

# Aspects of bilingualism

Code-switching, syntactic and semantic development in a bilingual child

Scholarly paper

English 61-90 hp

Högskolan i Halmstad

Spring 2009

Author: Kajsa Forslund

Supervisor: Chris Allen

## **Abstract**

The essay deals with different definitions of bilingualism and why people become bilingual. Both positive and negative aspects of bilingualism are considered. It also deals with the term code-switching and when bilingual people code-switch. The material used in the essay comes from the on-line CHILDES corpus of child language. The charts and the graph in the essay have been produced from a study made by the author of this essay. This study includes a bilingual girl of the age one year and three months up until the age two years and seven months. It includes the mean length of her utterances, how much the child uses the different word classes and different semantic groups, as well as how much the child code-switches in different ages. The results show that the mean length of utterances in Spanish most of the time is increasing, while the mean length of utterances in English is increasing until the child is just over two years old and then it fluctuated considerably.

Keywords: Bilingualism, code-switching, children, CHILDES database.

# Table of contents

<b>1. Introduction</b>	<b>5</b>
1.1 Background	
1.2 Aim	5
1.3 Literature review	5
1.3.1 Definitions of mother tongue and bilingualism	6
1.3.1.1 Definitions of mother tongue	6
1.3.1.2 Definitions of bilingualism	6
1.3.1.3 Skutnabb-Kangas' definition of bilingualism	7
1.3.1.4 Definitions based on competence	8
1.3.1.5 Definitions based on function	9
1.3.1.6 Definitions based on attitudes	10
1.3.1.7 Equal fluency as a bilingual?	10
1.3.2 Where and why are people bilingual?	11
1.3.2.1 Where can bilingualism be found?	12
1.3.2.2 Why are people bilingual?	12
1.3.3 Different categories of bilingual people	13
1.3.3.1 Elite bilinguals	13
1.3.3.2 Children from linguistic majorities	14
1.3.3.3 Children in bilingual families	14
1.3.3.4 Children from linguistic minorities	15
1.3.4 Mixing language and code-switching	16
1.3.4.1 When do people code-switch?	18
1.3.5 Simultaneous and consecutive bilingualism	19
1.3.5.1 Different aspects of development	20
1.3.6 Theories of bilingual development	20
1.3.6.1 The unitary system hypothesis	21

1.3.6.2 The separate systems hypothesis	21
1.3.7 Negative and positive aspects	22
1.3.7.1 Aspects of bilingualism	22
1.3.7.2 Interference	23
1.3.7.3 Losing language	24
<b>2. Methodology</b>	<b>25</b>
2.1 Data collection	25
<b>3. Results</b>	<b>28</b>
3.1 Overview	28
<b>4. Discussion</b>	<b>35</b>
<b>5. Conclusion</b>	<b>38</b>
<b>References</b>	
<b>Appendix 1</b>	

# **1. Introduction**

## **1.1 Background**

At the beginning of the 21<sup>st</sup> century it is estimated that at least half of the world's population was bilingual (Saville-Troike 2006: 8). The percentage differs because it depends on how researchers define bilingualism and the complex relationship between a language and a dialect. Bilingualism exists in almost all countries in the world, in all different classes of society and in all age groups (Grosjean 1982: preface). There is no simple definition of bilingualism. Often the term includes both trilingualism and multilingualism (Byram and Brumfit 2000: 82).

## **1.2 Aim**

The essay considers whether the mean length of utterance (henceforth MLU) development in English mirrors that in Spanish for a bilingual English/ Spanish child. Furthermore differences in the expansion of semantic groups in English and Spanish for the same child are highlighted upon as well as whether differences exist in code-switching between the two languages. Another part of the essay shows differences in the expansion of word classes in English and Spanish for the same child.

## **1.3 Literature review**

In this essay definitions of bilingualism and code-switching will be considered. Some theories of bilingualism will also be presented.

### 1.3.1 Definitions of mother tongue and bilingualism

In this section a short definition of mother tongue will be presented. After that different definitions of bilingualism will be discussed.

#### 1.3.1.1 Definitions of mother tongue

According to Skutnabb-Kangas (1981: 26) the mother tongue is identified on the bases of four different criteria, which are origin, competence, function and attitudes. The origin has to do with the language the person has learnt first which is a primarily sociological criterion. Competence is the language that the person knows best and that is a linguistic criterion, while the language that the person uses the most is function which is essentially drawn from sociolinguistics. The last one is attitudes, which is the language that the person identifies itself with and the native language that other people identify the person with. This all has to do with socio-psychology, individual-psychology and sociology. However sometimes a person does not fulfill all of these criteria but this is a definition not adopted Skutnabb-Kangas (1981: 26) for example.

#### 1.3.1.2 Definitions of bilingualism

It is difficult to define who is bilingual (Byram and Brumfit 2000: 82) since the definitions of bilingualism are almost as many as the researchers who have studied bilingualism. Each researcher uses a definition that suits their field of studies. In that way all definitions are arbitrary, but when other researchers have made generalisations with regards to other studies then confusion can arise. These kinds of confusions sometimes involve negative consequences for ongoing research. Choosing the right definition depends on what the researcher wants to investigate. What is important is the fact that there is no universal definition of bilingualism therefore some typical definitions will be dealt with (Skutnabb-Kangas 1981: 84).

A category of bilinguals is 'semilinguals', which are also sometimes called 'double semilinguals'. They are viewed to have insufficient competence in either language. Semilinguals are considered to have a small vocabulary and incorrect grammar and think about language production all the time. At the same time they think it is difficult to think and express emotions in either language (Byram and Brumfit 2000: 83).

### 1.3.1.3 Skutnabb-Kangas' definition of bilingualism

As well as many other researchers Skutnabb-Kangas (1981: 93) has her own definition when it comes to bilingualism. Her definition is divided into four subfields and these cover several different aspects of bilingualism and that is why her definition is in focus in this essay. In her definition the immigrant children are in focus.

All the definitions have to do with a person who:

- Origin
- has learned two languages from the beginning, in the family, by native speakers
  - has been communicating in parallel with two languages from the beginning
- Competence
- totally controls two languages
  - controls two languages as a native speaker
  - controls two languages equally good
  - can produce significant utterances in their second language
  - has at least some kind of control over the other language' grammatical structure
  - has been in contact with another language

- Function      ○ can use two languages in most situations
  
- Attitudes     ○ identifies themselves as bilingual or with access to two cultures
  
- is identified by others as bilingual (Skutnabb-Kangas 1981: 94).

#### 1.3.1.4 Definitions based on competence

The following three subheadings will focus on definitions of bilingualism based on competence, function and attitudes.

Linguists and psychologists usually define bilingualism by the way the bilingual control both their languages, ie the bilingual's language competence (Skutnabb-Kangas 1981: 84). Bloomfield (1933: 56) quoted the classical definition of bilingualism in Skutnabb-Kangas: "native-like control of two or more languages" (1981: 85), which means that a person should be able to use two or more languages as well as a native speaker. Braun (1937: 115) cited in Skutnabb-Kangas (1981) states that a person should be able to have a complete command over two or more languages. These are two of the strict definitions, but there are also other definitions such as the one made by Haugen (1968) cited in Skutnabb-Kangass (1981: 85). Haugen asserts that when a person starts making complete meaningful utterances in the other language bilingualism starts (Skutnabb-Kangas 1981: 85).

Some researchers claim that a person just needs basic knowledge and control of the grammatical structure of the other language. Skutnabb-Kangas (1981: 85-86) refers to Macnamara (1969: 82) who states that language skills can be split into four areas; understanding, speaking, reading and writing and these can be divided into four different categories; phoneme, lexicon, syntax and

semantics. Macnamara believes that someone is bilingual if the person controls one of the four parts even to a minimal degree in its second language. This means that a Swedish person, who knows the Greek alphabet, without being able to understand or read the words they make, is bilingual (Skutnabb-Kangas 1981: 85-86).

Definitions of bilingualism are needed to be able to compare the differences between different bilinguals. The linguistic competence should be able to be measured in order to obtain similar or different results. However the definitions of competence are either too narrow or too wide, and than almost all people are bilingual. The definitions that are between these two have difficulties as a basis for measuring the competence on each area. The demand of the four areas of language competence; understand, speak, read and write should be capable of definition and measurement (Skutnabb-Kangas 1981: 86).

Another difficulty when it comes to define the competence of a person is whom the person should be compared to. The question is who sets the norm of the demands there are for a person to be bilingual. The easiest situation is a person in the same age with the same social background, intellectual abilities, social group etc, but than there would be different demands for different people (Skutnabb-Kangas 1981: 87).

#### 1.3.1.5 Definitions based on function

Some researchers have realized that it is impossible to describe a linguistic competence by itself since language is a social phenomenon (Skutnabb-Kangas 1981: 91). Sociolinguists are more interested in what way a person uses or could use its language. They define bilingualism through function of language in a bilingual society or in a bilingual individual (Skutnabb-Kangas 1981: 84).

During the 1950s and 1960s the function of the language started being observed since researchers started to be interested in bilingual people (Skutnabb-Kangas 1981: 88). The classical definition in Skutnabb-Kangas (1981: 89) comes from Weinreich (1953: 1) who states that if a person alternatively uses two languages the person involved is bilingual. This was in the 1950s and in the 1970s Oksaar (1971: 172) defined it, in Skutnabb-Kangas 1981: 88-89), as a person who in most situations can use two languages to communicate and switch between languages if necessary.

#### 1.3.1.6 Definitions based on attitudes

Trained social workers and social-psychologists define bilingualism through attitudes because they are interested in how the speaker itself and its surroundings relate to their languages (Skutnabb-Kangas 1981: 84). In this definition a bilingual can investigate how a bilingual identifies with both languages and/or the different cultures. Skutnabb-Kangas (1981: 92) refers to Malmberg (1977: 135) who claims that the definition of attitudes also can include other people's judgement of the speaker; do people around the person accept the bilingual as a native speaker of both languages. However when bilinguals for example are tired or unmotivated their language will become worse, as well as if the person has not been using the language for a while or is speaking with someone who has another status. The same is for the person who judges if the person is bilingual or not. In one country someone might see the person as bilingual and in another country a person will not do so (Skutnabb-Kangas 1981: 92-93).

#### 1.3.1.7 Equal fluency as a bilingual?

In this subsection it will be discussed if bilingual people are equally fluent in both their languages and if not why that is the case. There is something called dominant language and that is the language that tends to be the strongest. This language is not always the first or native language of

the bilingual (Byram and Brumfit 2000: 82). However a bilingual can also be fluent in both languages without being able to function as a monolingual in either of their languages (Romaine 1995: 320). On the other hand Grosjean believes that: “balanced bilinguals, those who are equally fluent in both languages, are probably the exception and not the norm” (1982: 235).

There is a reason why many bilinguals do not become fluent in both their languages since it depends on the level of fluency that a bilingual needs to be able to communicate. Some people become equally fluent in both languages, while others do not since in their lives they just need to be really fluent in one language. It can also be that a bilingual does not continue to study one of the languages but still can use it in oral conversation (Grosjean 1982: 307). However people are still called bilingual, since most of the once that are bilingual regularly use both languages, even if they do not have native-like competence in both languages (Byram and Brumfit 2000: 82).

There are several factors that influence which language bilinguals chose. Some of the participant's factors are: language proficiency and preference, socioeconomic status, occupation, ethnic background, power relation and outside pressure. Some of the situation factors are: location, presence of monolinguals and degree of formality, while content of discourse has to do with topic and type of vocabulary. The last thing that is important is the function of interaction which has got to do with raising status, creating social distance and excluding someone (Grosjean 1982: 136).

### 1.3.2 Where and why are people bilingual?

This section presents where in the world bilingual people live and how widely spread bilingualism is. It also shows the different reasons to why people are bilingual.

### 1.3.2.1 Where can bilingualism be found?

In many parts of the world, especially in Africa and Asia, many countries are bilingual and multilingual. In the Western part of the world many countries are seen as being monolingual countries even though many languages are spoken in the different countries. In many European countries and in the United States bilingualism is seen as being temporary and has to do with immigration (Fromkin, Hyams and Rodman 2003: 374-375).

The languages in many countries are not equal in prestige. In Haiti the vast majority – the poor and uneducated – speak Creole, while the most prestigious language is French. In Peru the language of the rural poor Indians is Quechua and Spanish is the language the educated and urbanized middle class use (Grosjean 1982: 121).

According to Romaine (1995: 23), 25 out of 36 countries in Europe were officially monolingual in 1995. However in most of the countries there are minority languages. Some countries in Europe that have two or more official languages are Switzerland, Belgium, Finland and Greenland (Otterup 2005: 17). Switzerland has four official languages, French, German, Italian and Rhaeto-Romanic. This does not mean that all people know all of the languages. Some people are monolingual, some bilingual and even some are multilingual (Otterup 2005: 15).

### 1.3.2.2 Why are people bilingual?

People become bilingual for different reasons; people move because of the political situation in the country, the social or economical situation, as well as cultural and educational factors. In past centuries military invasions and colonization was common and as a result of these upheavals

languages were spread to different parts of the world. Almost all over Central- and South America people speak Spanish because of the Spanish conquest of the New World. Similarly many people from Ireland moved to the United States because of the potato famine in the nineteenth century (Grosjean 1982: 30-32).

An important reason for bilingualism is the movement of people. This leads to intermarriage, marriage between two immigrants from different countries or marriage between an immigrant and a native person (Grosjean 1982: 33). As for today many students are educated in another language than their native language; in India, Pakistan and many African states students are educated in English (Grosjean 1982: 35). Almost all children in Papua New Guinea are educated in English, since it is the legacy of the country's colonial heritage (Romaine 1995: 25).

### 1.3.3 Different categories of bilingual people

There are four different categories of bilingual people and in this section there will be an overview of these four categories.

#### 1.3.3.1 Elite bilinguals

Elite bilingual people usually make the decision themselves to become bilingual. They are middle and upper class children and young people that for example travel, live a few years abroad, children of academics and diplomats who work for different international organs. These children have no commands to become bilingual as long as their parents move voluntarily. When children learn the new language they are usually encouraged and people are patient with them in the learning situation since they want to be able to communicate with the children (Skutnabb-Kangas 1981: 78-79).

They are being taught both when they come in contact with people that only know the target language and if they are old enough also at school. However if these children do not succeed with learning the target language it is not a disaster since then they can probably spend time with people who speak their language. This kind of bilingualism is seen as something positive (Skutnabb-Kangas 1981: 79).

### 1.3.3.2 Children from linguistic majorities

Children from linguistic majorities either learn a foreign language, for example in Sweden when children learn English, German, Spanish and/or French, or children from a linguistic majority that are taught in a foreign language. The last group of people are the ones that are being focused on in this category. This can be done by using the minority language as the teaching language at school, which means that also the children who speak the majority language will be bilingual. In this case the minority language might become used more in public. This is being done in Canada where the children whose majority language is English are studying at French immersion schools. In many former colonized African states people can be taught at school in a prestigious minority language and in that way become bilingual. If someone fails to become bilingual that child can change to a school where the majority language is being used and they can also function in society with their own language (Skutnabb-Kangas 1981: 80-81).

### 1.3.3.3 Children in bilingual families

Children that come from bilingual families, where one of the parents speak a majority language and the other parent a minority language can learn both languages, but the children have no pressure from outside the family to become bilingual. But if the parents speak two different minority

languages the child might need to learn to speak three languages. Often the parents want the child to learn their language. There is a risk that the child does not become totally bilingual and the child might therefore get a worse relationship with the parent who speaks the language the child does not know that well. Then it is difficult for the parent to teach the child its culture and the child will have difficulties to communicate with people when/if they go to the parent's home country (Skutnabb-Kangas 1981: 81-82).

#### 1.3.3.4 Children from linguistic minorities

The last group is children from linguistic minorities who are under strong pressure to become bilingual or at least learn the language of the society. Usually the parents want the children to learn the majority language to get better opportunities in life than what themselves have had. The children then have a possibility to become well educated and get a better economy. Of course the parents also want their children to know their language. There are many risks for these children since they will not become attractive on the labour market if they do not learn the majority language and they will not have the opportunities in life that they would with the majority language (Skutnabb-Kangas 1981: 82).

On the other hand they still want to keep their culture, but their language might not have the same official authorities as the majority language and at the same time they might be oppressed both linguistically and politically-economically. In this case they are forced to become bilingual to survive in the majority society (Skutnabb-Kangas 1981: 78).

However if they learn the majority language and lose the ability to use the language that the parents speak they will not be able to have contact with their families and their culture. There is also a

major risk of these children becoming rootless and having difficulties with their self-identity. This means that these children have the strongest pressure to become bilingual, but they also lose the most if they do not succeed becoming it. They do not themselves choose to become bilingual and this group is the largest one among the bilinguals in the world (Skutnabb-Kangas 1981: 83).

#### 1.3.4 Mixing language and code-switching

In this part of the essay code-switching is in focus. Code-switching will be defined and there will also be a discussion of when and why people code-switch.

In early research into bilingualism it was viewed as negative to mix the languages. Researchers thought that the child was either confused or having difficulties with the two languages. Many parents even stopped raising their children as bilinguals when this kind of problem emerged. Some of the parents were even advised to do that by educators or psychologists. Nowadays it is seen as normal to mix the languages to some extent in the early bilingual childhood (Fromkin, Hyams and Rodman 2003: 375).

Code-switching is when a person moves back and forth between two different languages within the same sentence or discourse (Fromkin, Hyams and Rodman 2003: 577) and it is seen as a sign of strong linguistic competence. It is a part of the speaker's pragmatic ability and the better a person becomes in its both languages the more they code-switch. It is something that is positive and should not disappear (Håkansson 2003: 125). Small bilingual children at the age of two to three years can repeat an utterance in their other language when they notice that what they have said in their first language has not been understood by the listeners (Ladberg 1996a: 17).

The most common form of code-switching, both for children and adults is to use words from another language. Different word classes are being used when code-switching, but the most common word class used is nouns, followed by verbs, adverbs and pronouns (Håkansson 2003: 125). Nouns are being used the most since they are relatively free of syntactic restrictions (Romaine 1995: 125).

Code-switching is an area where both sociolinguistics and psycholinguistics are involved in research. The first category sees it as speech variations that have to do with group behaviour and psycholinguistics are seeking knowledge of how speech is stored and processed (Håkansson 2003: 126).

People use code-switching when they move between their different languages. Sometimes bilinguals code-switch when they do not know a word or an expression in one language (Byram and Brumfit 2000: 83). Code-switching is also used when they do not have knowledge of one topic in one of their languages or when the language they are using does not have the items or the appropriate translation of the words (Grosjean 1982: 149-150).

People can also mark relationships, signalling status and situation, respect and intimacy while code-switching (Byram and Brumfit 2000: 83). Bilinguals usually also change language when a third person approaches if the people know that the new person does not know the language they are speaking at the moment (Grosjean 1982: 320). At the same time they can change language to exclude someone from a conversation or show that they are angry (Grosjean 1982: 152).

#### 1.3.4.1 When do people code-switch?

A monolingual person can switch between for example informal and formal speech while bilinguals can choose between different varieties in one language, change language or do both (Grosjean 1982: 128).

Few bilinguals have the same competence as a monolingual speaker in either of their languages, because bilinguals use their languages for different functions and purposes and with different people (Byram and Brumfit 2000: 82). The purposes of the conversation, the interlocutor, the topic are some situations where bilinguals choose their language (Grosjean 1982: 283). Some people may use one language at home and within its religion and another one at school (Byram and Brumfit 2000: 82). While other people use different languages at home. There it depends on who the person is talking to (Ladberg 2000: 75).

According to Grosjean it is: “the environment and the culture as a whole that cause the bilingual to change languages, along with attitudes, feelings, and behaviours – and not language as such” (1982: 284). Two people who are friends or relatives and are bilingual and know the same languages usually have agreed on which language of interaction they use if it is not in a specific situation or topic that needs a specific language (Grosjean 1982: 136).

Different languages can also be used when it comes to different emotions. A Sami woman says that Finnish is her ‘playing’ language since she learned it while playing with Finnish children. Swedish on the other hand she learned at school where there was a very strict atmosphere. She has always been afraid of saying something wrong which makes it difficult to be playful in Swedish (Ladberg 1996b: 31).

Some people use one language when they are around other people not to stand out from the people around them. When the same people are at home they switch to another language (Grosjean 1982: 138-139).

### 1.3.5 Simultaneous and consecutive bilingualism

In this section the two different definitions of bilingualism, according to when a person starts to become bilingual, is in focus, as well as different aspects of development in the different languages.

When a child acquires two languages from birth it is often called ‘simultaneous bilingualism’ or ‘bilingualism as a first language’. From three years of age it is instead called ‘consecutive bilingualism’ (Byram and Brumfit 2000: 83). Children can develop simultaneous bilingualism if the minority language is used at home and the majority language is used widely outside the home. On the other hand Romaine (1955: 181) is cited in Hagberg-Persson (2006: 20) who says that there are advantages to define simultaneous bilingualism only if the child is exposed to two languages from birth. Otherwise Romaine believes that what someone learns in one language can have affects on a language that is learned later on.

Another researcher called Watson (1991: 34) is quoted in Hagberg-Persson (2006: 20) where Watson regards the fact that most simultaneous bilinguals are not aware of the fact that the languages have two different speech systems. When the child is around two years old it starts to realize this and than a process of differentiating the two different languages start. The differentiating is difficult to study since often one language dominates over the other.

Most of the study cases of simultaneous bilingualism have been done by the parents themselves (Grosjean 1982: 180). In the earliest studies the parents have written well documented diaries of their children's development. Often the structural aspects of code-switching were written down. There was seldom any information about the situation when the code-switching took place. More recent studies involve tape recording and than it is easier to see the communicative situation as a whole (Håkansson 2003: 126).

#### 1.3.5.1 Different aspects of development

Researchers have found different aspects of development in the two different languages bilinguals speak and these aspects are often found in bilingual children. Grosjean maintains that these aspects are:

the initial mixed language stage; the slow separation of the two language systems and increasing awareness of bilingualism; the influence of one language on the other when the linguistic environment favors one language; the avoidance of difficult words and constructions in the weaker language; the rapid shift from one language dominance to the other when the environment changes; the final separation of the sound and grammatical system but the enduring influence of the dominant language on the other in the domain of vocabulary and idioms" (1982: 181).

#### 1.3.6 Theories of bilingual development

There are two theories of bilingual development; the unitary system hypothesis and the separate systems hypothesis. These two theories are in focus in this section.

### 1.3.6.1 The unitary system hypothesis

The unitary system hypothesis means that from the start the child only has one lexicon and one grammar. The mixing of utterances has support by this hypothesis. From the beginning the child has a different vocabulary for the different languages. A child who only hears Spanish during meals will first learn the Spanish words for different food (Fromkin, Hyams and Rodman 2003: 376).

A bilingual child has a smaller vocabulary in each of their languages than a monolingual child has since a child can just learn an approximate amount of words a day and a bilingual child has two languages to learn. Therefore the bilingual child may have more lexical gaps than a monolingual and the gaps may be different in the two languages. Research into bilingual children's vocabulary has shown that even if they do not know exactly the same words in both languages, the overlapping makes it unlikely that the unitary system hypothesis can work (Fromkin, Hyams and Rodman 2003: 376).

### 1.3.6.2 The separate systems hypothesis

The separate systems hypothesis claims that the child builds one separate lexicon and grammar for each language. When someone tests this system on a bilingual child the person needs to look at how the child uses grammar that is different in the two languages. If both languages have the SVO (subject, verb, object) word order than it does not work to test the child, but when there are differences between the grammars of the languages several studies have shown that the children learn the different rules of each language (Fromkin, Hyams and Rodman 2003: 376).

Bilingual children who speak Spanish and English or French and German have been using the word order in the right way and they have also used the correct agreement morphemes for each language. Studies have also shown that children use two distinct sets of phonemes and phonological rules for their languages. But still children mix the languages. One suggestion is that they have lexical gaps; if a child does not know the word in one language it uses the word in the other language. Another possibility is the fact that the child is code-switching in the same sentence (Fromkin, Hyams and Rodman 2003: 376-377).

Bilingual children learn how to use the different grammars at a quite early age. A two-year old German-Italian bilingual did not use infinitives when speaking Italian, but used it when speaking German. German-English bilingual children skip the verbal inflection in English and use the infinitive in German, as well as young Spanish-English bilinguals drop the English verb endings, but use the Spanish ones (Fromkin, Hyams and Rodman 2003: 377).

### 1.3.7 Negative and positive aspects

In this part of the essay negative and positive aspects are in focus as well as the definition of interference and in what way it is a problem for bilingual people. This part also shows that bilingual people can lose a language.

#### 1.3.7.1 Aspects of bilingualism

During the late 1800s and beginning of 1900s a great deal of research was done where bilingualism was seen as something negative (Skutnabb-Kangas 1981: 70). The shifts between positive and negative attitudes have been the result of philosophical, political factors and/or scientific

development (Saville-Troike 2006: 93). In a book written by Otterup (2005: 14) Peals's and Lamberts (1962: no page-reference) classical study from 1962 states that the boundary line between negative and positive is set when they compared English-French bilinguals with monolingual English speakers. Peal's and Lambert's conclusion was that the bilinguals' result showed positive effects in the children's mental flexibility and their ability to comprehend things (Otterup 2005: 14). Since the 1960s research has shown that multilingualism has positive effects on intellectual functions (Saville-Troike 2006: 93).

Quite recently there has been negative asserts about multilingualism which says that there is a limitation of capacity when it comes to language acquisition and maintenance. According to Saville-Troike there has been: "evidence that simultaneous bilingualism in childhood may result in a narrower range of lexical development in either language, and that intensive and continued use of L2 may reduce ability of L1" (2006: 93).

### 1.3.7.2 Interference

Many bilinguals show signs of interference in one or both of their languages. Interference is when someone uses features or elements from one language in the other language. There are different parts of language where there can be interference. Some examples are interference in pronunciation, presence and absence of determiners and in the syntax of languages (Grosjean 299-305).

It is important to remember that interference in one area can lead to interference in other area. For example when a person has problem with intonation it may affect some other area. Syntax and semantics might be affected by lexical borrowing (Romaine 1995: 53).

### 1.3.7.3 Losing language

The ability to use a language may change if a person is not around people who talk the language as well as if for example relatives who only know one language come and visit. A person may lose fluency in a language if he or she loses contact with those who he or she speaks the specific language to (Byram and Brumfit 2000: 82). For example if a Chinese American moved from the part in New York where many people speak Chinese to where few or no people speak Chinese they might lose their Chinese (Romaine 1995:40).

People do not lose the language – instead it is still left in the brain, but it is more or less available. A bilingual once said that language can become rusty (Ladberg 2000: 49). It is important to realize that a person's mother tongue or bilingualism is not stable, instead it should be thought of as a process where changes are possible. Those changes should not be seen as something negative if it is the choice of the person itself (Skutnabb-Kangas 1981: 26).

All researchers have different definitions of bilingualism. It can be based on different things depending on who is making the study. Some different definitions are competence, function and attitudes. There are also different categories of bilingual people; elite bilinguals, children from linguistic majorities, children in bilingual families and children from linguistic minorities. What is code-switching and when is it being used has also been a part of the essay, as well as two different theories of bilingual development; the unitary system hypothesis and the separate systems hypothesis.

## 2. Methodology

### 2.1 Data collection

The raw data for this paper was drawn from the CHILDES database. From the part of the database that has been used for this essay there are transcripts with conversations between children, their friends and caregivers. One of the folders there is called bilingualism from which a study of a bilingual child who speaks English and Spanish was obtained. The girl was born the 24<sup>th</sup> of June 1985. The study is done from September 1986 until January 1988 and at that time the target girl was one year and three months to two years and seven months<sup>1</sup>.

In English there are eleven conversations and in Spanish there are nine conversations. They are between 5-47 minutes long, but most of them are 10-33 minutes. All the conversations took place in the child's home in Brighton, England. The research has been done at Sussex University in Brighton, England. All of the data was audiotaped and some was also videotaped. Different people are talking with the child; her mother, her father, her grandmother, once a health visitor and sometimes other children. Her father is Spanish and her mother is English, but her mother also knows Spanish. The people who are involved are playing with toys, looking at books and/or cards. Sometimes they are also eating and drinking<sup>2</sup>.

The mean length of utterances (MLU) was counted for each conversation. MLU is used as a sign of level of syntactic development (Dobbinson, Griffiths and Trott 2004: 51). When counting MLU the average length of a child's utterance is in focus. The language of the child is affected by the topic and the interactional dynamics of the conversation. The units that are being counted are morphemes

---

<sup>1</sup> <http://childes.psy.cmu.edu/data/>

<sup>2</sup> <http://childes.psy.cmu.edu/data/>

(Dobbinson, Griffiths and Trott 2004: 55). For example if the child is saying the noun *cat* it is counted as one morpheme, but if the child instead says *cats* it is counted as two morphemes (cat-s). In Spanish the verbs are being inflected after the person, for example the word *tener* (to have) is inflected like this: *tengo* (I have), *tienes* (you have), *tiene* (he, she, it has), *tenemos* (we have), *tenéis* (you have) and *tienen* (they have). All of these different word forms have two different morphemes. On the other hand in Spanish, personal pronouns are not used that often since the inflection of the verbs show which person that is talked about. If the girl said the same morpheme twice or three times a row it is counted as two and three morphemes.

The study has also been about which different word classes that the child is using. Since she used many expressions such as *ah* and *oh*, one category is named inserts. These words are included in the category of inserts; *ah*, *oh*, *uh*, *eh*, *mmm*, *yes*, *no*, *okay*, *hello*, *bye* and *dear* in both languages.

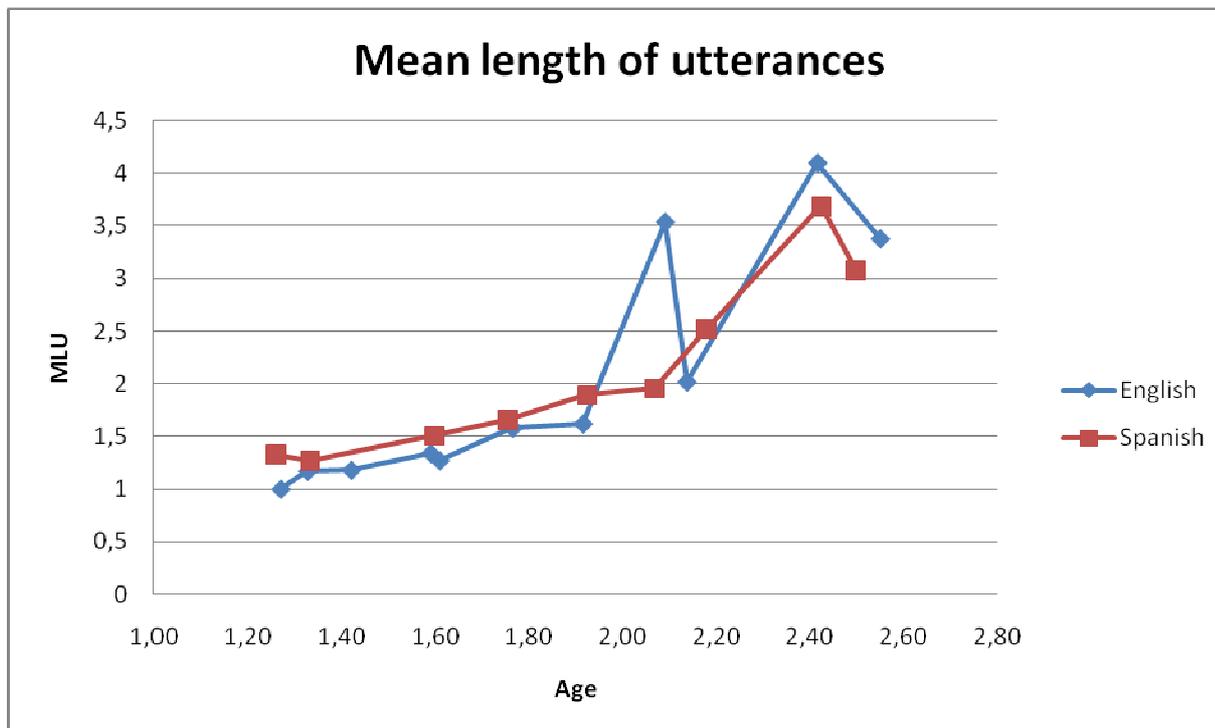
Spanish speakers use determiners when they use nouns to mark if it is male or female, for example *el niño* (boy) and *la niña* (girl). Therefore one category is named determiners. Even if these categories are included the charts are still called word classes. There is one chart for English and another one for Spanish. In each of the charts it is shown how many times a specific category has been used in each age.

The study also includes different semantic groups, where the nouns have been divided into groups that the author of this essay has decided. Some of the semantic groups are family, animals and abstract objects. The chart of the semantic groups are built the same way as the once for word classes. Both the word classes and semantic groups are shown in charts where the expansion and decreasing of different categories can be seen. There is also a chart on how much the child is code-switching. The result of this data is shown in percent.

In the CHILDES database the age of the child was shown as follows; 1;3.08 meaning that the child was one year, three months and eight days at the specific time. The computer did not understand what 1;3.08 meant when making the graph of MLU and then the computer made the graph in the wrong way. Therefore all age-data had to be changed. The months and days instead became days only, which means that three months and eight days becomes 100 days. Then 100 days was divided with 365, since we have 365 days a year. When counting this way 1;3.08 becomes 1.27 years. All of the different ages are calculated in this way.

### 3. Results

#### 3.1 Overview



As can be seen in this graph the MLU for English and Spanish are not the same. From the beginning the MLU of Spanish is a bit higher than the MLU of English. The Spanish is increasing the older the child gets with the exception of the last time it has been investigated.

However when it comes to English the first time it is going down, only slightly, is when the child is 1.61 years. From the age of 1.92 years the MLU is going up and down. A part of why this is the case is because the child was singing some long and difficult songs when she was 2.09 and 2.42 years.

## Word classes in English

Age	Nouns	Main Verbs	Adj	Adv	Pro	Prep	Num	Conj	Aux Verbs	Ins	Det
1.27	5									3	
1.33	3	1								3	
1.42	7	3			2					2	
1.59	56	6								15	
1.61	90	20	5	2				1		38	
1.76	164	29	6	2	9	3	8			42	5
1.92	139	9	1	5	1		10	10		32	
2.09	132	89	11	11	49	2	4	1	4	40	6
2.14	31	35	11	17	15	3			4	14	
2.42	131	168	39	108	142	36	9	17	31	69	36
2.55	57	51	30	31	59	8	10	2	15	34	19

How many times the word classes have been used in each conversation:

1-20
21-40
41-70
71-100
101-150
150-

As can be seen in the chart above the word class that is expanding the most is the nouns. In all conversations except for two that is the word class that is the most represented. When the child learns a new word in a new word class it does not mean that she will continue using that word class

in her next conversation. This can be seen in four different places when it comes to pronouns, prepositions, conjunctions and determiners.

The child first starts to use nouns, inserts and main verbs. Then her vocabulary expands with the use of adjectives, adverbs, conjunctions and pronouns, followed by prepositions, numerals and determiners. It is not until she is 2.09 years that she starts using auxiliary verbs.

## Word classes in Spanish

Age	Nouns	Main verbs	Adj	Adv	Pro	Prep	Num	Conj	Aux Verbs	Ins	Det
1.26	1									1	
1.33	9			10						16	
1.60	72	1	2	6	2		17			8	
1.75	97	15	5	13	2		5	4		3	3
1.92	147	17		22	7		2	1		17	13
2.07	98	17	2	5	14	3	1	2		39	10
2.18	81	123		46	71	31		4	1	117	35
2.42	152	181	15	81	66	36	10	33	1	193	46
2.50	97	107	1	42	35	31	9	10	1	73	36

How many times the word classes have been used in each conversation:

1-20
21-40
41-70
71-100
101-150
150-

The word class that is expanding the most is nouns except for during the last three conversations; both inserts and main verbs are expanding increasingly during the last conversations.

In Spanish the child started using nouns, inserts and adverbs the earliest. These word classes were followed by main verbs, adjectives, pronouns and numerals, and then conjunctions and determiners.

The child is over two years old when she starts using prepositions and auxiliary verbs. The fact that she is using very few auxiliary verbs is because the Spanish language has very few auxiliary verbs compared to the English language.

### Code-switching English to Spanish

Age	1.27	1.33	1.42	1.59	1.61	1.76	1.92	2.09	2.14	2.42	2.55
%	0	0	0	18.75	17.03	15.99	5.79	0	47.66	0	0

62.5 percent of the code-switching the child was using nouns, 14.29 percent she was using numerals and 9.52 percent main verbs. Other than that she was using all of the different word classes only a few times each except for auxiliary verbs that she was not using at all.

### Code-switching Spanish to English

Age	1.26	1.33	1.60	1.75	1.92	2.07	2.18	2.42	2.50
%	7.69	9.10	29.36	18.29	13.10	10.34	3.59	3.73	4.71

Nouns is the word class that is mostly represented when it comes to code-switching from Spanish to English, 46.30 percent are nouns. 20 percent are main verbs, 17.77 percent are inserts and 7.04 percent are adverbs. All of the other word classes are represented only a couple of times except for auxiliary verbs which there are none.

## Semantic groups in English

Age	Concrete Objects	Animals	Family-members	People	Food and drinks	Locations	Abstract Objects
1.27	1	1	3				
1.33	1		2				
1.42	6	1					
1.59	27	1	21		3		3
1.61	42	2	21	1	23		
1.76	81	15	42	22	4		
1.92	36	34	34	10	22	2	1
2.09	33	3	26		14	11	9
2.14	1	2	14	4	5	3	2
2.42	62	4	19	15	5	13	13
2.55	21	15	2	1	6	8	4

The number of times the semantic groups have been used in each conversation:

1-20
21-40
41-70
71-100

Since concrete objects are such a wide semantic group, that is the group that expands the most.

Family members is also a group that expands a lot especially up to the age of 2.09.

Concrete objects, animals and family members are the semantic groups that the child starts using. The semantic groups that follow are food and drink, people, abstract objects and locations. Abstract objects is first used in the conversation when the child is 1.59 years, but is not used in the following two conversations.

### Semantic groups in Spanish

Age	Concrete Objects	Animals	Family-Members	People	Food and drinks	Locations	Abstract Objects
1.26			1				
1.33			9				
1.60	19	18	22	10		3	
1.75	55	11	21	4	5		1
1.92	69	10	33	16	11	6	2
2.07	31	15	22	5	9	6	10
2.18	30	6	17	21	1	4	2
2.42	29	7	12	36	34	6	27
2.50	34	16	27	12	1	6	1

How many times the semantic groups have been used in each conversation:

1-20
21-40
41-70

In Spanish the semantic group that is expanding the most is concrete objects, but that is not the group that is being used from the first conversations. In the first two conversations only the group family members is being used. Then it takes four months before the child starts using concrete objects, animals, people and location, followed by food and drinks and abstract objects.

As can be seen in the graphs and charts there is a difference between English and Spanish. The curves of the MLU are different in Spanish and English. As well as the difference of which order the child starts using the different word classes in the language. The child is also code-switching during all ages in Spanish, which is not the fact in English.

#### **4. Discussion**

The MLU in Spanish is increasing from the early age until the child is 2.42 years, then it is going down a bit. The MLU in English is instead only increasing until the child is 2.09 years. After that it is really going up and down. First from 3.54 utterances down to 2.14, up to 4.1 and down to 3.38 utterances. One reason for the two peaks in the graph in English is that she sings during those two conversations. Another fact is that the child's vocabulary is expanding and she also starts using longer sentences.

As can be seen the MLU development in English does not mirror the MLU development of Spanish. The main reason for this is that the subject lives in England, where the language is English, and she is more exposed to English than Spanish. Most of her playmates, her grandmother and the health visitor do not know Spanish and therefore in those conversations the main language is English. Her grandmother is attending several of the conversations and when the child's grandmother and mother are talking to the child the language they speak is of course English, even

if the child is code-switching now and then. The only conversations when the main language is Spanish are the conversations when her father and sometimes her mother are the only ones taking part in the conversations with the child.

The child starts using both nouns and inserts in both languages early in its conversations, but then she starts using main verbs in English while she starts using adverbs in Spanish. The word *no* in Spanish means both *no* and *not* in English and the child starts using the word *no* as an adverb early in Spanish. Two other major differences are the fact that the child starts using main verbs three months later in Spanish than in English, as well as she starts using prepositions three months later in Spanish than in English. However when she does start using prepositions in Spanish she uses it much more than in English.

She also uses pronouns much more in English, but as mentioned previously the verbs in Spanish are inflected to show which person that is talked about and therefore they do not use pronouns in the sentences. Since Spanish uses determiners before their nouns those are being used much more in Spanish than in English. As well as the fact that Spanish almost does not have any auxiliary verbs makes it understandable that it is used much more in English.

As can be seen above the two languages are two different languages where some features in language are being used in one language and not in the other one. The differences are shown clearly when counting word classes in the different languages. Even if the child started using some word classes in different ages in the end she learned to use all the word classes.

The main difference in code-switching is the fact that the child code-switches from Spanish to English in each conversation, but not the other way. She is code-switching in 100 percent of the conversations in Spanish, but only in 45.45 percent of the conversations in English. This is one sign of the fact that English is her strongest language. In English she is code-switching in some ages the most, especially when she is 2.14 years. In Spanish the same happens when she is at the age of 1.60 years.

In both languages nouns was the word class that was used the most when code-switching. This may be due to the fact that nouns are the word class that has been used the most in the conversations. Romaine (1995:125) states that nouns are the most frequently occurring word class since they are relatively free of syntactic restrictions. It is also words that people use when trying to learn small children new words since many nouns; such as *lamp*, *juice* and different toys are around them.

Another word class that is being used a great deal when code-switching from English to Spanish is numerals. This has got to do with the fact that the child wants to show that it is able to count and sometimes she changes language when she counts. Code-switching is a part of the nature of a bilingual child. In these conversations the child does not understand that it is code-switching, as can be seen in one conversation where she does not understand that Joshua, her playmate, does not understand Spanish.

When it comes to starting to use a new semantic group there are two major differences between the languages; in Spanish the semantic group location is being used from the age of 1.60 years, but in English it is not being used until four months later. The semantic groups; concrete objects and animals are not being used until the child is 1.60 years in Spanish, while it is being used from the

first conversation in English. Abstract objects are being used more at the age of 2.42 years in Spanish than in English.

The semantic groups are expanding and increasing in both languages at different ages. I would say that this has to do with what the different conversations are about. When the child is learning nouns that are around her then of course there are many concrete objects involved. The same is true when the child wants the attention of her mother then she is saying mummy. Therefore I believe that the differences of when the child starts using different semantic groups have to do with the fact how the parents direct the conversation, especially in the beginning when a child learns to speak different words. When the child gets older it can be seen that the child is the one who directs the conversations.

It would appear that this target child is using one feature that is known to be common among bilingual people and that is the fact that one of the languages is being influenced on the other when one language is being favoured in the linguistic environment (Grosjean 1982: 181). For this child it is the Spanish that is being influenced by the English. However when the child gets older she will start to understand the differences of the languages and code-switch only in certain conversations and with certain people.

## **5. Conclusion**

Further research can be done where a comparison with two different children can be done when it comes to mean length of utterance and what type of word classes the children use. There can also be further research where code-switching takes a larger part than in this essay. Then different kind of

code-switching can be more deeply analyzed and a study on a bilingual child when it comes to code-switching can be made.

## References

Brumfit, C. and Byram, M. (editors) et al, 2000. *Routledge Encyclopedia of Language Teaching and Learning*. TJ International Ltd. ISBN 0-415-12085-3.

Dobbinson, S., Griffiths, P. and Trott, K. (editors), 2004. *The Child Language Reader*. Routledge, England. ISBN 0-415-28101-6.

Fromkin, V., Hyams, N. and Rodman, R., 2003. *An introduction to language*. Seventh edition. Heinle, United States. ISBN missing.

Grosjean, F., 1982. *Life with Two Languages. An Introduction to Bilingualism*. Harvard University Press, Cambridge, Massachusetts, and London, England. ISBN 0-674-53092-6.

Hagberg-Persson, B., 2006. *Barns mångfaldiga språkresurser i mötet med skola*. Department of Scandinavian Language, Uppsala University, Sweden. ISBN 91-506-1901-2.

Håkansson, G., 2003. *Tvåspråkighet hos barn i Sverige*. Studentlitteratur, Lund, Sweden. ISBN 91-44-03070-3.

Ladberg, G., 2000. *Tala många språk*. Andra upplagan. Carlsson Bokförlag, Stockholm, Sweden. ISBN 91-7203-969-8.

Ladberg, G., 1996a. *Barn med flera språk. Tvåspråkighet och flerspråkighet i familj, förskola och skola*. Andra upplagan. Liber Utbildning AB, Stockholm, Sweden. ISBN 91-634-0254-8.

Ladberg, G., 1996b. *Barnen och språken. Tvåspråkighet och flerspråkighet i familj och förskola*. Studentlitteratur, Lund, Sweden. ISBN 91-44-00126-6.

Otterup, T., 2005. "Jag känner mej begåvad bara". *Om flerspråkighet och identitetskonstruktion i ett multietniskt förortsområde*. Department of Swedish language, Gothenburg, Sweden. ISBN 91-87850-26-5.

Romaine, S., 1995. *Bilingualism*. Second edition. Blackwell Publishing, England. ISBN 978-0-631-19539-9.

Saville-Troike, M., 2006. *Introducing Second language acquisition*. University Press, Cambridge, United Kingdom. ISBN 978-0-521-79407-7.

Skutnabb-Kangas, T., 1982. *Tvåspråkighet*. LiberLäromedel, Lund, Sweden. ISBN 91-40-30517-1.

The CHILDES database: <http://childes.psy.cmu.edu/data/> April and May 2008.

## Appendix 1

Margaret Deuchar has done a longitudinal study of a Spanish-English bilingual child in Brighton, England, which was published 2004-03-30, but done in the 1980s.

Age 1;3-1;7 Target child's sex: female

11 conversations are in English and 9 conversations are in Spanish.

### ENGLISH CONVERSATIONS

1. Mother, grandma and target child

Time 10:04 min      2/10-1986      Age 1;3.08

1 utt    9

9 utterances

**9/9= 1,0 UTTERANCE**

2. Same participants as in 1

Time 18:45 min      23/10-1986      Age 1;3.29

1 utt      10

2 utt      2

12 utterances

**14/12= 1,17 UTTERANCES**

3. Grandma and child

Time 4:53 min      27/11-1986      Age 1;5.03

1 utt    16

2 utt    1

17 utterances

**19/17= 1,18 UTTERANCES**

4. Grandma, mother and Jane health visitor, unidentified and child.

21 morphemes of code-switching to Spanish

Time 32:22 min      29/1-87      Age 1;7.05

1 utt	47	SPANISH	
2 utt	19	niña	6
3 utt	2	Nuevo	1
91 utterances		Galleta	2
		dos	9
		gato	1
		galletas	1

**91/68= 1,34 UTTERANCES**

5. Mother, grandma and child

33 morphemes of code-switching to Spanish

Time 47:02 min      5/2-1987      Age 1;7.12

1 utt	96	SPANISH	
2 utt	17	más	7
3 utt	4	lampara	1
4 utt	1	taza	3
5 utt	1	sí	4
151 utterances		galletas	4
		papá	6
		mamá	3
		niña	1

**151/119= 1,27 UTTERANCES**

6. Mother, grandma and child

93 morphemes code-switching to Spanish

Time: 31:07 2/4-1987 Age 1;9.09

1 utt	120	SPANISH	
2 utt	75	ducha	1
3 utt	15	baño	1
4 utt	4	bebé	2
5 utt	2	sí	2
341 utterances		niño	1
		niña	14
		ropa	1
		pato	1
		barco	2
		papá	4
		mamá	13
		abuelo	1
		abuela	1
		camaas	1
		ot(r)oas picture	7
		papá otro papa	1
		otroas book	2
		Otroas new book	1
		Granny mama	1
		Oh dear cayoas	1
		Otroas one	1
		On poomao	1

**341/216= 1,58 UTTERANCES**

7. Mother, grandma and child

Time: 18:48 28/4-85 Age: 1;11.04

13 morphemes code-switching to Spanish

1 utt	99	SPANISH	
2 utt	40	parque	1
3 utt	12	abueloas	1
4 utt	4	patusaol	1
5 utt	1	this padres	1
8 utt	1	papá daddy	1
12 utt	1	ah abueloas	1
256 utterances		balena	1
		and estoas	1

**256/158= 1,62 UTTERANCES**

8. Mother, child + 4 children – Rayna, Lisa, Tony and David

No code-switching.

Time: 13:48 28/7-1987 Age 2;1.03

1 utt	31
2 utt	32
3 utt	18
4 utt	19
5 utt	25
6 utt	5
7 utt	2
9 utt	3
12 utt	2
14 utt	1

18 utt 1

19 utt 1

496 utterances

**496/140= 3,54 UTTERANCES**

9. Mother, father, child and Joshua=a child

The child does not understand that Joshua just understands English.

48 morphemes code-switching to Spanish

Time: 14.46 3/8-1987 Age 2;1.20

1 utt 26

SPANISH

2 utt 7

limpiarlo con agua 1

3 utt 14

un poco agua 1

4 utt 5

echo agua 1

5 utt 1

no destapes 1

107 utterances

frio 2

eso 1

M echo juice 1

mamá eso papa 1

de la tienda 1

Un poco agua ven aquí poco agua 1

Joshua limpiar eso poco agua poco agua 1

M little jugo@s 2

M little@s echa jugo 1

es@s wet there es@s wet 1

**107/53= 2,02 UTTERANCES**

10. Mother, grandma and child

1 morpheme code-switching to Spanish

Time 28:54 26/11-1987 Age 2;5.02

1 utt 56 SPANISH

2 utt 18 cama 1

3 utt 46

4 utt 34

5 utt 23

6 utt 22

7 utt 7

8 utt 6

9 utt 4

10 utt 3

11 utt 2

15 utt 1

16 utt 2

20 utt 1

24 utt 1

42 utt 1

931 utterances

**931/227= 4,10 UTTERANCES**

11. Mother, grandma and child

No code-switching

Time 30:11 14/1-88 Age 2;6.21

1 utt 42

2 utt 17

3 utt 16

4 utt 7

5 utt 11

6 utt 6

7 utt 3

8 utt 3

9 utt 2

10 utt 1

19 utt 1

37 utt 1

372 utterances

**372/110= 3,38 UTTERANCES**

## **SPANISH CONVERSATIONS**

1. Mother, father and child

1 morpheme of code-switching to English.

Time 10:33 28/9-1986 Age 1;3.04

1 utt 7 ENGLISH

2 utt 1 up 1

3 utt 1

12 utterances

**12/9= 1,33 UTTERANCES**

2. Mother, father and child

Time 21:39 25/10-1986 Age 1;4.01

4 morphemes code-switching to English

1 utt 30 ENGLISH

2 utt 1 duck cuak 1

4 utt 1 cuak cuak 1

6 utt 1

42 utterances

**42/33= 1,27 UTTERANCES**

3. Father and child

Time 40:16 1/2-1987 Age 1;7.08

67 morphemes code-switching to English

1 utt	52	ENGLISH	
2 utt	48	Teddy	6
3 utt	2	come on	1
154 utterances		oh woof	1
		mami	2
		Gone	1
		Down	1
		Oh clock	1
		Mm dear	2
		Car	2
		Clock	5
		Book	1
		Ball	2
		Shoe	1
		Oh dear	5
		Wood	2
		Woof	1
		woof@as	18

**154/102= 1,51 UTTERANCES**

4. Mother, father and child

Time 28:15 29/3-1987 Age 1;9.05

46 morphemes of code-switching to English

1 utt	62	ENGLISH	
2 utt	47	yes	3
3 utt	10	nappy	1
4 utt	5	book	1
206 utterances		ball	3
		tea	1
		Bye	1
		Car	1
		Hat	3
		Mummy	3
		On	1
		Up	1
		Clock	1
		Duck	1
		Cats	1
		Ducks	1
		Balls	1
		One more	1
		Mm table	1
		No open	1
		Oh dear	3
		No oh dear	1
		That one no@s quiero@s papa	2

**206/124= 1,66 UTTERANCES**

5. Mother, father and child

Time 29:12 31/5-87 Age 1;11.07

41 morphemes of code-switching to English

1 utt	76	ENGLISH	
2 utt	55	Mummy	1
3 utt	14	flower	1
4 utt	10	train	1
5 utt	3	people	1
6 utt	4	Granny	3
307 utterances		woof	1
		grandpa	1
		yes	1
		cuak cuak	1
		oh dear	1
		M do it	1
		more people	1
		granny play	1
		Granny Grandpa	1
		M's book	1
		Here you are	1
		M M look	2
		Granny sienta	1
		Grandpa papapa@o	1
		Se rompió Granny	1
		Se rompió there@s	1
		One papé pa@ol	1
		This niña@s is awake	1
		M tiene more@s card@as	1
		No*2 cama [no]* cama Mummy's pluma	1

**307/162= 1,90 UTTERANCES**

## 6. Mother and child

Time 25:43 20/7-1987 Age 2;0.25

34 morphemes of code-switching to English

1 utt	68	ENGLISH	
2 utt	41	cake	9
3 utt	19	candle	1
4 utt	5	paper	1
5 utt	3	yes	1
6 utt	2	first that	1
7 utt	1	thank you	1
8 utt	2	me look	1
277 utterances		Donald Duck	1
		no Donald Duck	1
		there you are	1
		Mí ma	1
		Vela cake@s	1
		Mamá y cake@s	1
		Candles@s mamá	1
		Where's the musica@s	1

**277/141= 1,96 UTTERANCES**

## 7. Mother, father and child

Time 25:40 29/8-1987 Age: 2;2.05

25 morphemes of code-switching to English

1 utt	116	ENGLISH	
2 utt	41	mummy	1
3 utt	30	Granny	1
4 utt	23	woofy@s	1

5 utt	11	oh dear	1
6 utt	7	Mummy tengo este	1
7 utt	8	okey woof@s abrirlo	1
8 utt	2	eso es Granny	1
9 utt	2	esto es the@s M	1
10 utt	1	este es para Granny	1
11 utt	1	in the pram	1
12 utt	1	worm@s	1
15 utt	1	tiene un woofy@s	1
615 utterances		Gramps granny	1
		eso Granny	1
		Eh para Granny okey	1
		No tenemos otro collar para Granny	1
		Mm [se cayó]*2 el cake@s de M	1

**615/244= 2,52 UTTERANCES**

#### 8. Mother, father and child

Time 30:34 29/11-87 Age 2;5.05

41 morphemes of code-switching to English

1 utt	98	ENGLISH	
2 utt	38	esto Granny	1
3 utt	43	yes	2
4 utt	24	in	2
5 utt	22	go	1
6 utt	21	pick it up	1
7 utt	8	what	2
8 utt	6	two	1
9 utt	7	vamos a jugar with this	1

10 utt	8	okay broke of	1
11 utt	4	mamá y papa... Granpa... van Londres	1
12 utt	1	mamá y papá y Gra y Granny y Grandpa perrito...	1
13 utt	3	con Grandpa oh no oh wheels	1
14 utt	1	puso wheels	1
15 utt	2	look one one	1
18 utt	1	there	1
23 utt	1	one three four five	1
1062 utterances		eh Grandpa	1
		Granny	2

**1062/288= 3,69 UTTERANCES**

#### 9. Mother, father and child

Time 30:09 26/12-1987 Age 2;6.02

#### 29 morphemes of code-switching to English

1 utt	80	ENGLISH	
2 utt	30	up	1
3 utt	16	stuck@s	1
4 utt	18	yes	1
5 utt	16	Granny	1
6 utt	6	oh dear	1
7 utt	3	Santa Claus	1
8 utt	4	ah Granny there	1
9 utt	4	up and up	1
11 utt	1	someone push her	1
12 utt	2	hello	2
13 utt	1	hola pa	1
16 utt	1	Granny va arriba	1

18 utt	1	ah oh dear Granny	1
20 utt	1	y aquí está Granny	1
567 utterances		Granny qué está haciendo	1
		Uno dos cuatro cinco ah yyy Granny están amiga	1

**567/184= 3,08 UTTERANCES**