respects. One of them is the lack of integrity in the data collection method, and the setting formation. Some of the data was only audio recorded, which prevented us from making inquiries into some types of analysis such as those that require detecting addressees. In addition, not all of the participants were observed in all settings. One group of participants were never observed while being in the same settings with other group members. If we could have, for example, observed Murat in the school environment, then we would have been more confident in generalizing about his linguistic preferences. Overcoming these problems should not be impossible, although it would definitely require more time to be spent in prior arrangements about settings and technical equipment. An ideal way would be to observe all the participants in every possible environment they could be, such as school, home, and outdoor areas such as parks, with all kinds of people they would normally meet, such as siblings, teachers, peers and monolingual friends.

One other area to be improved is the depth and diversity of the comparisons. Comparative statistical analysis is the core of this study. Therefore, if the number of these combinations is increased, many more connections between different variables might become visible. We have conducted analysis on a number of variables, but there are still many more others that would potentially yield important results. For example in this study, only utterances containing CS were classified according to their sociolinguistic objectives. Extending this labeling to the whole data could not be possible, as it would require a tremendous amount of work and considerably more time. Likewise Labov's observation in Martha's Vineyard Island (1933- 1961) study, it might take years to discover some sociolinguistics facts, but it is always worth trying new comparisons until discovering the yet unknown reasons.

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