

University of Thessaly  
Department of Special Education

# **Children learning English as a Third language: A study on their L3 speech production**

**Fotini Anastassiou**

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Κωνσταντινά,

Φωτεινή,

Αννέτα



# Abstract

The aim of the present study was to investigate the vocabulary interaction of the three languages of primary school children who are currently learning their L3, English, in a school context. All of our participants had stated as their L1 either Greek or Albanian and English as their L3.

All of our participants were from 9 to 12 years old, born and raised in Greece, they all came from immigrant families and they were in the process of acquiring their A1 level in their L3 according to the CEFR.

Specifically, the participants were asked to narrate a picture story in their L3 (English). The study aimed to explore cross-linguistic influence as far as code mixing is concerned, as well as the main source language or default supplier of cross-linguistic influence (either Greek or Albanian, whether L1 or L2) while speaking their L3 English. Code mixing and code switching instances were analysed and discussed. Also, our participants produced trilingual utterances (which are rather scarce in so far literature), therefore these were analysed and discussed. Moreover, we investigated the parts of speech produced in all of the three languages our speakers owned while they narrated in their L3, in order to see whether cross-linguistic influence affected Content and Function words and thus their ratio in the produced speech. Also, the profile of the more successful L3 learners according to the language biographies of our participants, their narrations and their L3 level of proficiency was attempted to be built. All of the participants had been in the process of attaining their A1 level of proficiency according to the Common European Framework of Reference for Languages.

Furthermore, language dominance issues were explored and according to our findings, Greek, whether as an L1 or an L2, was the main source of transfer in our participants' speech production. In fact, those children that their L1 is Greek transferred more from their L1 than from their L2 (Albanian), whereas the children that their L1 is Albanian transferred more from their L2 (Greek) than from their L1. Also, the investigation of the more influential factors towards the higher competency of our participants in their L3 (A1 level according to CEFR) has shown that the most significant ones were the age of these children (the older they were the more competent they were found to be) and their formal instruction in their L2 (Greek), which seemed as if it created a link with their next formally instructed language, i.e. their L3 (English), since they lacked literacy in their heritage one (L1, Albanian).





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# 1. Introduction

## 1.1. General Introduction

Over the past decades, there has been an increasing migration and mobility of population which has led to cultural diversity among the people and accordingly, as a result, to the phenomenon of multilingualism (cf. Cruz-Ferreira 2006; Niño-Murcia and Rothman 2008 and works cited within). Also, families whose members come from different ethnic and/or national backgrounds are globally increasing (Cruz-Ferreira 2006, Tokuhama-Espinoza 2000, 2001). Children growing up in multinational families are often in contact with more than one language through their parents, and in some cases these heritage languages are supported by the linguistic system of the wider community's language, such as the Basque language in Spain. In Greece there is one official language, Greek, and the linguistic minorities that exist in the country mainly through immigration are confined within the family environment as well as the specific language community. Their status is perceived by its own speakers as a low one, especially in view of their assimilation to their host country.

Multilingualism has been something natural in several societies. However, there are still many societies that only recently has multilingualism been acknowledged and therefore has become the focus of more research. This latter observation applies for Greece too, since the vast and rapid advent of immigrants has now created a versatile linguistic environment within public schools. There are nowadays a great number of children who are being raised as bilinguals (they speak their heritage language and Greek which is the official language of the community they grow up in) and they begin being taught their third language, English, when they are around the age of seven years old. Therefore, these children are more experienced in terms of language learning compared to their classmates who only speak Greek and are being taught their second language, English, with a foreign language learning methodology. Moreover, children growing up in a multilingual family own unique qualities and

diverse needs, which have been the focus of literature recently (Barron-Haumwaert 2004; Cruz-Ferreira 2006; Niño-Murcia and Rothman 2008; Tokuhama-Espinoza 2000, 2001, inter alia).

In the past, and until 1960 that the induction courses began in Canada, there was the belief that second language plays a negative role on a child's language development. Nowadays, according to recent studies on bilingualism (Brohy, 2001; Hufeisen, 1998; Jessner, 1999) this wrong perception is fortunately no longer the rule but only the exception. Furthermore, in the recent years there has been a tendency to teach students a third or in some cases even a fourth foreign language. This has had as a result that trilingualism has been established as an academic field, a research and an educational topic (Griessler, 2001).

Through this scope, it is no wonder that research on trilingualism and third language learning has increased, not to mention the conferences that have been held on this field, having as their target to broaden our view on trilingualism and to add up new insight on what trilingualism is and what defines it. The current developments on language are rapidly evolving and the global academic community has to adjust to a new state of things in order to answer to their "call". It is very important to point out that until recently researchers have approached the issue of trilingualism through bilingualism and in a way it was perceived as a branch of bilingualism, as if it did not have an agenda of its own.

This has led to the fact that research on trilingualism was rather delayed as a different and completely distinct field. A rather striking point to be taken into consideration on the importance of research on trilingualism and third language learning is that there has been a significant increase in sites and fora on the issue of tri/multilingualism on the internet. Most of them were created by the parents themselves, obviously with the hope that this might help their efforts to answer their questions regarding their children's language requirements and abilities, as well as the stance that they should take to face the challenge of their children's second, third or even fourth active languages.

Research on an issue though is a consequence of the current trends as well. According to Aronin (2005) twentieth century can be distinguished in three stages as far as the use of language is concerned. The first stage, which is defined as the monolingual, starts from the beginning of the twentieth century and goes up until the 1950s. The second stage, the bilingual one, exceeds from approximately the 1960s until the end of the 1980s, whereas the third stage that is defined as the tri

– multilingual, starts from the early 1990s until today. Based on this classification as well as the fact that bilingual speakers are really learners of multiple language systems we will consider anyone that is speaking more than one language as multilingual. Furthermore, anyone that has already acquired more than one language is more possible to proceed with learning a third or even a fourth language in the course of his/ her life.

Ever since the importance of multilingualism has been largely acknowledged more and more research is being conducted on the acquisition and learning of a third language (L3). This is mainly because of the vast mobility of populations between countries and mixed marriages (Barnes 2005). Since multilinguals are far more compared to monolinguals in the world (Tucker 1998) it is just as important to investigate the way bilinguals use their languages while still in the process of learning their third language. A child's ability to communicate in more than one language is surely a more complex ability and thus represents an intricate phenomenon too. This phenomenon entails acquiring more than one grammatical system as well as language learning processes that are not part of a single vacuum.

This project deals with a specific type of multilingualism, namely trilingualism, where development of L1 and L2 has progressed while L3 is still ongoing through learning within school context.



## 2. Trilingualism

### 2.1. Defining Trilingualism/ multilingualism

It is indicant that since trilingualism is a rather recent field of research there are a lot of differentiations on its definitions. Many attempts have been made so far to approach a definition of trilingualism. Most of them have been through bilingualism. Trilingualism has also been seen as a branch of bilingualism or even as an extension of bilingualism.

So far literature on multilingualism, including the one on trilingualism, has seen these speakers' qualities in several ways; Bloomfeld (1933), accepted as "true" multilinguals only those that have gained a mastery of all of their languages in a native like manner. Multilingualism is still seen as an exceptional quality although monolinguals are in today's world more of a rare case. Jessner (2008) has criticized the belief that trilinguals are still seen as three monolinguals in one, as well as that a true multilingual does not mix his/ her languages. Jessner goes on her criticism on that perception by saying that this "monolingual perspective of multilingualism is still prevalent in traditional research on multilingual acquisition" (p. 20), thus clearly pointing to a different direction towards research.

Nowadays, the most common scientific view of trilingualism, that most researchers consent to, refers to multilingual speakers who have gradually obtained the ability to communicate in each one of their languages; extending from simple understanding/communicating capabilities to the "model" of a solid multilingual person. In this sense, effective communication in each of the multilingual speaker's languages sets functional multilingualism, irrespectively of the patterns monolinguals use according to their age defined abilities (e.g. Cruz Ferreira, 2006; Tokuhama-Espinoza, 2001, 2003).

Typical cases of L3 learners as found in the literature on multilingualism include: a) children growing up with three languages from birth (e.g. Oksaar 1977; Hoffmann 1985; Barnes, 2005), b) **bilingual children learning an L3 – in many**

**cases English – at school at an early age, as in our study** and as is the case in the Basque Country (Cenoz, 2005) or in South Tyrol (Jessner, 2006), c) bilingual migrant children moving to a new linguistic environment, such as Kurdish/ Turkish children learning German in Austria (Brizic, 2006).

Therefore, this definition, can apply to several types of trilingual speakers; adults who learn two foreign languages informally or within school context either at the same time or in later phases of their lives, early childhood bilinguals who are learning a third language later as children or as adults, as well as children who grow up by being in touch with three languages ever since they were born or as *very young learners* and can speak all of them fluently. However, this latter category of speakers is quite limited and can only apply to those children who have acquired a native – like proficiency of all of their languages. This type of proficiency though is rather rare and although it is mentioned by the relevant literature it seems as though it is talking about an ideal multilingual learner; one being quite far from the realistic one that we encounter either in classes or in the so far bibliography.

Haugen referred to multilingualism as “a kind of multiple bilingualism” (1956: 9). Oksaar defined bilingualism as “the ability of a person to use here and now two or more languages as a means of communication in most situations and to switch from one language to the other if necessary” (1983: 19). Also, Skutnabb-Kangas (1984) accepted the presence of more than two languages in the person she defined as bilingual. McArthur (1992: 673) maintained that a multilingual is a person who has “the ability to use three or more languages, either separately or in various degrees of code-mixing. Different languages are used for different purposes, proficiency in each varying according to such factors as register, occupation and education”.

Cenoz and Genesee (1998) suggested that a student should be defined as trilingual if he can use his three languages to communicate in both oral and written speech. Furthermore, they described multilingualism as the final result of the process of acquisition of several non-native languages. Herdina and Jessner (2000) have suggested that multilingualism should be considered as a varied phenomenon involving bilingualism and monolingualism as possible forms, but addressing mainly those languages learnt after a second one. In this sense then bilingualism is identified with multilingualism.

Given the differentiations on defining multilingualism, Jessner (2008) has rightly summed up the issue by saying that “*finding a definition of multilingualism can be described as one of the most daunting research questions of current linguis-*

*tics*” (p. 20). Her statement seems to be in accordance with Roman Jakobson’s (1953: 20) who rightly pointed out that “Bilingualism is to me the fundamental problem of linguistics”, since we support the view that bilinguals are multilinguals themselves. In this sense, Hufeisen (1998) has added that multilingualism should be used to refer to the learning of more than two languages. This statement also seems to be in line with scholars who have argued that learning an L2 differs from learning an L3.

However, each researcher gives or adopts his/her own definition of multilingualism, and there seem to be two main reasons for this: a) the participants’ own intricate state because of their very nature of use of their several languages, b) the researchers’ backgrounds, aims, personal beliefs and/ or ideologies which formulate their methodologies and frameworks. These two different but strongly connected factors intertwine and create this pluralism of definitions which most of the times seem to be rather similar and at the same time so far from each other.

Moreover, as early as 1953, Weinreich (1953: 113) set the problem of defining multilingualism in that “*no two studies are thoroughly comparable, because the linguistic techniques employed and the sociological orientations, if any, on which they are based have been so different from one case to the next*”. Also, Skuttnab-Kangas (1984: 81), has tried to classify the different types of definitions on multilingualism in terms of their scope. Therefore, definitions stemming from an origin wise perspective view multilingualism as a developmental phenomenon, definitions stemming from a proficiency perspective are based on the linguistic proficiency in two or more languages and functional definitions are based on functions that the use of language serve for the individual or the community. This kind of classification seems to unblock the “conflict” on defining multilingualism since it tries to explain the several interpretations by means of their field of research. In that sense, it is only natural to come across with different “interpretations” if not definitions of multilingualism. Furthermore, as De Angelis (2007: 11) has suggested that the term "third or additional language acquisition" would be more appropriate within the scope of multilingualism as it does not equate the bilingual speaker with the multilingual one. In fact it points to the opposite statement which researchers of multilingualism insist on, that is, the difference of the trilingual/ multilingual speaker compared to the bilingual since he/she has a more complex set of languages to work with. To make it more clear, a bilingual speaker has in his/her disposal two linguistic systems whereas a multilingual speaker has more than two.

Moving further with this issue of defining multilingualism we need to stress out that there have been many researchers of language acquisition that insist on seeing multilinguals as some kind of many monolinguals. However, this seems to come from a perspective stemming from Chomsky's theory on the proficiency owned by native speakers. Although this is not expressed directly, native speakers are identified with monolinguals. However, a more realistic perspective and thus more up to date with current research seems to be Cook's concept of multiproiciency who based his own view on Grosjean's holistic view of bilingualism (1992, 2001) and sees bilinguals as competent and "specific speakers – hearers". In the long run this Grosjean's concept of bilingualism has led to Herdina and Jessner's (2002:1) statement that "research on linguistics should be centered on the multilingual speaker as a norm, not on the monolingual individual".

Furthermore, following Grosjean's theory, Cook (2003) suggested that the L2 user, a definition which he prefers instead of 'bilingual', develops multiproiciency which is significantly different from monolingual proficiency. Cook claims that a multilingual is someone far more than a monolingual since he/she happens to own more linguistic attributes. Therefore, multilinguals have established a completely different knowledge of their languages and they thus have developed a distinguished language processing system and/ or methods. This perspective has been the basis of several studies according to which multilinguals are better learners compared to monolinguals, as already mentioned before.

Therefore, after Grosjean's and Cook's aforementioned models bilinguals are now viewed as people who own special language competencies that facilitate their ability to communicate in several multiple social contexts. Through this scope the differences existing between monolinguals and bilinguals have to do with sociological perspectives since they are perceived to be more able to cope with multiple contexts. According to Hofmann (2001: 19) bilinguals "create their own linguistic means in order to master particular communicative situations".

Moreover, as Kemp (2009: 24) clarified and in agreement with De Angelis (2007) "most researchers now use the term 'bilingual' to refer to individuals who use two languages, and 'multilingual' to refer to individuals who use three or more languages (rather than using the term bilingual to mean more than two languages, or multilingual for users of just two languages)". Based on Kemp's statement we move further with this issue by stating that identifying bilingualism and multilingualism as a kind of the same quality seems a rather problematic assumption and



we maintain that just as bilingualism has been proven to be in itself a multifaceted phenomenon, multilingualism should be seen as an even more complex situation which owns distinct characteristics and needs to be viewed in its own right as an exceptional phenomenon.

## 2.2. Types of Trilingual Settings

Multilinguals may use several languages due to their different social, cultural and economic backgrounds and field of using their specific languages. They might live in a multilingual community, or bilingual communities, or they might be in contact with several monolingual communities during their everyday routines or social life. Their proficiency in each of their languages is possible to differ, and might change over time (Herdina & Jessner, 2002). The multilinguals' languages can have distinguished roles and functions, they may use them separately or code switch and code mix and last but not least *they are still seen as multilinguals even if they use three or even six languages.*

The ability of a person to speak more than one language can occur under a variety of conditions. Edwards (1994: 39) states that “*in most instances, multilingualism arises, and is maintained, through contact and necessity*”. The emergence of three languages can exist when in each language there is both a source of input and the necessity for communication. Cases of trilingualism can be subdivided into four interrelated variables: (a) the age of the speaker when he made his first important contact with the language, (b) the input they receive (type, modality and quantity) (c) the level of proficiency in each language and (d) the order that the languages were obtained. It is not compulsory that the previously mentioned variables should be independent, although this may also be the case. For example, the time the speaker made his first contact with the specific languages could have a close correlation with the input, i.e. younger speakers could be expected to have a more “naturalistic way of acquiring their language” than older speakers, although this correlation can be a generalization that could be easily argued. Apart from that, when three languages are involved, there are many inherent variations in each learner, within each variable, as in the occasion of all cases of language acquisition.

It has to be clarified that the manifestation of the previously mentioned variables leads in various possibilities that may all outline different types of trilingual speakers, and such situations can be further divided according to the age of the speaker, the type and amount of input they receive and the proficiency in each lan-

guage, considering also the order of acquisition. According to Hoffman (2001: 3) the following classification can be suggested:

- a) Trilingual children who grew up having adapted two home languages different from the one spoken in the community.
- b) Trilingual children grown up in a bilingual community and their home language (either spoken by one or both of their parents) is different from the language spoken in the community.
- c) Third language learners, that is, bilinguals who obtain a third language in the context of school education.
- d) Bilingual individuals who have turned into trilinguals through immigration.
- e) Individuals that belong to trilingual communities.

The present research focuses on children who have acquired their L1 and L2 and are currently learning their L3 within school context. Specifically, this research surveys the language interaction of children who come from an Albanian background and they were born and raised in Greece. They have learnt Albanian from their family, Greek from their family and their social environment and they have also received formal instruction in Greek at school. Also, they are currently being taught English (L3) at school. It should be noted that their L1 may be either Greek or Albanian according to our participants and that Greek is of a native-like proficiency since they have been using it since their very early childhood interchangeably with Albanian within their family environment.

### **2.3. Evolving and dissolving trilingualism**

Hoffman (2001) also clarified the difference between transient and recurrent trilingualism. Transient trilingualism occurs after less usage of one of the three languages until it is eventually forgotten, absorbed by the other two languages or even never completely acquired, so that eventually the speaker turns to a bilingual or

monolingual with a background in trilingualism. This quite common phenomenon is more likely to happen in childhood trilingualism, in instances that one of the languages becomes functionally unimportant so that in time the child loses the contact with the linguistic input as well as contact with the heritage language in a different country. Moreover, it is most usual to encounter “recurrent trilingualism,” in which each of the three languages has its own functions and relates to a specific domain, and thus each one is preserved and developed by the individual to a greater or lesser extent. However, the three languages are unlikely to be equally developed in every area of communication. *One or even two of the three, although firmly established, is likely to be used less than the other two or the most dominant one*, as shown in Hoffman (2001) and Cruz-Ferreira (1999).

It is expected that one of the three languages will outperform the other two, as a natural result of the education being occurred in the most socially accepted language. According to Fishman et al (1971), the possibility of balanced bilingual speakers is considered to be rare: “Bilinguals who are equally fluent in both languages (as measured by their facility and general correctness) are rarely equally fluent in both languages about all possible topics; this phenomenon is a reflection of the fact that societal allocation of functions is normally imbalanced and in complementary distribution rather than redundant” (Fishman et al, 1971, in MacSwan, 1999: 30).

A similar logic can also be seen with trilingual speakers. Cenoz (2003) states: “Third language acquisition presents more temporal diversity than second language acquisition” (p. 72).

Also, Cenoz (2000) describes at least four types of acquisition order:

- (i) Simultaneous acquisition of L1/L2/L3 (although this is rather rare)
- (ii) Consecutive acquisition of L1, L2 and L3,
- (iii) Simultaneous acquisition of L2/L3 after learning the L1,
- (iv) Simultaneous acquisition of L1/L2 before learning the L3 (*as in our case*).

As far as the classification of the types of trilingualism, it is necessary to say that the borders between them are flexible rather than rigid. As stated by Hoffman

(2001: 9), “it is not possible to discern clear cut-off points between the infant, the child and the older trilingual, or between simultaneous and subsequent trilingualism, or between natural acquisition and acquisition as a result of structured learning”. Therefore, these classifications should be taken into account as a basis for studying trilingualism, and not as rules that force the researcher to think or work within a rigid framework.

Third language acquisition is an indeed complex phenomenon and is therefore associated with both individual and psycho-social factors during language learning. Since this complexity has been found in studies on second language learning (e.g. Dornyei, 2005) we may assume that third language learning tops up this complexity.

## **2.4. The beneficial effect of bilingualism in learning a third language**

The older perception held that children who learn a second or a third language add up a negative factor towards their overall language development; however this has been proven wrong. Different studies have shown that third language learners were more skillful and talented than second language learners. Many studies on trilingualism propose that if the circumstances are positive in supporting and preserving all of the languages known to a third language learner, bilingualism may appear to be a determinant factor in building up L3 proficiency. Most of the studies in the specific area are supported by cases of L3 acquisition through formal instruction, like with our study since our participants have been learning their L3 (English) at school.

The specific abilities and the language competency that seem to benefit from already existing bilingual experience are pragmatic proficiency (Safont Jorda, 2003), metalinguistic awareness (Bialystok, 1991, in Hoffman, 2001), and language processing capabilities (Cenoz, 2003, Sanz, 2000). Hoffman (2001) suggests that in the occasion of trilinguals “the experience of three different languages also results in further enhanced awareness of the analysis and control components of processing to enable the speaker to make the right choices and respond in linguistically and communicatively adequate ways” (p. 14). However, since the choices of trilinguals are indeed many it should be expected that more occasions in which grammatically

odd and/or unorthodox usage may occur.

It should also be taken into consideration that language is totally linked to culture and serves as an exclusive way for analyzing and interpreting the surrounding objects and events (Auer 1998, Cruz-Ferreira 2006, Grosjean, 1985, Hamers and Blanc, 2000, Rothman and Rell, 2006, Tokuhama-Espinoza, 2001); this inevitably results in a trilingual speaker seeing everyday things and situations through a different perspective than a monolingual or a bilingual speaker.

According to studies on bilingualism (Brohy, 2001; Hufeisen, 1998; Jessner, 1999), children who learn a second or a third language appear to be more intellectually acute. Furthermore, Griessler (2001) suggested that any third language has a beneficial effect on a child's two other languages, not only on his grammatical awareness but also on his linguistic abilities, his memorizing techniques and his communication strategies. Brohy (2001) also mentions that bilingual children are more receptive to learning a third language compared to children who approach their second language with the help of just their mother tongue. Bialystok (2001) suggested that a bilingual does not have universally superior metalinguistic advantages and abilities but increased abilities in tasks that require attention L1. Cenoz (2003) pointed out that the majority of studies on general proficiency indicated a positive effect of bilingualism on third language acquisition and that this was also connected to metalinguistic awareness, language learning strategies and communicative ability, especially when we look into typologically related languages.

Also, Andreou (2007) has shown that the experience of three languages is likely to result in enhanced awareness of the analysis and control components of language processing on the part of trilinguals. Furthermore, McLaughlin (1990) supports the view that multilingual learners use different strategies compared to monolingual learners, who only learn their first language, due to their experience in language learning. Thomas (1992) also suggested that when a student has a former linguistic experience he/she uses strategies which influence his future success in the foreign language classroom. Moreover, Kemp (2001) showed that multilinguals pick up the grammar of another language faster, meaning that they use more grammar learning strategies. Furthermore, she pointed out that an experienced multilingual learner develops automaticity in processing several foreign languages depending on the linguistic environment (in Jessner, 2008). Therefore, the studies indicate that a bilingual has the specific prerequisites for successful future language learning since his/her former language learning experience leads him/her to better results com-

pared to a monolingual who is learning his/her second language.

## 2.5. English as a third language

Research in learning English as a third language has attracted significant attention in the recent years, since it is the main language of communication among European Union citizens. Jessner indicated that “in a growing number of countries worldwide English is learnt and taught as a third language.” (2006: 2). Thus, English is seen as a factor in the formation of trilingualism and the spread of English.

In 2001 Eurostat found that 90 percent of pupils in secondary schools in the European Union learn English (Pilos, 2001), and according to “The Key Data on Teaching Languages at School in Europe” (2012) it is confirmed that English is by far the most taught foreign language in nearly all European countries. In this sense, English is in many cases a second or even a third and not a foreign language and it is in contact with other languages since many European countries are bilingual or multilingual. According to the “Eurobarometer” (2012) conducted by the European Commission, 74% of the Greeks believe that English is the most useful language for their personal development, while the total of the Europeans that took part in that study answered to that question that English is the most useful in 64%. Also, Greeks believe that English is the most useful language for their children’s future in 92% while Europeans believe the same thing in 79%. Finally, 51% of the Greeks stated that they are confident in having a conversation in English, whereas only 9% of the participants were confident with French. Clearly, this reinforces the perception that English is by far the most “popular” foreign language in Greece and thus widely taught and learnt. Also, it has a high prestige within the Greek population and children are introduced to it from an early age (most of them around the age of seven).

Moreover, English is nowadays one of the languages the majority of the multilinguals own since it is being learnt as a second, third or fourth foreign language. English is actually a lingua franca and although this term is used according to Crystal (1995: 454) as “a medium of communication for people that speak different first languages”, Cenoz and Jessner (2000: 248) point out that in the case of Europe specifically this term should be also used for people speaking different second languages too. This particular suggestion sums up the great diversity of the language situation within Europe today as well as the implications (linguistic, social, economic and political) that will emerge in the near future.

In most European countries English had been taught as a second language with a foreign language methodology, however nowadays it is common that it is taught as a third language. For instance, the case of immigrants from non-European countries who learn the official language of the country they have settled in and they also study English at school. Research into trilingualism also looks at bilingual children's acquisition of the third language through schooling. Studies of this kind have been carried out with linguistic minority children in the United States (e.g., Klein, 1997; Thomas, 1988), Canada (Bild & Swain, 1989; Genesee, 1998), Belgium (Jaspaert & Lemmens, 1990), and the Basque Country (Cenoz, 1998; Cenoz & Lindsay, 1996; Valencia & Cenoz, 1992) among others.

Moreover, Hoffmann and Stavans (2007) *point out that most of the research on trilingualism focuses on individuals who acquire or learn a third language in a school context* – just like our case - (e.g. Cenoz & Genesee, 1998; Cenoz, Hufeisen, & Jessner, 2001) or migrant minorities who learn a third language in social contexts (Baetens-Beardsmore, 1993). Also, the majority of these studies look into the development of a third language consecutively to the development of one or two other languages, just like our study presented below. Furthermore, recent literature promotes the learning of more than one language as a way to ensure cognitive advantages (compared to monolinguals) (Bialystok et al, 2004).

Most of the schoolchildren in Greece learn English as a second language with a foreign language curriculum and methodology. In fact, English is the first foreign language that every Greek pupil will start with, since there is the belief that it is a global language and the most useful one towards their professional future life. There have been more languages introduced in public schools and children (and their parents) have had the option of learning French, German, Italian, and in some schools Spanish. However, the amount of effort that was needed in order to change the beliefs regarding the usefulness of the languages as well as the great problematic attitude towards learning a foreign language within public school education has not given the desired results in terms of the language trend shift. Greek children however are considered as one of the most multilingual learners within Europe, since the vast majority of them have attended foreign language classes and they have also sat the relevant language exams to gain the relevant certificates.

Nowadays, the multilinguality of the Greek children has moved even more forward since during the last twenty years or so children coming from immigrant families have been an ever increasing number of the schoolchildren. These children

bring their own linguistic experiences in the general education classroom and they are learning English as their third language, since they speak their heritage language, Greek which is the wider society's official language and they are also learning English at school. In most of the cases of these immigrant communities the children are not being taught their heritage language by effort of their communities and their parents. It is rare that children may show literacy in their heritage languages and this is mostly because of the status their languages have in Greek society as well as the unstable situation they experience due to the manner they have arrived in Greece (their majority do not possess the legal documentation needed). Therefore, their children become literate only in Greek when they enter school age, although their naturalistic manner of learning Greek has preceded because they use it from their early years and onwards.

However, there is another side to this multilingual aspect of English. Although there are an ever-growing number of people learning English as a foreign language, it seems that native English speakers are on the verge of becoming a rare case. As Graddol (2006) points out monolingual English graduates may soon find themselves in a disadvantaged position since young people from other non English speaking countries nowadays own their mother tongue, English and another language. Therefore, they have an advantage towards their professional career since they are being taught English – in most cases as a startup and then more languages follow – ever since they are schoolchildren. On the contrary, the British Council (2007) seems to alert on the lack of motivation and encouragement English schoolchildren seem to be getting in order to learn other languages due to the effortless communication that they enjoy by owning a lingua franca.

On top of that, today's mass communication medium, the internet, has proved to be more multilingual and less English dominated than originally thought. Recent data (Nunberg, 2000) has shown that more and more software is providing a user's selection of the language he/she will use, and the same goes for the websites around the world. Although English continues to be one of the most used languages, the mobility of the world population and the tendency of the Diaspora to use its own language to communicate within social media and chat rooms have created a multilingual need for the internet itself. This way less used languages have been flourishing and they keep gaining ground. Hence people that have been living away from their countries as well as their children have nowadays more incentives and more motivation towards their heritage language maintenance. Although English



is at the time being indeed a lingua franca and the medium of communication for people coming from many different language backgrounds it seems that this kind of domination is not going to be the case in a few years time.

Besides, this English language domination has been having a negative effect on people whose mother tongue/ first language is English, since they do not have enough incentives to learn and use other languages too. Multilingualism can be achieved when both sides make an equal effort to approach the same goal; otherwise it is a less effective struggle. In that sense, the European Union “1 plus 2” recommendation which aims to promote the learning of one’s mother tongue/ first language + two other languages, has been trying to increase the languages being learnt and spoken within the European citizens. This recommendation had been also trying to ensure that the domination of just one language will not prevail for much longer and that less popular languages will not be less privileged in that sense. Moreover, the perception of a certain language’s prestige may in the long run hinder the learning and usage of other languages and thus hinder multilingualism as perceived and implemented by the European Union (see more at the EUNIC Recommendations on language learning, 2006, [http://www.eunic-brussels.eu/asp/dyn/detailed\\_1.asp?dyndoc\\_id=7](http://www.eunic-brussels.eu/asp/dyn/detailed_1.asp?dyndoc_id=7)).

## 2.6. From Monolingualism and Bilingualism to Trilingualism

Romaine (1984: 1) pointed out that “it would certainly be odd to encounter a book with the title ‘Monolingualism’. However, it is precisely a monolingual perspective which modern linguistic theory takes as its starting point in dealing with basic analytical problems, such as the construction of grammars and the nature of proficiency”. This concept sets the scenery; there is a default setting under which monolingual or bilingual skills may be compared to, without taking it for granted that this is the only way to evaluate the proficiency of bilingual or trilingual speakers. According to Rothman and Niño-Murcia (2008) there might be a possibility to evaluate the success or failure of multilingualism in terms of the output of multilingual speakers in each corresponding language. They seem to argue that the use of monolingualism, as the utmost “benchmark” for the assessment of multilingual production, denotes that bilingual skills cannot be considered as equal to a sum of two monolingual systems, since the conditions the languages are learnt and their

functions are different even in the rare situation that the exposure to each language appears to have similarities. Although the methods (i.e. learning strategies, inborn language faculty and processing capacities) that each speaker acquires bilingualism are more or less identical. Apart from that, it would be logical to assume that monolingual grammatical skills are somehow “fixed” for each speaker who is exposed to a specific dialect, regardless of the context in which it is acquired. Also, the final proficiency of each language appears to be varied amongst speakers in an overall sense - even within the same speakers who may show different grammatical competences for each one of their languages (see Montrul, 2008 for a discussion).

According to Grosjean (1985) bilingual speakers are not only the sum of two monolinguals, and what is more, a bilingual speaker has established unique language skills and proficiency. Accordingly, trilingualism should not be considered as the sum of three monolingual systems and neither as just another language which has been added to a bilingual situation, simply because it appears to have boundless variations in the level of linguistic and social context as well as variability amongst the learners (Cruz-Ferreira, 2006; Rothman and Niño-Murcia 2008).

## **2.7. Models of multilingual speech processing**

There have been a lot of recent models regarding multilingualism and most of them were developed from a psycholinguistic point of view. Below we present some of these models which focus on multilingual speech processing as they try to suggest newer ways for the comprehension of the multilinguals' speech production and the frame in which they operate.

### **2.7.1. The language mode hypothesis (Grosjean, 1998, 2001).**

As already mentioned, Grosjean's views on bilingualism (Language mode hypothesis) have been rather influential in the research on multilingualism. According to him (1998, 2001) a bilingual speaker is not the sum of two monolinguals since bilinguals and by extension trilinguals too, perceive in a different manner not only their mother tongue but also the second language. These speakers have also a different kind of system of processing their languages. In this framework, Cook (1991) introduced the concept of multi-competence to describe the knowledge of two different languages by the same speaker. Cook believed that the knowledge on the target-language by a certain speaker is not the same with that of a native speaker. Moreover, bilingual

speakers differ as far as their knowledge on their mother tongue compared to the monolingual speakers of the same language.

According to Grosjean then, a language mode describes the ‘state of activation of the bilingual’s languages and language processing mechanisms at a certain point in time’ (2001: 2). Depending on the language mode, the speaker finds himself/herself in a situation where she chooses a base or a most highly activated language and how many languages should be activated. Therefore a trilingual person can find herself in a mono-, bi- or trilingual mode. The language mode depends on various factors, such as the participants’ language mixing habits, the usual mode of interaction, the presence of monolinguals, the degree of formality, and the form and content of the message uttered or listened to as well as the socio-economic status of the communication partners (Jessner, 2008: 22).

### **2.7.2. The multilingual processing model (Meißner, 2004)**

Meißner (2004) developed his own model of multilingual processing to explain the processes that take place during the reception of written and oral texts in an unknown language to the speaker. This ideally applies to languages which typologically belong to the same language families. His hypothesis basically says that if someone is learning Spanish as a foreign language he/she will easily develop receptive abilities of other Romance languages too.

In Meißner’s model emphasis is given to the processes which facilitate the understanding of the new language. Learners depend on their former knowledge of other languages and they use them as the basis to support and build the structure of the new language they are currently learning. In the case of two typological close languages the learner constantly reviews his/her own hypotheses. The result of this process is the creation of a ‘spontaneous or hypothetical grammar’, which at first is mainly based on the system of the language(s) that the learner had initially learnt rather than that of the target-language. During the language learning process this spontaneous grammar is constantly reviewed and developed as far as its structures and the lexicon of the target-language. The foreign language that had been learnt beforehand (i.e. the one which was closer to the target-language) takes up the role of the bridge and becomes a kind of matrix to which any new structure and lexicon are compared to. However, there are certain prerequisites for the development of “spontaneous grammar”: a) there has to be a typological relation between the

languages the person learns, b) the learner needs to have an excellent knowledge of the language(s) which operate as the ‘bridge’ towards the target-language, c) the learner must be taught the way with which he/she will use the knowledge of the former language(s). Only when these prerequisites are met there can be a development of a ‘spontaneous grammar’ in a multilingual learner (see also Ανδρέου, 2012 for a more detailed analysis of the stages that the learner goes through during the acquisition of the ‘spontaneous grammar’).

### **2.7.3. The model of multilinguality (Aronin & Ó Laoire, 2004)**

According to Aronin & Ó Laoire (2004) the study of multilingualism should be based on multilinguality. They argue that language is one of the most significant characteristics of the individual and they suggested an ecological model of multilinguality. According to this assumption there is a terminological difference between multilinguality and individual multilingualism as well: “Individual multilingualism only refers to the processes and results of Third Language Acquisition or the trilingual speaker, linguistics and language, whereas multilinguality concerns the multilingual communicator in a social and physiological environment, society, communication and sociology” (Jessner, 2008: 26).

## **2.8. Factors that influence Trilingual Proficiency**

Trilingualism is a phenomenon that appears as a result of many factors and which can play an important role in the level of proficiency in each language. This chapter examines some of these factors, from the aspect of trilingual acquisition.

### **2.8.1. Conditions associated with the development of L3 Acquisition**

Cenoz (2003) stated that there are a number of factors connected to the acquisition of the third language. Some of these factors are: the age that the individual started speaking the third language, the context each language was used for as well as

the background and conditions that each language was acquired. These factors play an important role on whether or not bilingualism will contribute positively on L3 acquisition. More specifically, in the study of additive trilingual children who were in the process of acquiring the third language, most of the studies took place in Spanish-Catalan and Spanish-Basque school classrooms where bilingual children were learning English as a third language. These studies, that also include the ones by Sagasta Errasti (2003), Safont Jorda (2003) and Sanz (2000), point out that bilinguals, that also presented a better progress in English compared to monolinguals, had also involved a wider spectrum of writing and communicating skills.

However, Spain is an exceptional example regarding its sociopolitical situation and its bilingualism, so Spain's example will not be examined further in this dissertation. This happens because despite Basque and Catalan are minority languages in the country, they are still languages of instruction. This is considered unusual because in multilingual communities, the languages of instruction are society's majority language. Studies conducted in Spain suggest that bilingualism is important on third language development. These studies confirm the fact that the minority language can play a crucial role in the acquisition of the third language. Romaine also stated that "bilingualism cannot be understood except in relation to a social context" (1984, p.xiii). The same statement applies partially to trilingualism, bearing in mind though that the social context of the trilingual environment is far more complex compared to a bilingual one due to the fact that each one of the three languages has a specific influence on the speaker.

Education is considered to be a component in determining any advantages of trilingual learners over bilinguals. It cannot be considered though as the determining factor in language proficiency. According to MacSwan (1999) the embodiment of literacy as a factor of communicative language proficiency can be quite problematic. MacSwan believes that if literacy is considered to be part of language development, from the aspect of language proficiency, it can be problematic because language acquisition and literacy are not necessarily interdependent. However, since there have not been many studies that included literacy in their research aims there is going to be a matter of further study on that issue in ours. Specifically, we have looked into the matter by seeking to see whether formal instruction in the second language may result in higher proficiency in the third language, which is also learnt at school, thus forming a link between the L2 literacy and the L3 literacy which is

still under development (for a more detailed description on this matter see Discussion of the Results chapter).

## **2.9. Language relationships amongst the three languages of trilinguals and their competences in each one of them**

To begin with, let us define a person's languages as a set of systems which are autonomous but when needed they also interact with each other. A person who owns more than one language system has the ability to work with all of them independently and interchangeably according to his/her needs. In the following section we will present so far literature regarding the interaction amongst the languages owned by trilingual speakers and the proficiency they were found to have developed.

Lambert stated that “bilingualism provides a person with a comparative, three-dimensional insight into language, a type of stereolinguistic optic on communication that the monolingual rarely experiences” (1990: 212). Assuming that a bilingual speaker has such qualities would it be correct to assume that a trilingual speaker has also the same qualities and even more? Lambert continued by stating that bilingual speakers have a certain efficiency to switch codes when they address to speakers of either language (L1 or L2) or even when they communicate with bilinguals that also speak these same languages, especially in the communities with a diglossic situation. Could we assume that a consecutive trilingual that went through a bilingual period in his life and then moved on to a trilingual period has developed his language efficiency and can switch codes in a more rapid and efficient way?

Jessner (1999) has looked into the advantage that bilinguals have over monolinguals about their interactional efficiency, meaning their ability to communicate with others and perform communicative actions in a speech community on the basis of sociocultural and sociolinguistic norms. Specifically, as Jessner argued, bilingual speakers may appear to show a higher level of pragmatic development than monolingual speakers. Moreover, Cenoz (2001) stated that the appearance of more than two languages means more complex models during the activation of languages in terms of language production and understanding.

According to Grosjean (2001) when a bilingual speaker is in a monolingual

mode the other language is extremely deactivated and the speaker's language production resembles that of a monolingual. Both languages appear to be active when they are in bilingual mode and that is when their language production may show characteristics of bilingual speech such as code mixing and code switching. That said, Grosjean's proposed model can be applied to trilingual speech production too. Trilinguals would then be able to engage in monolingual, bilingual as well as multilingual modes in accordance to the level of activation or deactivation of their three linguistic systems (Hoffmann & Stavans, 2007) who also pointed out that the study on child trilingualism "is often hampered by practical problems relating to the collection and interpretation of data on the one hand, and the absence of theoretical models that might be used for comparison on the other. The rewarding feature of such endeavours, however, is that they do allow fascinating glimpses into the human capacity of processing language and the linguistic resourcefulness of multilinguals" (2007: 55).

The majority of the researches on trilingualism concerns speakers who learn a third language within formal instruction (Cenoz & Genesee 1998, Cenoz, Hufeisen, & Jessner 2001) or immigrant minorities who learn a third language in social contexts (Baetens-Beardsmore 1993). Most of these studies and models view the acquisition of the third language continuously to the acquisition of one or two other languages. Our study, that will be outlined later on, focuses on children who have acquired their L1 and L2 simultaneously or semi-simultaneously, and are learning their L3 within school context.

As Jessner & Cenoz (2007: 155) have pointed out, when we use the term L1 and L2 to refer to the relationship of these languages in a bilingual system, L1 is taken as not only the first chronologically learnt language but also as the dominant one. This way L1 is considered and given all the values of the mother tongue. So, according to this assumption "it is implicitly assumed that the level of proficiency in L2 must necessarily be lower than in L1". On the other hand, when an individual obtains a third language the sequential order of the languages learnt does not match up with how often the languages are used or with the level of proficiency in the trilingual's languages. It has been noticed that language proficiency changes over time and skills may vary or even alter in time according to sociolinguistic contexts (Hufeisen, 1998: 169-170).

Therefore, in this research, L3 English is used to define the third consecutive language that these children came in contact with so far after their synchronous

learning of their two first languages. Moreover, L3 English is in this case a language that is only spoken by these users in class, although it is a rather “universal” language, as far as every day references are concerned. In this sense, this specific L3 is all around these users’ ears and they come across it every day, through television, media, magazines and music, therefore they are acquiring through teaching a somehow already familiar language system.



## 3. Code switching and code mixing

### 3.1. Defining code switching and code mixing

Hans Vogt (1954) was the first one to introduce the term “code-switching”, while he was reviewing the Uriel Weinreich’s “Languages in Contact” (1953). Fano (1950) pointed out that Weinreich borrowed the phrase “switching codes” from information theory. This notion was developed by the linguists Roman Jakobson (1953) and Einar Haugen (1956) as early as the 1950’s.

The terms code switching and code mixing have been the research subject of language contact for more than fifty years, and they have been defined by Haugen (1956) and Gumperz (1982) as the alternating use of two languages. Code switching and code mixing have often been used vice versa; Code switching (see e.g. Poplack, 1980; Sankoff and Poplack, 1981; Zentella, 1997; Bullock and Toribio, 2009, pp. 2-5 and work cited within) is a structurally constrained combination of two (or more) languages and can take place either in a single sentence (“intrasentential”) or from one sentence to another within a conversation (“intersentential”). Meisel (1995) argued that the term “Language-Mixing”, in general terms, refers to all occasions where elements of the two languages are mixed within a clause or across a clausal boundary, and on the other hand “Code-Switching” is a specific subdivision of mixing that relates to the bilingual’s actual abilities, i.e. selecting the language in accordance to the interlocutor, the context or the topic of the conversation, etc. without “breaking” any syntactic rules.

However, Thomason (2001: 262) has suggested that code switching is: “The use of material from two (or more) languages by a single speaker with the same people in the same conversation (...) the term includes both switches from one language to another at sentence boundaries (intersentential switching) and switches within a single sentence (intrasentential switching). The latter is sometimes called code-mixing”.

In our study however, the previously mentioned terms will be used according

to Myusken (2000) who decided to use the term “Code Mixing” for “all cases where lexical items and grammatical features of two languages appear in one sentence” (intrasentential), and the term “Code-switching” for a “rapid succession of several languages in a single speech event” (intersentential). So, the term code mixing refers to the mixing of different linguistic units (words, phrases, sentences, modifiers) usually from two participating grammatical systems within one sentence (see also, 3.2 for “Code mixing in a Combination of Three Languages”). In other words, code mixing is governed by grammatical rules and can be prompted by social/psychological motivations. Code switching refers to the combination of different linguistic units (phrases, words, clauses, sentences) mainly coming from two participating grammatical systems in a single speech event. Thus, code switching is intersentential and can be subject to some conversation principles.

**We have already stated that we follow Muysken (2000); therefore in our study the two terms “code switching” and “code mixing” are signifying two distinct phenomena.** However, there have been scholars who have used only the term “Code switching” for both phenomena. So, whenever we refer to their opinions or definitions on the matter we will use their terminology and we will not alter it. When we refer to such a quotation in our text, it will be accompanied by the abbreviation (sic) denoting that this is according to their terminology in order to signify this difference.

Code switching and code mixing are phenomena that have been under a lot of important attention in bilingualism’s literature, focusing mainly on intrasentential instances (code mixing); however the attention on language mixing in trilingualism, has only recently received significant attention, which is also the case with trilingual data too (Rothman, 2009). According to the existing studies, mixes that involve a combination of all three languages are rare since trilingual speakers usually combine elements of two languages out of the three they have at their disposal (Edwards, 1994; Hoffman, 2001; Klein, 1995). However, just by plain observation there is not an advantage for a specific subgroup of the three languages. Although, speakers usually combine only two languages in their code mixes, in a broad sense this happens with any potential combination of the three language systems. In our study trilingual utterances were found in our data and they will be presented and discussed.

#### **3.1.1. Code switching and code mixing as naturally employed learning mechanisms**

According to Cruz-Ferreira (1999: 20), language combinations seem to “constitute a strategy for learning” and show a wide range of communication tools rather than an absence of bilingual synonyms at the lexical level or parasitic cross-linguistic alteration of the grammar systems during the period of acquisition of any of the three languages. The early language mixing during the early stages of language development is viewed more like a spontaneous procedure than a mechanical transfer. In later stages, taking for granted some level of proficiency in the languages in question, code switching and code mixing might serve as a more sociolinguistic complex phenomenon, in which more variables can play a determining role, like linguistic identity, language negotiation, as well as the influence of the interlocutors. All of these lead to the conclusion that multilingual children have a wide perception of language principles, which they apply in various combinations. Hoffman (2001) agreed with Cruz-Ferreira’s (1999) opinion that it is a communication strategy: “For bilinguals or trilinguals it is normal to move between different languages when talking with each other, and code switching is an essential strategy for them” (p. 11).

In this case, learners are not considered as inadequate monolinguals in each one of their languages, but more like people that possess and manage more than one grammatical system; pieces from these systems come into contact often enough and the speakers mix them in compatible ways with each language, but they also represent individual properties specific to the code switching situation. Similarly, young children can be considered as explorers of the languages they speak.

Hamers and Blanc (2000) stated that language formation is initiated in the “social interaction with others” (p.15); therefore each one of the languages used is dictated by specific social functions which are then transformed into actual expressions through a sequence of actions onto linguistic forms. A multilingual child may preserve the languages in a balanced level, or in a state of altering connections at his social and personal levels. If the sequence of forming and functioning or the social value of a language changes, this will also lead to changes in language behavior. Conclusively, multilingualism is considered as an ongoing changing phenomenon, which represents a process and not a state. This perspective is also supported by numerous of the available empirical studies by many researchers (see e.g. Cenoz, 2003;

Cruz-Ferreira, 2006; Edwards, 2004; Ervin-Tripp and Guo, 1992, in Ervin-Tripp and Reyes, 2005).

The fact that trilingual children can have numerous language choices can lead to various linguistic formations which are different from a sense of a single language proficiency and therefore should be treated accordingly. As a result, studies on trilingual code mixing and code switching, apart from contributing to the relevant literature, should also contribute to the development of new suggestions on the study of child trilingualism, the distinction of linguistic systems in the mind of children who own more than one language, as well as the roles of the language systems.

### **3.1.2. The structural implications of Code Mixed utterances**

Linguistic research has given a lot of attention to the syntactic structure of utterances. The way elements from various languages appear and coexist within the same utterance and the way these elements are governed by certain constraints has been a matter of research as well as controversy amongst scholars. The term “elements” is used according to Treffers-Daller (2009: 59) “for want of something better, as there is no other term to cover the wide variety of phonological, morphological, syntactic, semantic and conceptual features, lexical items, phrases, clauses, multiword chunks and graphemic symbols that can be transferred from one language to another”.

All the literature reviewed earlier applies to Code mixes (according to Muysken, 2000 and the term we follow) since in the case of intersentential code switching (sic) each utterance is fully produced in one language and therefore it is logical to expect that only the syntactic rules of that specific language apply to it. When considering code mixes, the first question to ask is whether a combination of two languages is random or grammatically constrained. If they are grammatically constrained it is viable to find out whether these constraints are linked with the languages in question or with code mixing per se.

Various researchers have characterized code mixing as a random and/or even an alternative process of language production both from the aspect of formal linguistics (see Bullock and Toribio, 2008) and the sociolinguistic literature (see Poplack, 2000) showing that code mixing is mostly taking place under strict specific linguistic rules, is very constrained and does not come in contradiction to all the linguistic restrictions as well as the language rules of each one of the specific languages that

comprise the language combinations in question (Poplack, 2000). Taking as an example the data on code mixing it is obvious that it is not likely for speakers to produce utterances or expressions with fragments that are ungrammatical in that specific language and that they are not able to randomly switch between the languages, thus indicating that certain structural principles and rules apply to code-mixing (MacSwan 2000, Poplack, 2000, Treffers-Daller, 2009).

Earlier studies assumed the location of certain mixing points between the nouns and verbs or even between conjunctions and their conjuncts (Gumperz, 1982, in Poplack, 2000). Poplack (1980) and introduced another attempt on the analysis of data on code mixing, concluding in the following: “The order of sentence constituents immediately adjacent to and on both sides of the switch point must be grammatical with respect to both languages involved simultaneously” (in Sankoff and Poplack 1981: 5); thus suggesting that in each language the sentence fragments have to follow a specific internal consistency with the grammatical, morphological and syntactic rules of the source language.

This brings us to the first restriction on code mixing as proposed by Poplack:

**The Equivalence Constraint:** The mix within the same utterance should take place at a point in the sentence where it does not disrupt the grammar of either language. Therefore, it is possible to have the Greek/English mix “I want some φωμί” or “I saw a βάρταχο” because both English and Greek share the construction in which the object follows the verb.

Poplack also proposed a second constraint on code-mixing:

**The Free Morpheme Constraint:** According to this constraint, mixes are limited when the combination of the morphology of two or more languages is required, that is, when a lexical word is combined with morphosyntactic elements. For this kind of combination to take place, the word has to be phonologically adapted to the language supplying the functional morphology.

It is crucial to bare in mind Poplack’s (2000) suggestion that despite “code switching and lexical borrowing” (sic) are the outcome of language contact, they are not necessarily equal at any sense. Nonetheless, all of the previously mentioned approaches share that code mixing does not imply a coincidental combination of language elements but it specifically takes place within strict limits of the languages in use. Later on, this constraint’s application proved not to be supported by analyzed data presented by Bhatt (1995) and Halmari (1997). Belazi et al. (1994) proposed that the Functional Head Constraint does not allow code mixing between

the functional head, e.g. Determiner, Quantifier and Complementiser, and the supplement (noun phrase, verb phrase etc) which is selected by this functional head. Di Sciullo et al. (1986) proposed the Government Constraint, which is based on the Italian – French – English and Hindi-English code mixing data. According to this Constraint the mixing happens between a lexical head, like a verb, and the highest composing that this head governs, like the determiner in the verb's noun phrase. On the other hand, Benthila and Davies (1983) suggested that restrictions in Code mixing are based on subcategorization and not in word order balance.

The structural domination of one language over the other one within a code mix is a question that has been considered extensively in research. Current literature includes two different and conflicting standpoints on this issue. Myers-Scotton (1993, 2002) and Jake et al (2002) introduced a model called the Matrix Language Frame, which refers to the idea of a matrix language and an embedded language. According to this model, one of the two participating languages consists the matrix language (ML) and the other one is embedded in it (EL – the embedded language), making them exist in a state of asymmetrical relationship. It has to be pointed out that the Matrix Language Frame model deals only with code mixing (intrasentential), due to the fact that code switching (intersentential) involves exclusively full sentences in a single language.

Myers-Scotton (1993a) proposed the idea of the congruence being embedded within the Matrix Language Frame, meaning that in mixed utterances, the Matrix Language grants the word order of the sentence (the Morpheme Order Principle), and the grammatical frame of the clause (the System Morpheme Principle), while the Embedded Language provides the content morphemes, as long as they are adequately congruent with their Matrix Language counterparts at the various levels of mental lexicon. In this model “the matrix language constituent order and matrix language functional categories are assumed to dominate a clause” (Muysken 2000: 16). Myers-Scotton described the Matrix Language as the “one language [that] supplies the main grammatical frame for a clause containing words from two (or more) languages.” (2006: 235).

Muysken, however, criticized the Matrix Language Frame Model when he made the observation that: “The model proposed rests on the assumption that mixed sentences have an identifiable base or matrix language (ML), something that may or may not hold for individual bilingual corpora” (2000: 16). Basically, Muysken pointed to the fact that this model may not be applicable to all bilingual corpora,

since it might not always be easy to identify the Matrix Language. Muysken provided six possible approaches available when identifying the Matrix Language. He called the first approach a “discourse-oriented way of determining the base language”. Here, the matrix is defined using a conversion criterion, i.e. the matrix is the language in which the conversation is generally realized (2000: 64). Muysken called the second approach left-to-right parsing, where “the first word or a set of words in the sentence determines the base language” (2000: 65). The third approach is to count morphemes, and the language with the most morphemes is the Matrix Language. The fourth approach is related to psycholinguistics, and “the language most activated for the speaker” (2000: 67) is the Matrix Language. The fifth approach is a structural approach, and it lets the main verb of the sentence determine the matrix. The sixth and final approach is based on constituent structure, and “the highest element in the tree would determine the language for the whole tree, this would often be the inflection on the finite verb (...). In subordinate clauses this would be the complementizer” (2000: 67).

However, the concept of congruence hasn't been so clear on the matter of code mixing and it seems that it needs more development. In order to explain this process further, Myers-Scotton (1993a) developed a number of subordinate principles in addition to that to explain the counter-examples to the two initial principles. The Embedded Language Island Principle permits EL morphemes in islands consisting solely of EL words, and the Double Morphology Principle gives the ability of usage of an EL system morpheme which is equal to its ML counterpart.

The combination of the previously mentioned principles can be very complex and even descriptive, so the MLF model is one of the most solid theoretical developments of code mixing despite the fact that the specific terminology is not used by most of the researchers when they try to describe one of the participating languages as the basis of the utterance and the other one as the one developed upon this basis (see, for instance, the terms “host language and guest language” used by Cruz-Ferreira (2007). On the other hand, various authors like MacSwan (2005) do not adopt at all the assertion that the MLF model (and particularly the matrix language model) is important for any successful analysis of code mixing data and also dispute the observational outcomes of the MLF for being inconsistent with the facts of code mixing, suggesting that research on code mixing is different from Code mixing specific constraints like the MLF model and thus they analyze language contact instances in terms of the general constructs of linguistic theory, without allowing any

specific code mixing mechanisms (the Null Theory). The Null Theory seems more like a point of view than an actual structure which would apply to code mixing and this is a drawback; apart from that there is a lack of code mixing constraints and principles and the application of just a language-specific model turns code mixing looks more like a peripheral aspect, rather than a valid and global speech process. Also, these are researchers, like Bhatt (1997), who claimed that code mixing is surely ruled by grammatical constraints and limits, but these are classified by a way of the Optimality Theory, thus counting in for the possible variations in code mixed utterances.

The Activation Hypothesis, proposed by Paradis (1984, 2004) suggested that an activation threshold can be applied to a language in order to prevent interference and in the case of code mixing this threshold is lowered to the level of each language resulting in mixing; more specifically, “in the case of extremely frequently used items, such as closed-class grammatical morphemes, the threshold may be so low as to show no fluctuation because of the strong frequency effect” (Paradis 2004:224). This also means that code mixing will regularly occur with all closed class items, which is very over-generalized. Besides Paradis’s hypothesis does not take into consideration any social or personal and societal factors or even typological closeness between the languages.

Nevertheless, Muysken (2000), accounted for these factors and also proposed a set of code mixing strategies: *alternation* (an overall transition from one language to another, in structure and lexicon too), “*insertions* of material (lexical items or entire conversations) from one language into a structure from the other language” (p. 3) and *congruent lexicalization* (which occurs in typological similar languages, in which the structure allows a lexical transfer at any random point of the sentence.) Since Poplack’s (2000) model is linear and syntactic, and code switching in her model is seen as the alternation between languages, the associations to this process are evident.

Muysken, also connected these three previously mentioned strategies with the sociopragmatic aspect of code mixing suggesting that the alternation is typical in solid bilingual communities, insertion is typical in older colonies in which the speakers appear to be more familiar with the underlying language, and congruent lexicalization is mostly observed in communities where a lot of speakers are fairly fluent in two related language. On the other hand, the distribution might not be representative due to the fact that it may look like a simplification of the actual



condition of bilingual groups; however researchers still cannot avoid the linking between the two aspects of code mixing. One of the researchers that attempted to make this link was Chan (2009), who stated that there is a possibility of the existence of more than one ways of combining elements from the two languages. In the case that the two languages appear to have more than one rule for a specific construction, the bilingual speaker appears to have the ability to access more than one structurally correct options to generate a mixed utterance, the choice often being “functionally motivated by sociolinguistic, pragmatic, or processing factors” (2009: 198), resulting in the speaker’s ability to choose from a variety of constructions in different bilingual situations.

With the syntactic/pragmatic interface presented by Chan we can proceed to the next chapter which deals in more detail with the communicative side of the code mixing process. Finally, it is crucial to mention that despite the fact that there are conflicting accounts on the structure of mixed utterances, all these accounts still preserve the fact that code switching is not free and random but structured, limited and constrained and does not disrupt the structure of any language concerned within the code mixed utterance. As Poplack (1980: 586) suggested, “switches will tend to occur at points in discourse where juxtaposition of L1 and L2 elements does not violate a syntactic rule of either language”.

#### **3.1.3. Code mixing and code switching as communication strategies**

According to MacSwan (1999) code switching can be regarded as a coping strategy to overcome specific communicative imperfections in one or both of the languages that are involved. In other studies these communicative deficiencies are mentioned as semilingualism (Cummins and Miramonte, 1989, in MacSwan, 1999). The term semilingualism was regarded as the state in which the bilingual speaker may lack linguistic proficiency for one or more of the languages that he or she speaks. This was often considered as the reason for low academic success for a lot of multilingual children (Milroy and Muysken, 1995, Tokuhama-Espinoza, 2003). The term semilingualism was largely applied to ethnic minorities and not to the speakers of dominant languages (Wei, 2000). However, its perspective received criticism during the 1980s (Martin-Jones and Romaine, 1985; Poplack 1980;) for its faulty terminology (mean-

ing that the speaker has less than one language at his/her disposal, while in reality it is two language systems that are different from two monolingual equivalents) and the prejudices it imposed on the speakers of minority languages. According to MacSwan (1999: 249) "If teachers believe that code switching (sic) relates to an inherent disability in children which might be remedied with sufficient instruction, then the children's perceptions of their own "natural abilities" as severely limited, conveyed by classroom teachers, will impact upon their success in school". The lower academic level of the children in question was linked with a more general lower social and educational level of their immigrant families and was also linked with various other socioeconomic factors. Valadez, MacSwan and Martínez (1997) performed a study in which they assessed how three low-performing children possessed a grammar that was practically indistinguishable from the original grammar of the control group, making it clearer that code switching (sic) in cases like that can be attributed to other factors and not to a kind of grammatical imperfection.

Poplack (1980), in her research in mixed utterances in English-Spanish bilinguals, was one of the first that claimed that this phenomenon is not an indication of language imperfection; on the contrary it showed that bilingual children were developing their languages normally: "Code switching (sic), then, rather than representing deviant behaviour, is actually a suggestive indicator of a degree of bilingual proficiency" (p. 73). MacSwan (1999: 22) also shared this opinion by stating that "code switchers (sic) have the same grammatical proficiency as monolinguals for the language they use", and thus instances of mixing of elements of two languages can be attributed to an immature system in either language, and they are not caused by interlinguistic misinterpretations (Goodz, 1989). Heritage language speakers constitute a group that tend to code mix a lot; however, researchers have shown that proficiency differences exist between the heritage language and the majority language in this particular group of speakers (see for example Montrul, 2008; Polinsky, 2007).

Wei (1998: 207) agreed but also added the issue of cultural identity shown in each specific language: "code-switching (sic), far from being caused by an insufficient proficiency in one of the two languages, and besides expressing a double cultural identity works as a communicative strategy used for a variety of purposes, related either to the negotiation of the language of interaction or to the organization of conversational activities". Bilingual children establish different language systems from the beginning and have the ability to use the evolving languages according to

the context they find themselves in (Genesee, 1989). Cruz-Ferreira's (2006) studies, along with many other current studies in child trilingualism, showed that if the children have the opportunity for a successful intellectual and linguistic development, then multilingual children present the same ability with, if not greater, with their monolingual peers when it comes to academic achievement.

Another question is if code switches and code mixes are triggered by lexical deficiencies. This could look like a rational explanation; even if bilingual speakers have a totally developed grammatical system in each one of the languages they speak, they may show a lack of specific lexical units that are necessary for the expression of their ideas. Older studies though, (Clyne, 1967; Hasselmo, 1970, in Lipski, 1978) suggested that code switching cannot be attributed only to the lack of lexical availability. Among others, Cruz-Ferreira (2006), Rothman and Niño-Murcia (2008) displayed data on trilingual siblings which made it clear that the switches between languages were not totally caused by the lack of available synonyms in children's vocabulary; in fact, in Rothman and Niño-Murcia's study, the children often used the correct terms from two languages conversely within the same context.

Moreover, Dewaele (2000) studied his daughter's progress as she was being raised as trilingual. Although he stated that most of his daughter's utterances were mixes in two of the languages she owned, he did observe that there were times that she used all of her three languages. He reported that Livia (her name) even from the age of 2 years and 5 months was able to use all of the three languages she spoke for the same concept. She first used the English word, then the French and then the Dutch one for the word "feet" as in the example:

L: Grands feet papa! (Big feet daddy!)

D: Grands pieds? (Big feet?)

L: Oui grands pieds! (Yes big feet!)

L: Voetje, non grands feet. (Small foot, not big feet). (\*She points to her feet).

What still remains open is the question of whether these mixes and switches are caused by some type of language distribution according to which children tend to

assign the term in a specific language to a specific context or interlocutor. However, Livia was aware that her father knew all of her three languages and thus she was feeling confident to use them when speaking with him. Dewaele though had pointed out that she had a clear understanding of the fact that not all of the interlocutors she was speaking with knew all of her languages and she would only use English with her English friends and at school. In that sense and because of her ability to include in her speech French and Dutch only with children that understood it Dewaele rightly pointed out that Livia was a perfect applied sociolinguist. For instance, she addressed a French speaking child at school in French only when they were on their own. If their English speaking schoolmates were present she would only use English.

Finally, it needs to be stated that although code mixing per se is not an indication of a lack of fluency, it could, in some occasions, be a sign of a reduction in proficiency, namely language attrition. Seliger (1996: 163) clearly suggested that mixing “can be considered a precursor sign of primary language attrition when mixing begins to occur in contexts that are not motivated by external factors such as interlocutor, topic, or cultural environment”. Bolonyai (1998, 2009) found variations in the amount and the structure of code mixing as the children that took part in the study gradually turned to English-dominant and their use of Hungarian was less. They produced more code mixes than code switches and their code mixes were grammatically English (matrix language). However, the researcher did mention that when the children started visiting Hungary the mechanism of language attrition was strongly hindered.

Concluding, Baker (2000) suggested that code switching in general should not be seen as a sign that bilinguals are not able to keep their languages apart but more like a manifestation that they have a unique multicultural personality. He added that **bilingualism seems like “a more richly fed thinking machine”** (p. 67).

### **3.1.3.1. Contextual and social factors that may lead to code switching and code mixing as well as the “trigger hypothesis”**

Scotton and Ury (1977) claimed the existence of three prime factors than lie behind code switching and code mixing; these factors are: identity, power and transaction. The chosen language is selected according to these factors. Myers-Scotton (1999, 2004) also shared a similar point of view with the Markedness Model

she proposed. According to this model, the speakers face an awareness of markedness when it comes to the linguistic choice for various situations or discourse types, and according to their relationship to the situation and its participants they get to choose the language they will use. According to Myers-Scotton there is also a principle that has to be taken into consideration as the basis of all code switches and that is the Negotiation Principle: “Choose the type of your conversation input in a way that it points the set of rights and obligations [the PRO set] that you covet to be in force between speaker and the person addressed to for the exchange” (Myers-Scotton, 1993, in MacSwan, 1999, p. 39). This principle suggested that people are trying to form their social relationships according to their choice of languages within their conversations or their speech. Bilingual children come in contact with the mainstream language usually at their school age, when the basic education begins, so the parent languages are characterized as “home languages” or “inside languages”. Then at the same time the language taught opposes to the home language and it becomes the “outside language” (Ervin-Tripp and Reyes, 2005, also similar to the division between we-code and they-code proposed by Gumperz, 1982). The next step for the child is to try and bring a balance to these languages depending on the speech situation, which should be examined on an individual basis.

There is also another significant factor that has to be taken into consideration in code switching strategies and this is the language negotiation between the two speakers. It could be easily characterized as unfair to ascribe the choice of language absolutely to the speaker, without taking into consideration the impact of the other interlocutor and the number of switches and mixes that are needed to be a norm inside a certain circle of people. The feedback taken from the interlocutor, the overall value attributed to each language and the quality of the linguistic group that the conversation occurs in, they all appear to have an impact on the number and type of switches and mixes produced.

Language negotiation is a concept that may find ground to child speech from an early stage. Vygotsky (1978) stated that whether children are inside or outside a bilingual situation they are equally affected by the same elements as adults and respond to the way others surrounding them express themselves by way of “social” speech. Nicoladis and Genesee (1997) confirmed that situational code switching (sic) is usual for young bilingual children, based on an efficient separation and the way they are aware of their surroundings. This kind of evidence is also introduced by speech production data derived from bilingual children in the studies of Foster-

Meloni (1978), Saunders (1988), Lanza (1992) and others. The children's native language can be the language of the comparatively powerless social group (as in our case the Albanians in Greece) or as in fewer cases these days, the language of the minority with a high status (e.g. French or Swedish in Greece). Children are prone to the societal reputation and the prestige of their languages from their young age and make use of it in various types of interaction with their peers (Ervin-Tripp and Reyes, 2005; Shenk, 2008; Zentella, 1997). Young children can also be considered as quite sensitive to the power relationships between languages (see Khattab, 2007, 2009).

Children can also be very sensitive to the amount or frequency that switching (sic) might occur from their interlocutors and so they modify their own speech by fluctuating the rate of code switching (and mixing) since their preschool age (Comeau et al, 2003). Literally, their sociolinguistic proficiency is more likely to begin to establish and develop almost at the same time that their grammatical proficiency begins to occur, emerging as actual language production (see, for example, Andersen 1990, Hymes 1974, amongst others).

Social roles can definitely play an important part in language switches and mixes; nevertheless, the individual characteristics of the speakers can also be very important and influential. According to the longitudinal studies of multilingualism in families (presented in Tokuhama-Espinoza 2001, 2003, Cruz-Ferreira 2006, Davidiak, 2010 each summing up the speech data from siblings) even children that are being raised in one family and thus in the same conditions appear to have different patterns of language use, which seem to depend a lot on their personality and their communicative style. Therefore, the social and personal factors have to be taken into consideration when examining the presence of each language in a bilingual or a trilingual situation.

Clyne (1967, 1972, 1977, 1980, 2003) also suggested another explanation for the switches and mixes with a hypothesis he made. He clarified that cognates "trigger" code switching in their close environment, no matter if they are preceding or following them. Such trigger words include the following groups:

- a) Lexical transfers (lexical items which belong to one language but also form part of the speaker's lexicon in another language, such as names of certain foods),
- b) Bilingual homophones,

c) Proper nouns.

Moreover, according to Clyne, these kinds of words make the speakers identify the language they begin to talk in as the linguistic system of their conversation and to continue speaking in this particular language. Apart from that, Clyne also reported various occasions of mixing, or transversion as he characteristically refers to this process, produced by prosodic and syntactic factors. Depending on the position in relation to the lexical switch, Clyne classified the triggers as “consequential” (the trigger word is followed by the switch), “anticipational” (the trigger word is preceded by the code switch [sic]) and finally a category derived from a combination of these two, having the lexical switch being put between two trigger words.

It cannot be taken for granted that this hypothesis can fully predict the change of code next to a candidate trigger word. However, it can be assumed that the existence of such words increase the possibility of code switching, depending at the same time on the position the trigger holds in a sentence along with its pronunciation; referring to the structural relationship there is no influence accredited to the trigger word and the adjacent sentence elements, therefore it somehow becomes a rigid surface phenomenon. Triggering is also considered to happen during overlaps of meaning between the words in two different languages, and so false cognates cannot be expected to act as triggers. True triggers would include words that have slight morphological and phonological differences, such as “boot” in English and “μπότα” in Greek.

Apart from Clyne, the triggering hypothesis has also been studied and tested by other researchers like Broersma & de Boot (2006), who broadly agreed with Clyne’s suggestion that trigger words can in some occasions lead to a code mix, but they clarify that the reasons that cause code switching and code mixing are way more complex than what Clyne supports and will be different according to the speaker’s individual characteristics, occasions and situations.

## 3.2. Code mixing in trilingual data

Code switching and code mixing can be considered as a typical strategy of speech for bilinguals and trilingual speakers, with the only difference between them

being the various combinations that can be produced. When a trilingual speaker is using his monolingual, bilingual and trilingual skills, technically he/she is capable of producing a total of seven different combinations and in each one would be included one, two or three of the languages the speakers have at their disposal (for example, in our study of Greek, Albanian and English the combinations found were:

1. English- Greek code mixes,
2. English- Albanian code mixes,
3. Greek – Albanian code mixes,
4. Greek – Albanian – English code mixes.

However, it has been commented in the majority of so far studies that most of the times in all types of trilingualism only two of the three languages are involved in each code mixing instance (Edwards, 1994; Hoffman, 2001; Klein, 1995; Rothman and Niño-Murcia, 2007). This apparently makes clear the fact that there can not be more than two language systems used for communication at the same time. Hoffman (2001) though, is convinced that there are indications of possible combinations of three languages in occasions where trilingual children would be only aware that they are using two languages while they are indeed mixing elements of a third one. So, in child trilingualism it is possible that three language combinations may occur, when two of the three languages involved are not perceived as two different systems by the child, at least compared to the third one, but rather as a single one. In that case then, the speaker might be in a bilingual mode (Grosjean 2001) although he uses all of his three languages in a somehow subconscious manner.

According to Cruz-Ferreira (1999) even trilingual children rarely mix three languages and trilingual data in a single utterance may be considered as almost nonexistent. Contexts in which a combination of three languages is necessary within an utterance or even within a single discourse are not easily encountered by plain observation, so the suggestion that trilinguals have a tendency to produce two language mixes rather than three language should be examined more through a variety of experiments and designs so that it can be questioned further. Thus, our study will make useful data available in current literature since the combination of the three



languages was found within our participants and the distribution of the languages involved are presented and discussed in chapters 5 and 6).

Clyne (1986) stated that trilinguals have a tendency to behave more like bilinguals, or “double bilinguals”, meaning with two or three sets of bilingual language combinations. As stated before, trilingual children haven’t been studied as extensively as bilingual children; but on the other hand a lot of studies in bilingual children provide important data into the matter. Amongst various other researchers, children’s early dual language (under 2-3 years of age) is also discussed in Taeschner (1983) Barron-Hauwaert (2004), Jisa (2000), Dewaele (2000), Davidiak (2010). These sources provide information that early mixed utterances consist of 2 or 3 words and expand as time passes. According to various other empirical studies performed with language samples produced by young English-Spanish bilinguals (McClure, 1981; Zantella, 1997) younger children mainly use lexical-item code mixing. This kind of fusion of lexical items from one language into utterances in another language is often called nonce borrowing (Ervin-Tripp; Reyes, 2005) and it is mainly caused by assumed lexical gaps. As the child grows older, the code mixing patterns turn more mature for which a totally developed grammatical system is necessary along satisfactory lexical knowledge in each language and also a greater variety of stylistic purposes and situational demands is allowed. Köppe and Meisel (1995) focus on the fact that intersentential instances (code switches) and not intrasentential instances (code mixed utterances) are common from early years, due to the fact that they are structurally less complex and because most of the times they are caused by specific shifts in situations, like the interlocutor’s change (situational switches). Later on, intrasentential mixes (code mixed utterances) become even more frequent, approximately after the age of 3-4 years old, due to the fact that they have to deal with more complex concepts, like topic shift (metaphorical switches), and also due to the earlier unavailable syntactic awareness required when mixing elements of two languages in a structurally correct way.

A child growing up with a bilingual awareness will deal with language choice as a rather complex issue. Young children are not yet aware that not all people around them speak the same language, or maybe that in reality they even speak more than one language. However, the natural aftermath later on, is that the same child will find himself/herself in the position of having to choose the appropriate language with each person. Köppe and Meisel (1995) state: “Note that, in the course of the child’s language development, the factor “interlocutor” may become increasingly

complex: especially with bilingual interlocutors, the child has to find out whether the interlocutor expects to be addressed in only one language, or whether he accepts the use of both languages” (p.279). Most children seem to easily handle this task since their young age (Goodz, 1989; Lanvers, 2001; Lanza, 1992, Miccio and Scheffner Hammer, 2009). More specifically, according to Quay (1995), Genesee, Nicoladis and Paradis (1995) and Genesee (2002), French-English bilingual children were found to be able since the age of two years old to use each language appropriately depending on the person they are communicating with, a capability which forms part of their communicative competence. In some occasions children might also adjust their level of mixing to that of their interlocutor’s (Comeau et al., 2003), (see also about Dewaele, 2000 in 3.1.2.1). Genesee (2002) stated that “true bilingual proficiency entails the ability to adapt one’s language use on-line in accordance with relevant characteristics of the situation, including the preferred or more proficient language of one’s interlocutor” (p.174).

Rothman and Niño-Murcia (2008) found a similar tendency for trilingual children who at the age of three years old seemed to be aware with whom they would be able to use Spanish, Italian and English. In addition to that, they found three brothers that showed a high level of awareness of the separation of the codes they speak and they could also tell that they were in fact distinct languages. Specifically, the oldest child was able to dictate his brother what language their interlocutors were speaking and accordingly what code they could use in each occasion, a fact that the younger brother seemed to perceive easily enough in order to respond to their interlocutors accordingly in their language. When it comes to the interlocutors’ proficiency, even though the child can tell if they are a non-native speaker, there could be some kind of a threshold that the interlocutors have to exceed so that they can be considered as fluent. Cruz-Ferreira (2006) and Rothman and Niño-Murcia (2008) pointed out the fact that trilingual children appear to be very sensitive to the speaker’s level and may sometimes assess it - consciously or subconsciously- whether it is good enough for them to communicate in the target language. This could be attributed to their easiness of communication and to the language identity, meaning that the child chooses to accept the interlocutor into the range of speakers who use this language. It is not of course implied that the children judge the linguistic proficiency of the people they are speaking with, but they appear to fit into the level of proficiency accordingly and adjust their communication by using mostly the language their interlocutor is speaking better since they can manage

their interlocutor's native language quite well. Finally, Zentella (1997) argued that some children might also understand that some concepts are expressed easier, more detailed and even more correctly in one language than in another and use code switching or code mixing for this reason.

### 3.3. Cross-linguistic influence

The issue of cross-linguistic influence during second language acquisition has long been an important topic research. During the last decade, however, there has been increased interest in a relatively under-explored field; cross-linguistic influence in third language acquisition.

In this study, the term “transfer” and ‘cross-linguistic influence’ will be used interchangeably as they are commonly employed in many studies of third language acquisition (Jessner 2003; Cenoz 2001; De Angelis & Selinker 2001; Ringbom 2001, 2007). According to De Angelis (2007: 19) cross-linguistic influence is the influence of prior linguistic knowledge on the production, comprehension and development of a third language which can affect various linguistic levels such as lexis, phonology, morphology or syntax. The most distinguished influence can be found in L3/Ln lexis, mainly from the L1 but also from non native languages - the latter has been the focus of many studies (e.g. Ecke, 2001; Muller-Lance, 2006; Ringbom, 2001).

From a cross-linguistic point of view L3 studies focus on the way the three languages interact with each other during the language learning process and L3 speech production. What strikes the most is that during L3 production the speaker may spontaneously produce code mixes with L2 or code switches in L2. For instance, native speakers of Dutch with English L2 produce French L3 utterances such as \**ils veulent gagner more*, euh, plus... and \**les gens sont impliqués* (Dewaele, 1998), and a native speaker of English with French L2 and German L3 says: \**Tu as* mein Fax bekommen, maintaining correct German syntax but unintentionally producing the French personal pronoun and auxiliary (Selinker & Baumgartner-Cohen, 1995 in Wunder, 2011).

Jessner (2008) has pointed out that “In a multilingual system crosslinguistic influence not only takes place between the L1 and the L2 but also between the L2 and the L3, and the L1 and the L3, not forgetting the fact that the influence can also work vice versa in all cases. In comparison to SLA [second language acquisition] this

presents an increase in transfer possibilities which cannot be neglected, or possibly subsumed as L1 influence – as traditional SLA research would suggest. Due to changes in linguistic behaviour, for instance in a migration context, both L2 and/or L3 can jeopardize the maintenance of the L1 and consequently, language attrition might set in” (p. 31).

Also, studies on third language acquisition and L3 use have shown that L2 in a trilingual system takes up a specific role; L3 learners or users do not rely on their L1 as one would expect, but mainly on their L2. In various studies of learning an L3 of Indo-European origin, L3 learners whose L1 is typologically unrelated to the L2 and/or L3 showed a tendency to transfer knowledge from their L2, or in the case of bilinguals, from the related L1 (e.g. Chandrasekhar 1978; Ahukanna, Lund & Gentile 1981; Bartelt 1989; Hufeisen 1991; Cenoz 2001; Wei 2001, in Jessner 2008). Also, Tremblay (2006) indicated that L2 exposure may influence the learners’ ability to exploit their knowledge of L2 to escape from their lexical deficits in L3, whereas L2 proficiency plays a major role in the frequency with which the L2 intrudes during L3 production (in Jessner, 2008).

De Angelis and Selinker (2001) consider two different types of transfer during the production of an L3; the lexical transfer and the morphological transfer:

- Lexical transfer refers to the substitution of an intended L3 word by an L2 word (Cenoz, 2001; Ecke, 2001), but can also include the formation of hybrid lexical items that consist of morphemes from two languages and do not exist in either the L2 or the L3 (De Angelis & Selinker, 2001; Dewaele, 1998, 2001).
- Morphological transfer refers to the formation of types of an  $L_n$ , in which a bound or non bound non-target language morpheme has been mixed with another bound morpheme or non bound morpheme of the target language, in order to produce a target-language-like word.

According to De Angelis & Selinker (2001) all linguistic systems in a learner’s mind may communicate and interact while creating their  $L_n$ . The linguistic theories on transfer are not as many and they are based on the communication of the systems involved, mainly that of the native one and the non native one. However, in order to have transfer we need more than two linguistic systems, therefore a transfer occurring among three systems allows us to investigate the communication and the

possible conflict of these systems at the same time.

It is significant that research keeps on investigating the reasons cross-linguistic influence occurs and the possible factors that may provoke it. Furthermore, although there have been several but not enough studies on the production of the third language it is still a field that ongoing research is being conducted. Apart from the fact that each research focuses on different aspects and uses different methodologies the combination of the languages that have been investigated in our study is also very important, since to our knowledge Greek-Albanian and English have not been the focus of a previous research as far as these languages' interactions and the language choices of such participants. Moreover, the individual characteristics and biographies of the participants in relation to their L3 speech production that have been investigated in our thesis have not been researched in so far literature. Therefore, this kind of perspective will be tried to be surveyed through our study. An analytical presentation of our aims and the characteristics of this thesis are provided in the first chapter as well as in 3.4.).

### **3.4. Factors affecting cross-linguistic influence**

The factors that may be linked to cross-linguistic influence and particularly transfer have been the focus of research in trilingualism, especially ever since it has been acknowledged that it has to be seen as a completely different and independent field from bilingualism. As already mentioned before, studies were looking into trilingualism and thus multilingualism through the scope of bilingualism. The study of trilingualism initiated a long research on the factors that may predict transfer. What was very clear from a point and on during trilingualism research though, was the fact that almost every study had different aims and thus different methodologies. Therefore, scholars coming from different linguistic backgrounds (e.g. linguistics, psycholinguistics, second language acquisition and lately third language acquisition) were approaching the phenomenon of transfer and cross-linguistic influence from different starting points and thus provided different terminology and factors that they surveyed. As Treffers-Daller (2009) points out “Although many researchers think of code switching (sic) and interference or transfer as different phenomena, instances of code switching (sic) and transfer can be seen as similar in that they involve the occurrence of elements of language A in stretches of speech of language

B” (p. 59). So, at least to our knowledge, there has not been a specific motivation to gather all of the factors in a single study or in a theoretical publication that would include and describe the so far findings on these variables connected with the transfer of (lexical) items even from different starting points. Although there were a lot of studies referring to lexical transfer the reasons that provoke it were seen through a specific scope.

Nevertheless, Murphy (2003) has provided a presentation of the variables that may affect cross-linguistic influence and grouped two large categories of the most prominent and most surveyed of them. So, she distinguished two categories of variables: a) the learner specific ones and b) the language based ones independent of the individual learner. Below is a discussion of the variables which have been found to interact and facilitate language transfer in both L2 and L3 acquisition. However, at this point we provide a presentation of these factors as they will be further commented while discussing our results. Our rationale of the whole design of this research is strongly connected with these variables (the questionnaire constructed as well as the correlations performed have been based on these variables in order to have a chance to see the way the languages interact according to the participants’ background and to the speech they produced, i.e. corpus). Largely, the variables are:

### **3.4.1. The learner specific factors**

#### **3.4.1.1. Proficiency**

Proficiency is one of the most important factors of language transfer. Hammaberg (1998) has pointed out that although a person may be mature language wise and may speak two or three languages, his/her language abilities in each one of the three languages are usually not of the same level.

While in second and foreign language acquisition studies ‘monolingual (‘native’) proficiency’ is commonly used as the preferred term, researchers in the field of multilingualism and L3 acquisition studies prefer to use the term ‘language proficiency’. Herdina and Jessner (2002) argued that different aspects and terminologies of language proficiency, for example Chomsky’s (1965:3) earlier distinction between proficiency and performance, were found inadequate. In later distinction between knowing how and knowing a language, as suggested by Ryle (1973 [1948] cited from Herdina and Jessner 2002), regarding the term ‘knowing a language’, Herdina and

Jessner (2002) assumed that it includes the knowledge of a language and the knowledge of how to use the language, and according to them “the knowledge of how to use a language” is of particular significance in multilingual proficiency and knowledge. Therefore they suggested: “In an attempt to a preliminary terminological clarification we would like to suggest that “*competence*” be restricted to the field encompassed by the knowledge of a language, whilst the term “*proficiency*” – primarily derived from SLA context – should be reserved for the consistent outcome of the speaker’s knowledge of how to use a language and knowledge of the language” (p. 56).

Researchers seem to agree that language transfer is more possible at lower levels of proficiency (Odlin, 1989; Poullisse & Bongaerts, 1994). That said, learners often resort to their L1 when they are not able to come up with the lexical item in the L2 (Fuller, 1999; Ringbom, 1986). Proficiency is frequently discussed in L3 acquisition studies and the general agreement is that much L2 → L3 transfer is the result of low L3 proficiency (Dewaele, 2001; Fuller, 1999; Hammarberg, 2001; Williams & Hammarberg, 1998). However, due to the intricate linguistic profile of the multilingual, the effects of proficiency in all of the languages of the speaker must be considered.

Transfer from the L2 can happen if the speaker has a certain degree of L2 proficiency (Hammarberg, 2001). However, Shanon (1991) pointed out that it is the most recently acquired language, and therefore the weakest, that becomes the source of language transfer. This particular finding can be observed with lexical transfers that are not morpho-syntactically altered to resemble the target language and may come from the speaker’s previously learnt languages that he/she has not achieved high proficiency (Ringbom, 1986). Also, (Dewaele, 1998), stated that lexical transfer and code switching decreases as the L3 proficiency is getting higher, however according to Hammarberg (2001) L2 general influence is reduced more rapidly than L1 influence on L2. Also, Bardel (2010) maintained that both the L2 proficiency level and the L3 proficiency level influence the activation of the languages previously acquired. In fact Bardel links the proficiency level of the target and of the background languages, i.e. a low proficiency in the target L3 language activates a background language with a low proficiency as well and in the case of high proficiency in the L3, only a high L2 or the L1 will be activated.

Furthermore, another factor in the L1 and L2 distinction as far as transfer is concerned is that for many multilinguals, the L1 is not necessarily the dominant

language. Hence, a clear relationship between level of proficiency and order of acquisition is difficult to determine. This is an issue that should be considered when investigating proficiency in relation to multilinguals' transfer (De Angelis & Selinker, 2001; Dewaele, 1998, 2001; Fuller, 1999). Given the importance of the variable of proficiency it was part of our study too. In fact we devised a method for assessing the level of proficiency of our own participants, by using their produced texts both as a tool for evaluating their proficiency and as the corpus to examine their speech production (see chapter 4 Methodology).

### **3.4.1.2. The Amount of Target Language Exposure and Use**

This variable has been found to have a significant relation with age and with proficiency. It usually refers to the time of exposure on the target language through contact with the specific community or to the amount of instruction if it is learnt as a foreign language. As early as the 1970's, Stedje (1977) had found that her participants' speech productions were influenced by the longer exposure to the Swedish environment, especially for those individuals that had spent more time in Sweden (as reported in De Angelis, 2007). Also, Hoffman (2001: 4) has suggested that "trilinguals assign a relative importance to the languages they speak at any given time, and a gradual loss of dominance can arise for the language(s) used the least, presumably because they become less important for the individual".

As Hammarberg (2001) has suggested transfer from an L2 can be found if the speaker has achieved a certain degree of L2 proficiency too. However, age is strongly connected with the amount of exposure to the target language so they have (or should) be both investigated. To this end, Jarvis (2000) found that the effect of age compared to exposure is dependant upon the task in question and they are less significant than L1 background as far as transfer is concerned.

Linguistic exposure seems to be the same for both L2 and L3 acquisition. The so far findings indicate that the more the L3 exposure is the less transfer from the L2 is occurring. However, when L2 and L3 learners had been studied and compared it was found that long exposure to the target language had led to less transfer with the L2 learners and as much with the L3 ones (Dewaele, 2001). This could probably be accounted to the multilingual's more complex language system and the more effort he/she has to make in order to achieve the desired effect.

Age and exposure to the target language as well as the speaker's L1 and L2 are linked and viewed within the same spectrum. This association can be understood



as a first step in the interpretation of the linguistic productions of the participants of a research; however these two variables do not have a linear relation. It is not necessarily the case that the older a speaker is the more exposure to one of the three languages he/she will have experienced. Therefore, although these two variables are often investigated in case there is a certain finding which will show whether the speaker has been having greater exposure as he/she was growing older, there is a need for caution on the interpretation of such results or the importance of the correlations of these two variables. Munoz (2010) states that the “learners’ amount of instruction can be expected to correlate with proficiency scores, although research has shown that the relation of time spent learning a language and the level of proficiency achieved is not always linear” and she cites Alderson, 2000; Kalberer, 2007; also see Murphy, 2001 for a discussion). We can never neglect the fact that each learner has his/her own personal characteristics, motivations and learning styles and thus must be viewed in his/her own right. Besides, the conditions the languages are learnt and their functions are different even in the rare situation that the exposure to each language appears to have similarities (Rothman and Niño-Murcia, 2008).

According to Tremblay (2006) the degree of the L2 exposure plays a significant role in the learner’s employment of the L2 during speech production in the L3, whereas L2 proficiency plays a major role in the frequency with which the L2 intrudes during L3 production (in Jessner, 2008). Also, the more the exposure is to the L2 the more chances there are that the L2 might be the source of transfer. In that case, the factors of exposure to the target language, proficiency and typology are all interacting and influencing L2 transfer to L3. Therefore, the factor of exposure to the languages involved has been part of our study as well through the information we gained by the questionnaires our participants filled in (see Methodology).

#### **3.4.1.3. Language mode**

As we have already mentioned, according to Grosjean (2001: 2) the degree of lexical transfer from one language is dependant on the speaker’s language mode, defined as “the state of activation of the bilingual’s languages and language processing mechanisms at a given point in time”. The target language is always on an activation mode since it is the system that is responsible for the language production. However, the “guest” language can be partially or almost fully activated (Grosjean suggests that none language can be fully activated). If the speaker is in a monolingual mode the activation of the guest language is rather small and few

instances of code mixing or code switching may be identified. When the learner is in a bilingual mode though, the guest language is almost as active as the target language is and this causes code mixing and code switching.

As already suggested, Grosjean's (2001) model can be also easily adapted to a trilingual speaker. In that case the target language operates as the base language and both of the two guest languages are also active. Studies have shown that in a trilingual speaker with low L3 proficiency there are not many signs of influence from his/her L1 and L2 during L3 written and speech production. However, he/she may show influence from his L2 without the speaker's knowledge (De Angelis & Selinker, 2001; Ringbom, 2001). The same phenomenon might be noticed with mixes that do not seem to serve any pragmatic purpose (Without any Identified Pragmatic Purpose – WIPP), when short L2 function words are used in an L3 utterance (Hammarberg, 2001; Williams & Hammarberg, 1998). This peculiar condition has led to the establishment of another variable called “the L2 effect”. The “L2 factor” in L3 acquisition refers to the general tendency to transfer from an L2 rather than an L1. In online processing/ performance terms, “L2 status” is usually used to express the idea of general tendency to activate L2 rather than the L1 (Leung, 2007: 102).

According to Selinker & Baumgartner-Cohen (1995), during L3 production a cognitive mode known as “the talk foreign mode” is active and the speaker seems to permit his prior foreign language to present itself in order to fill in a lexical gap. This particular L2 presence is only found with L2 short function words. Dewaele (1998) has also suggested that L3 learners show the tendency to produce more lexical devices than L2 learners. Moreover, the source of transfer is usually the L2 and not the L1, since the L2 is highly activated. According to Hammarberg (2001) the mechanism that had been employed during L2 acquisition is activated again during L3 production and there is a suppression of the L1 which is identified as a non foreign language system. This mechanism though does not succeed in suppressing the L2 in such an extent that there is no mixing of languages whatsoever and there is not a legitimate explanation for the spontaneous mixing of the languages involved.

From a psycholinguistic point of view, Williams & Hammarberg (1998) do not agree with Poulisse & Bongaerts (1994) that the longest the use of a language is the greatest its activation is and therefore there is more use of L1 language elements since it is used more by the L3 learner. However, L1 is more easily deactivated than L2. Moreover, a variable that is often associated with L2 status and that enhances its transfer is the “recency effect”. According to this concept, the language

that was most recently acquired will be the more valid for transfer (Cenoz, 2001; Hammarberg, 2001; Shanon, 1991; Williams & Hammarberg, 1998). This variable though has to be approached with caution since there is a chance that the learner of the L2 may be still using the techniques needed for language learning and thus applies them to his L3 learning process too.

Therefore, in our study we have included the question of the language that was activated during L3 production on behalf of our participants in order to find out whether they would resort to their L1 or to their L2 as the main source of transfer. Furthermore, this would also serve as a way to see whether our participants would use their L2 as with other studies and whether Greek either as an L1 or an L2, being the community's language, would be the main language the children would spontaneously activate. Apart from the social or psychological implications on this issue this would probably add a psycholinguistic perspective since Greek would be the most dominant language in our participants' lexicon and thus another element correlated with the so far variables mainly investigated within so far literature.

#### **3.4.1.4. (Meta)linguistic awareness**

The linguistic awareness of a learner is one the most significant variables that affect the level of proficiency and the process of learning a foreign language, and it is connected with the learner's educational background. Variables such as "psychotypology" are also connected with language transfer since the learner is able to perceive the difference between a native and a target language linguistic element. Herdina & Jessner (2002) as well as Hufeisen (2000) support the view that a multilingual person gains metalinguistic awareness while learning a foreign language, which distinguishes him/her from a monolingual speaker as far as his cognitive proficiency. The acquisition of linguistic awareness results in knowledge on the structure of a language, in the ability to see into and talk about the language, and in the analysis and use of the language in a rather creative manner. These language abilities require both a linguistic and a cognitive proficiency. Jessner (1999) has pointed out that this linguistic awareness expands the more a learner is using and learning about a foreign language and it is exploited as the learner is employing learning strategies.

Also, there have been many accounts on how a monolingual differs from a multilingual in terms of general language awareness, facilitated language learning, language learning strategies or metalinguistic awareness altogether (Cenoz & Genesse,

1998; Cenoz et al., 2001; Herdina & Jessner, 2002; Hoffmann, 2011; Jessner, 2008).

Metalinguistic awareness is also exploited in linguistic and semantic structures, and affects a learner's knowledge on a phonological, pragmatic and sociolinguistic level. Basically, it is the learner's ability to recognise the speech production in his mother tongue and his foreign language. Cook (1992, 1995), Grosjean (1995, 2001), and De Angelis and Selinker (2001) believe that an L3 speaker's metalinguistic awareness is completely different compared to that of a monolingual speaker learning his L2 (therefore his first foreign language). Cook's "multiproiciency theory" suggested that multilingual linguistic abilities are characterised from an enhanced metalinguistic awareness on behalf of the learner and it results in more creativity and cognitive versatility. Furthermore, Cook suggested that any code switching or mixing on behalf of L3 speakers should not be considered as a problematic state during L3 production, but a sign of their unique and intricate ability to move with great flexibility among their three languages. Concluding, Singleton & Aronin (2007: 85) have stated that "the higher the level of language awareness is, the more effectively language-related possibilities are likely to be perceived and capitalised upon". Since metalinguistic awareness is strongly connected with the learner's educational background we have included in our study the factor of the type of language learning our participants had, i.e. a naturalistic or an instructed one.

#### **3.4.1.5. Age**

Cross-linguistic influence may be also affected by the age of the learner. Cenoz (2000) has investigated this factor and very young learners' age was related to their cognitive and metalinguistic awareness development, whereas adolescents seemed to progress more rapidly during the first stages of their L2 acquisition. The development of cognition and metalinguistic awareness is also connected with cross-linguistic influence and more specifically with psychotypology since older learners are more able to identify the linguistic distance amongst their languages. This awareness of how close their languages are to each other seems to help them comprehend how their target language can be affected by the words they transfer from their other languages in store.

Although there have been quite many studies on children's L2 acquisition they have not focused on the matter of age sufficiently enough. Cenoz (2001) has studied this issue with children and the way their age may have affected their language learning process. She studied 90 children of primary education (2nd, 6th and

9th grade – Spanish education system grades) and their L1 and L2 was either Basque or Spanish and L3 English. She found that older children made more transfers although their level in their L3 was higher than the rest of the participants. According to Cenoz this finding was due to the fact that older learners had a more developed metalinguistic awareness which is connected with the higher degree of the comprehension of the typologies and the structures of their languages. Also, older learners showed more transfer from their L2 to their L3 because of their avoidance to transfer elements from their L1, the most typologically speaking distant language. Younger children, though, transferred more elements from their L1 and their L2 because of their lack of such knowledge. Later on that the aforementioned project was still in progress Cenoz (2003b) studied the rate of code mixing of both younger and older children and she found that her younger participants did not mix languages more often than the older ones. In fact, Cenoz suggested that the early introduction of the third language at the age of four was not linked with a higher level of language mixing compared to the introduction of a foreign language at the age of eight or eleven. This finding also indicated that the often fear of parents that their children should not start learning a second or a third language at a young age because they might ‘mix their languages and their successful linguistic development could be at hazard’ – a frequent myth – is not supported by current research. Cenoz also found that young learners showed a very positive attitude towards language learning and that older children learn more quickly compared with the younger ones. This latter finding also suggests that the other frequent myth regarding the language learning potentials of older learners could not be the case. The research question which focused on the language mixing tendencies of Cenoz’s older and younger participants showed that the factor of age may not be linked with code mixing; Cenoz mentions in her conclusions that these findings were part of a longitudinal study and that she would be able to establish a more solid understanding when the project would be completed.

However, the factor of age with regard to transfer has frequently been associated with proficiency due to the perception that usually older individuals have acquired higher degrees of proficiency in their second or third language because of their greater exposure or teaching to that language. Hoffmann & Stavans (2007) have found that the younger the learner was the fewer instances of cross-linguistic influence there were because “the three linguistic systems had not fully been acquired and the child’s overall trilingual proficiency had a smaller formal “knowledge

base” to draw on” (p. 61). Finally, that sort of studies have focused only on children, therefore a more systemised comparison on children and adults would probably yield interesting results regarding L3 acquisition and the age of the learners. Our research has focused on the factor of age as well in view of the lack of studies that have focused on this matter (see 3.4. *Research questions*).

#### **3.4.1.6. Educational background**

Another significant factor on cross-linguistic influence is the educational background of the learners as well as their literacy. The majority of the studies conducted were on the performance of learners coming from different social and cultural levels and they are seen through the scope of sociolinguistics rather than psycholinguistics, however “future L3 acquisition research needs to take educational background into account since it relates directly to metalinguistic awareness” (Murphy, 2003: 12).

According to (Odlin, 1989) the learner’s educational background and literacy are factors predicting positive transfer since one that has more language related knowledge (reading, writing and rich vocabulary) in his L1 will have a benefit for his L2 learning. In that sense, we aimed to investigate the possibility that our participants may show beneficial influence from their formal instruction either on their L3 or in either of their two prior acquired languages. The fact that in our study our participants had received formal instruction in only Greek, whether an L1 or an L2, could possibly reveal interesting findings regarding the absence of formal instructed in their heritage language, Albanian.

Since there are not many studies looking into the connection of formal instruction and future language learning we believed that it would be important to include this factor in the present research. Also, since this issue has been investigated with adolescent participants we believed that our study investigating children of primary education would be rather beneficial towards future research in evolving trilingualism. Education and language learning can be interconnected (at least as far as formal instruction methodology is concerned) and therefore our study’s implications may shed some light in that aspect too.

The educational background is also connected with the factor of metalinguistic awareness. So, we investigated whether literacy in the speakers’ L2 would mean better level in their L3. This would mean that prior formal instruction in the speakers’ L2 may initiate a more enhanced understanding of their L3 as well, due to their structured learning of their L2. We surveyed this matter for their L2 in view of the

L2 effect, that is, if their L2 is more activated due to its foreign language learning mechanisms and strategies used during L3 production, maybe this could also be the case with the way their L2 was acquired. Moreover, due to the lack of research on primary education children on this matter our study could provide some insight into this issue and give some implications for language teaching of the second and/ or the third language, since a knowledge that second language teaching may influence future language learning could give a different kind of importance on its contribution to any successful language learning.

#### **3.4.1.7. Context**

As Murphy (2003) suggests “context is a general variable that is neither learner-based nor language-based, but does play a role in language transfer” (p. 13). However, she does point out that “context” should be seen as a distinctive category with its own several variables. Furthermore, this factor can be seen from a sociolinguistic point of view (monolingual vs. bilingual communities), from a pragmatic point of view (the level of formality during the L3 production) or from an empirical point of view (according to the task during which production takes place).

According to previous studies (Dewaele, 1998, 2001; Grosjean, 2001) learners are more susceptible to language transfer if their interlocutors are familiar with the target language and the source languages that they own. This seems quite reasonable since the learners may feel that it is more legitimate to use other languages than the target language if they feel that other people might be able to understand their “erroneous” language behaviour. In that sense, and psychologically speaking, the speakers may feel more comprehended in terms of their linguistic choices.

From a psycholinguistic point of view, the role of context is usually seen through the level of formality as well as the task in question. Regarding the level of formality speakers have been found to show higher levels of control and attention during their language production in formal settings (Dewaele, 1998, 2001; Grosjean, 2001). With regard to task-related production Poulisse (1990 in Kellerman, 1995) has found that speakers employ more transfers when they are being interviewed in comparison with story-telling tasks. Kellerman argued that this finding is related to the attention speakers need to employ during a free interview during which they have to focus less on their linguistic production. On the contrary, when the speakers are narrating a story they have to focus more on their linguistic production thus leaving less room for their structural and lexical monitoring, especially when the

speaker is of a higher level of proficiency. In that sense, we tried to keep the general environment of the interviews with our participants as less official as possible and we employed several techniques in order to establish a less stressed atmosphere for the children. However, the fact that the interviews were conducted within the school premises could play a role on the children's attitude towards their use of their languages and this was considered during the interpretation of our results (see more at the Discussion of the Results chapter as well as at the Conclusions chapter).

With these findings in mind, we used a picture story and asked our participants to narrate it in order to produce a spontaneous speech production. Furthermore, our study was focusing on the lexical level and therefore we wanted to investigate the speakers' speech production through a free narration task that would leave the necessary room for the children to give their own speech production. This would enable us to gain a 'genuine' corpus and a better understanding of the cross-linguistic influence occurrences of our participants.

### **3.4.2. The language specific variables**

#### **3.4.2.1. (Psycho)typology**

The factor of typology in third language acquisition (e.g. Foote, 2009; Ringbom, 2001) or psychotypology factor (Kellerman, 1983) refers to the perception of the typological closeness or distance between the languages involved in a speaker's mind. This factor is important since it is believed to facilitate cross-language competition, at least at the level of lexis (Sanchez, 2011). In fact, Odlin (1989: 142) has stated that "in any learner's attempt to acquire a new language, language distance is ultimately in the eye of the beholder. Research indicates that when everything is equal, transfer will most likely result from a learner's judgement (made consciously or unconsciously) that particular structures in a previously learned language are quite like – if not the same as – structures in the target language".

However, there has been a lot of debate and contradicting theories and findings regarding the importance of psychotypology compared to the "L2 factor". To begin with, Singleton & O'Laoire (2006) have placed the whole issue as follows: "on the question of whether the critical factor in the resorting to language y when using language z is a) that the language user perceives language y as typologically closer to language z than any other available language or b) that language y is, in common with language z, a non-native language" (p.192). Having said that, there



has been much evidence that the factor of typology should not be seen on its own; instead, research in third language acquisition has pointed to the interrelation of the factors of typology and proficiency in all of the languages of the multilingual individual (Hammarberg, 2009; Jaensch, 2009; Tremblay, 2006). Moreover, Bardel & Lindqvist (2007:138) found that the effects of typology were outperformed than that of proficiency since “the proficiency factor rules out the psychotypology factor in the choice between French and Spanish”. Still, another issue that could account against the significance of typology (especially when seen in isolation and not in relation to other factors) is that “it has often been investigated in situations where the L1 is typologically distant from both the L2 and the L3” (Sanchez, 2011: 88). Therefore, the effect of typological similarities and differences must be dealt with caution. In that sense, Cenoz (2003: 104) has put the issue in a “balanced” perspective by saying that “languages are relatively distant or relatively close, not distant or close in absolute terms”.

Cenoz (2003: 105) stated that “language typology has a historical origin and cannot be studied without considering the history of the language and the language contact situations. Language contact is more likely to be more influential at the lexeme level than at the lemma level”. Therefore, we present the historical facts about the languages involved in our study as well as their main typological characteristics. In our study, the languages studied are typologically close. Greek, English and Albanian belong to the same language family, that of Indo-European. However, the Albanian language is an Indo-European language in a branch by itself, i.e. it is an isolate language. Greek is also an isolate language since it is an Indo-European language but owns a branch of its own; the Hellenic one. English is part of the Indo-European language family and belongs to the Germanic subgroup.

Languages can be divided into those with so-called free word order and those with word order rules (Goodluck, 1986). The Albanian language has a relatively free word order, since it can be SVO (Subject-Verb-Object) but it can also be VSO, hence it is rather flexible. In fact, Demiraj (1988: 84) has pointed out that speakers of Albanian can change the neutral word order of SVO in order to put emphasis on specific discourse functions. Albanian nouns are inflected by gender and number. There are five declensions with six cases although the vocative only occurs with a limited number of words and the forms of the genitive and dative are identical. The cases apply to both definite and indefinite nouns.

The earliest loanwords attested in Albanian are from Doric Greek (proba-

bly indirect) (Huld, 1986), while the heaviest influence was that of Latin. Moreover, there is much interaction of the Albanian language with Latin and there have been many loan words from it (Mihaescu, 1966; Rosetti, 1986). Furthermore, what has to be noted is that “the history of the (Albanian) language is obscure, and it is impossible to demonstrate a clear relationship with any other Indo-European group” (Crystal, 1997: 302), since there is lack of texts to confirm its linguistic route throughout history, therefore they give it a branch of its own (Nakhleh et al., 2005) and it is categorised as an isolate language. Albanian has been written in a Latin writing system since 1909 (with some additions of their own to match some of their phonemic needs).

Likewise, Greek has been an isolate language having its own branch within the Indo-European language family (the Hellenic). It is often pointed out that Greek language has survived through historical changes and has undergone many morphological and phonological alterations which have not resulted in literary, orthographic or cultural alteration, especially when compared with other languages. Therefore, one can not speak about Modern Greek being a new language that has emerged from ancient Greek, but rather about a language which has kept its unique features and has evolved throughout time. In fact Alexiou (1982) has said that “Homeric Greek is probably closer to Demotic [A/N used to be the Low Greek but this is today’s official language of Greece] than twelfth century Middle English is to modern spoken English”. Another interesting fact is that Greek and Latin are the two main languages used for scientific terminology. Therefore, it is a highly used language even today by many languages through sciences, e.g. the suffix –logy: meteorology, etc. Moreover, Greek words have been borrowed in a great extent from other languages including English (e.g. astronomy, democracy, philosophy, theatre, athletics, etc.) and have also been the source of coinage, such as anthropology, photography, telephony, etc.

As far as its syntax Greek’s word order is rather flexible and it can be either SVO or VSO or even OVS. Its writing system is the Modern Greek one. Also, Greek nouns are inflected by gender and number and the subject can be omitted. Pronouns show distinctions in person, number and gender, and decline for case (the four cases are nominative, genitive, accusative and vocative). Nouns, articles and adjectives show these distinctions apart from person and attributive and predicative adjectives agree with the noun (Κλαίρης & Παμπινιώτης, 2004; Τριανταφυλλίδης, 2012). The subject can be completely omitted and this is usually the case in Greek because each

person in either singular or plural of each tense is showed by a different morpheme in Greek. That is why Greek is labelled as a pro-drop (pronoun drop) language since the subject is not compulsory (Andreou, Karapetsas & Galantomos, 2008).

As far as the English language is concerned it is part of the Germanic subgroup of the Indo-European family. However, “culturally it displays many similarities with Romance, in view of the large number of loan words it has taken in from French and Italian, and the way these languages have even exercised some influence on grammar and phonology” (Crystal, 1997: 295). Also, a significant number of English words are constructed on the basis of roots from Latin, because Latin in some form was the lingua franca of the Christian Church and of European intellectual life (Weissbort, 2006). Moreover, as far as the vocabulary “ingredients” of the English vocabulary according to Nation (2001: 265) the Germanic influence on English language is 36%, the Italic is 51%, the Hellenic is 7% and other languages constitute 6% of the English lexicon.

English is a strict SVO language and its grammar has a minimal inflection compared to other Indo-European languages. For example, English, unlike German and the Romance languages, lacks grammatical gender and adjectival agreement. The language has developed a strict word order as a way to prevent failures in the conveyance of the meaning. English sentences always require a subject (Cook, 2001) otherwise an unacceptable structure that violates language rules will occur. “For example, the sentence /we bought apples/ is the only acceptable one because it follows the rule SVO” (Andreou, Karapetsas & Galantomos, 2008: 36).

In conclusion, the three languages of our study, Greek, Albanian and English, belong to the same family; although Greek and Albanian own a distinct subgroup. The vocabulary borrowings throughout history have been significant, especially in the case of English borrowing from Greek. The cultural element of the interaction between these languages may be quite strong, given that Greek has indeed given loans to both English and Albanian (though with the latter this process was more profound and archaic). As Crystal (1997: 296) comments on the typology issue “both typological and genetic classifications ignore the relevance of cultural links between languages – the fact that languages influence each other by contact, such as borrowing words from each other” and thus these relations are rather significant in linguistic studies. Therefore, in our study typology issues will be considered in terms of the results derived from the analysis of the produced texts of the participants. However, we presume that the role of Greek as a dominant language of Greece will

probably play a more influential role, especially in view of the fact that the languages investigated are all typologically related in that they all belong to the Indo-European family, even though they have some individual differences since Greek and Albanian are isolate languages.

### 3.4.2.2. Recency of use or the recency effect

Another factor that can affect cross-linguistic influence is “the use of the most recently acquired foreign language” or “recency” (Hammarberg, 2001). According to this concept, an L2 is more easily activated if the learner has been using it recently or has more easy access to it. It could be then suggested that a learner prefers to borrow from a language that he actively uses than resorting to other languages that he may know but it has been a long time since he/she last used them. So, if an L2 is actively used within the L3 learner’s environment it is more likely to be used during his/her L3 production (Dewaele, 1998; Ringbom 2001).

The learner that Hammarberg studied would resort to German (the last language that he was learnt) although this could also be justified because of his high level in German and the factor of psychotypology. Furthermore, Dewaele (1998: 488) proposed that “the active language with the highest level of activation is the preferred source of lexical information. Access to lemmas of languages that have a lower level of activation is partially blocked”. Recency seems to be highly connected and related to the Grosjean’s (2001) concept of speech modes (see more about “Language mode” in 3.4.1.3). Therefore, we included the factor of recency by investigating how often the speakers’ L1 and L2 are used in order to estimate whether the access to either language would be easier and thus more frequent during their L3 speech production.

Within language transfer we can distinguish the one happening from content and the one from function words. According to Murphy (2003) this factor seems to be largely related to those of control and attention. She cites Faerch and Kasper (1986) who distinguished the transfer of content words as a conscious strategy in the speaker’s attempt to fill a lexical gap. They also stated that content words were usually found after a pause. Function words were usually found to be unintentional transfers of frequently used L1 words.

The frequency which certain linguistic features appear in the L1 seems to determine its transfer during L2 production (Murphy, 2003). According to Kellerman (1983) in terms of the perception of the speaker on a certain linguistic item and

its frequency of appearance in his/her lexicon it may be considered from a psychological point of view as more “problematic” with regard to its use and its function. Therefore, such an item or feature has fewer possibilities to appear during L2 production. According to Poullisse and Bongaerts (1994) the frequency of the use of function words in one’s L1 determines the degree of their appearance in his/her L2 too. However, this can not be easily implemented with L3 production. Williams & Hammarberg (1998) maintained that “provided the factors of proficiency, typology, and recency are at a sufficient level, L2s appear more likely to be activated than the L1 as supplier language during the early stages of L3 acquisition” (p. 323).

Poullisse and Bongaerts (1994) have shown that L1 function words are rarely phonologically or morphologically adapted to their L2 and they attributed this finding to frequency as well as the degree of attention. Ringbom (1986, 2001) has suggested that transfer during L2 acquisition is mainly short, complete and it involves non adapted L1 function words.

However, the findings by Poullisse and Bongaerts do not seem to be quite so with L3 production. According to Murphy (2003: 15) “when function words are transferred in an L3 utterance, they are overwhelmingly supplied by the L2 even though the L1 function words must still have higher activation if the L1 is the language of highest proficiency. It appears that during L3 production, particularly in the early stages of acquisition, L2 status overrides the frequency effect associated with high proficiency”.

Also, lexical transfer during L3 production has shown a tendency to employ more function than content words. Hammarberg (2001) also found that there was an L2 transfer for the unconscious switches his subject made and they were mostly short function words, e.g. *mit* (with). Cenoz (2001) whose study we followed in most parts for our own in terms of the methodology for the linguistic part of this research, has found that her participants had transferred almost seven times more function words from Spanish compared to Basque and she justified this finding by means of their typological proximity to the target language.

However, Hoffmann and Stavans (2007) investigated trilingual children from their infancy to their early childhood. The study involved two periods of the children’s speech recordings, one at an early age and a second after three years that the participants had grown up more. During the first period of the recordings the children borrowed more often from content words, namely nouns and verbs. This finding was duplicated with the second session of the recording and the children that

were now older borrowed from content words again; however the proportions of the lexical transfers were different from the first session because the children used fewer nouns or they would be morphosyntactically violated compared to the verbs.

In our study we have focused on transfer and particularly on the lexical level and one of our aims was to investigate whether cross-linguistic influence will affect our participants' use of content and function words. In view of the relatively few data currently available from similar studies and the fact that our participants produced trilingual utterances (which is rather scarce at present literature) we decided to include this issue in our research. Code mixed utterances using three languages along with their analysis in terms of parts of speech has only been partially addressed within so far literature and therefore we consider that it will contribute in the study of trilingual children's L3 speech production.

### **3.4.2.3. Word class and the frequency of use of certain linguistic items**

Within language transfer we can distinguish the one happening from content and the one from function words. According to Murphy (2003) this factor seems to be largely related to those of control and attention. She cites Faerch and Kasper (1986) who distinguished the transfer of content words as a conscious strategy in the speaker's attempt to fill a lexical gap. They also stated that content words were usually found after a pause. Function words were usually found to be unintentional transfers of frequently used L1 words.

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of trilingual children's L3 speech production.

### **3.5. Aims and value of this research**

In a situation where more than one language is consistently available to a speaker, bi/multilingualism occurs as a consequence of this environmental factor. In such a case, it is possible that there will be some kind of interaction amongst these languages related to the environmental input. This interaction is linked to the environment and the three languages are not randomly employed as the speakers may use them according to the situation they find themselves in.

The aim of the present study was to investigate the vocabulary interaction of the three languages of bilingual primary school children who are currently learning their L3 English in a school context. Specifically, this study aimed to explore cross-linguistic influence as far as code switching and code mixing is concerned, as well as the main source language or default supplier of cross-linguistic influence (either Greek or Albanian, whether L1 or L2) while speaking their L3 English. Moreover, the profile of more successful L3 learners according to the language biographies of our participants and their L3 level of proficiency will be attempted to be built. All of the participants had been in the process of attaining their A1 level of proficiency according to the Common European Framework of Reference for Languages (abbreviated as CEFR). Some of them were more advanced than others and this has led to their classification according to their progress at the time (for more on this matter see Methodology chapter).

Furthermore, language dominance issues will be explored as far as the community language (Greek) is concerned, whether it is an L1 or an L2. We will also investigate parts of speech produced while participants speak their L3, in terms of code mixed and code switched utterances in order to see whether cross linguistic influence affects Content and Function words.

Moreover, so far research has tried and sorted out the factors that may cause cross-linguistic influence. The most prominent factors were reviewed in this dissertation and will be considered as a way to find out if our participants will show to be affected by them, and if so by which of all. Specifically, we believe that our study will be of interest and that it will provide further insight within the so far research conducted. This interest lies to the fact that with regard to the issues addressed in the present study it has been tried to include many aspects of the trilingual speech production and language use. Namely, we have included a profiling of the most



successful L3 learners of our participants in order to find possible factors that may have influenced their learning. Furthermore, we have surveyed the factors that are known to so far literature regarding cross-linguistic influence and we have also included an investigation on the parts of speech produced by our participants in their three languages. Many of the factors regarding cross-linguistic influence as well as the participation of Content and Function words during L3 speech production still require further research since the relevant literature is still expanding and our study aims to address this need for more data on this matter. Below we present some of the main reasons our study may contribute to research on L3 speech production and trilingualism.

Given the importance of the variable of proficiency regarding cross-linguistic influence it was part of our study too. In fact we devised a method for assessing the level of proficiency of our own participants, by using their produced texts both as a tool for evaluating their proficiency and as the corpus to examine their speech production. Therefore, the children's narration has a twofold role.

Also, so far findings indicate that the more the L3 exposure is the less transfer from the L2 is occurring. However, when L2 and L3 learners had been studied and compared it was found that long exposure to the target language had led to less transfer for the L2 learners and as much for the L3 ones (Dewaele, 2001). The more the exposure is to the L2 the more chances there are that L2 might be the source of transfer. In that case, the factors of exposure to the target language, proficiency and typology are all interacting and influence L2 transfer to L3. Therefore, the factor of exposure to the languages involved has been part of our study as well.

The "L2 factor or the foreign language effect" in L3 acquisition refers to the general tendency of the L3 speakers to transfer from the L2 rather than their L1. According to Hammarberg (2001) the mechanism that had been employed during L2 acquisition is activated again during L3 production and there is a suppression of the L1 which is identified as a non foreign language system. Moreover, a variable that is often associated with L2 status and that enhances its transfer is the "recency effect". According to this concept, the language that was most recently acquired will be the more valid for transfer. Therefore, in our study we have included the question of the language that was activated during L3 production on behalf of our participants in order to find out whether they would resort to their L1 or to their L2 as the main source of transfer.

Furthermore, this would also serve as a way to see whether our participants

would use their L2 as with other studies and whether Greek either as an L1 or an L2, being the community's language, would be the main language the children would spontaneously activate and transfer from. Apart from the social or psychological implications on this issue this would probably add a psycholinguistic perspective since Greek would be the most dominant language in our participants' mind and thus another element correlated with the so far variables mainly investigated within so far literature.

Since there are not many studies looking into the connection of formal instruction and future language learning we believed that it would be important to include this factor in the present research. Also, since this issue has been mainly investigated with adolescent participants we believed that our study investigating children of primary education would be rather beneficial towards future research in evolving trilingualism. Education and language learning can be interconnected (at least as far as formal instruction methodology is concerned) and therefore our study's implications may shed some light in that aspect too.

The educational background is also connected with the factor of metalinguistic awareness. So, we investigated whether literacy in the speakers' L2 would mean better level in their L3. This would mean that prior formal instruction in the speakers' L2 may initiate a more enhanced understanding of their L3 as well, due to their structured learning of their L2. We surveyed this matter for their L2 in view of the L2 effect, that is, if their L2 is more activated due to its foreign language learning mechanisms and strategies used during L3 production, maybe this could also be the case with the way their L2 was acquired.

Moreover, due to the lack of much research on the factor of educational background an investigation on this matter on primary education children could provide some insight into this issue and give some implications for language teaching of the second and/ or the third language, since a knowledge that second language teaching may influence future language learning could give a different kind of importance on its value for any successful language learning. This could give some more information to language methodologists and teachers.

Although there have been quite many studies on children's L2 acquisition they have not focused on the matter of age sufficiently enough. Our research has focused on the factor of age as well in view of the lack of studies that have focused on this matter.

We also included the factor of recency by investigating how often the speakers'

L1 and L2 are used in order to estimate whether the access to a specific language would be easier during their L3 speech production because of one of them having been more recently used by our participants.

In our study we have focused on transfer and particularly on the lexical level and one of our aims was to investigate whether cross-linguistic influence will affect our participants' use of content and function words. In view of the relatively few data currently available from similar studies and the fact that our participants produced trilingual utterances (which is rather scarce at present literature) we decided to include this issue in our research. Code mixed utterances using three languages along with their analysis in terms of parts of speech has only been partially addressed within so far literature and therefore we consider that we will contribute in the study of trilingual children's L3 speech production. Our data and our conclusions may not necessarily provide clear cut answers regarding our research questions and our aims; however it will give some new information that has not been considered yet.

#### **3.5.1. Research questions**

With regard to our research aims and in view of the current literature reviewed in the previous chapters we aimed to explore the following issues:

**A) The information collected by the questionnaires were analysed and the focus was the profiling of the more successful L3 learners:**

1. What is the influence the children's specific L1 (either Greek or Albanian) may have had on learning their L3?
2. Which are the common (language) biographical characteristics that may have played an influential role in the making of the more successful third language learners regarding our participants?
3. Will older children show higher level of proficiency in their L3 as so far described in previous studies?
4. Will children that have learnt their L2 through formal instruction show higher level of proficiency in their L3, since their L3 is also a taught language?

**A) In terms of the profiling of the more successful L3 learners we hypothesized that:**

- i. Regarding the age factor we hypothesized that older children would show higher level of proficiency in their L3.
- ii. Regarding the role that formal instruction in L2 would play we hypothesized that children who had been taught their L2 would show higher level of proficiency in their L3 (an also taught language), due to the same mechanisms employed from their L2 to their L3. We also perceived the matter of literacy as a significant factor; the participants who were already literate in their L2 would show higher attainment of their L3 (a language that they had also been acquiring literacy in).

**B) The texts produced by our participants were analysed and the focus was on the lexical level. Therefore, in terms of the speech production of our participants we aimed to find out:**

1. What is the influence of the children's L1 on their L3 speech production?
2. What is the influence of age on cross-linguistic influence?
3. Which is the main source language of transfer (their L1 or L2) during oral production of English as an L3?
4. Will Greek (the community's language) either as an L1 or an L2 be the main source of transfer in the entire corpus and if so, what are the factors that may influence such a presence during narration in L3?
5. What will the distribution of the three languages involved be within the code mixes found in the corpus produced?
6. Does cross linguistic influence affect content and function words?
7. What will the distribution of content and functions words within code switches and most importantly code mixes be in the speech production of our participants?
8. Will there be a prevalence of Greek (the community's language) either as an L1 or L2, within the code mixed utterances produced?

**B) In terms of the speech production of our participants we hypothesized that:**

- i. Younger children will transfer more in relation to the older ones, because of the less developed abilities they have in achieving communication fully in their L3.
- ii. Children will use their L2 in order to overcome communication hardships while narrating in their L3, as previous studies have shown.
- iii. With regard to the transfer from Greek (the community language) we hypothesized that it would be the main source of transfer within our total corpus.
- iv. Greek would be the main source of transfer within the code mixed utterances.
- v. The number of Content words will be higher than that of Function words, according to Cenoz (2001) and Hoffmann & Stavans (2007).



## 4. The Present Study Research Design and Methodology

In this chapter, we introduce the participants of this study, their social and linguistic backgrounds and their current language situation. We then move on to the specific methodology employed in the present study and the way the children's production is recorded, classified and analyzed, providing sample transcripts and explaining the treatment of qualitative and quantitative data, including the principles of data classification.

### 4.1. The methodology

The methodology chosen for this study was initially based on a research conducted by Cenoz (2001). She had asked bilingual primary school children to narrate a picture story by Mercer Mayer in their third language, English, the one that they were being taught as a foreign language at school. Then their narrations were transcribed and instances of code switching and code mixing were identified and analysed. She also found the percentages of each part of speech from each language used within the produced "texts" and looked into the relations between Function and Common words of each language in question and some possible factors affecting the transfer from their L1 or their L2. We too used the same series of picture stories and we based our research rationale on Cenoz's study as her methodology and research was an inspiration and was chosen for this study too. Jasone Cenoz is one of the most cited and well-known multilingualism academics and her work has been rather influential in current linguistics. For the linguistic part of the study this research was partly based on Cenoz's methodology and further questions that have arisen during this quest were added by the present study researcher. The part of this research, which aimed at finding the characteristics that may form a profile of the most successful learners of English as an L3 of our participants, was thought

of and structured by the present study researcher since this was part of her own research aims. Further on we will present the way this research was designed and implemented, i.e. the participants, the procedures, the tools we used as well as the statistical analysis procedures.

## 4.2. Participants

All of the children that took part in this study came from Albanian immigrant families and they were born and raised in Greece. Their parents had come to Greece with the big migration flood from Albania, about twenty years ago. The participants' first two languages were Albanian and Greek and they were learning their third language (English) within school context. At this point we need to clarify that not all children had the same L1. There were children that their L1 was Albanian and others that their L1 was Greek.

The participants were between the age of nine and twelve years old and they were attending public primary schools with a monolingual curriculum. English is to these children a third language, although for the majority of their classmates English is the second language learnt with a foreign language methodology. Therefore, our participants were more experienced language learning wise compared to their classmates, since they have been learning their third consecutive language. One important factor that will be discussed later on (see Discussion of results chapter) is the fact that our participants have been literate only in one language prior to learning their L3 (English) because they had not received any classes in their heritage language, Albanian. Therefore, they had the same experience literacy wise with the rest of their classmates.

This study is discussing children who are in the process of acquiring their third language, and are clearly not equally competent in all of them (see Bialystock, 2001, for a discussion of how bilingual people need not to be equally proficient in their two languages.) They are referred to as being trilingual because they are, for the time being at least, comfortable with their trilingualism, and appear to be able to communicate with native speakers of each language to their own satisfaction (at least to a certain standard). If they were not comfortable in these ways, the questions raised would be important, but beyond the scope of this study.



### **4.2.1. The criteria for qualifying the final participants for this study**

Out of a total of eighty children who were initially interviewed, only forty nine of them were finally chosen to be part of this study. This choice was made according to qualitative characteristics: their English language level which had to be A1 according to the “Common European Framework of Reference for Languages: Learning, Teaching, Assessment” (abbreviated as “CEFR”), and the spontaneous narration of the picture story, since there were instances that the child would be prompted by a classmate to speak in Albanian too during his/her narration.

At this point we clarify that if a child seemed more stressed than usual his/her friend was allowed to remain in the room in order to achieve a more relaxed atmosphere for him/ her. This friend was guided not to interfere with the narration and to try to remain silent until the end, however this was not achieved in all cases. In these prompting instances, all of the children that were finally excluded from this study were “made” to speak in Albanian too, clearly aiming to show that they can communicate in that language too. In another interpretation, these prompts may have aimed at presenting their ethnic background as well and the fact that they do own that background’s language too. In any case, these cases were excluded from the final group of the participants. Also, the children that did not have an A1 level in English were excluded from the study since the produced “Texts” would not represent any cross-linguistic influence found in an objective way. Therefore, in the end thirty one narrations out of the total of eighty were not chosen to be part of this study.

### **4.2.2. The classification of the participants according to their level in their L3 (English).**

During the study of the produced “Texts” participants were listed in three different sublevels of A1 English language levels: A1 low, A1 medium, A1 High. This classification was necessary as not everyone had reached the same level of A1.

The classification was done by analyzing the produced texts and then assessing them according to the “can do” statements set by the “CEFR” guidelines. Therefore, all of the texts were assessed and listed to the appropriate sublevel of A1 and this way the narration in their L3 functioned as an assessment tool too, indicating their level of proficiency in English. The assessed texts would ultimately be

used along with the data gathered from their questionnaires to locate those factors that may have been more influential in more successful third language learning and a profiling of the most successful L3 learners would finally be suggested. Also, these factors could be considered as far as cross-linguistic influence is concerned and the necessary correlations would be done.

Although, the “can do” statements describe the language capabilities a learner must show in order to be assessed as an A1 level speaker we had to rate our participants’ competence according to three sublevels. This assessment was done on the basis of their produced texts and the researcher relied on her former experience as a rater for the “National Foreign Language Exam System (the Greek abbreviation is K.P.G.)”. Therefore, the assessment of the produced texts was a familiar procedure for the researcher and was done on the basis of her experience and the seminars she has attended regarding the philosophy of the CEFR and its “can do” statements. However, in order to verify the assessments another rater with a significant experience in “KPG” exams was asked to assess the produced texts and discussion for each one of them was done in order to make sure that all of the texts would be classified based on a unanimous decision. Therefore, the assessment and classification of the texts that the forty nine participants of this study produced was done in a safe manner and was verified by two raters. By effect, the forty nine participants were accordingly classified in three respective A1 sublevels. Below we present examples of children who were assessed according to the three sublevels of A1 that we had defined as ‘A1 high’, ‘A1 medium’ and ‘A1 low’.

*“A1 high”:*

*“The boy and his dog goes to the river.*

*He continues to go the river and then he sees a frog on the river.*

*Then he try to catch the frog and then he fall down.*

*So he’s in the river.*

*Then he βγήκε with a bucket in his head and the frog το κορόιδευε.*

*Then the frog του ξέφυγε.*

*The boy shouts to his dog to catch the frog.*

*Then they ανεβαίνουν on the tree and try to catch the frog.*

*Unfortunately he catch his dog and the frog escape.*

*Then the frog go to a rock.*

*And he see the boy to shout.*

*Then they leave river and the frog is unhappy.*

*The boy and his dog go to his home and the frog is alone at the river.*

*He follow the footsteps of them and he arrive home of the boy and he see the boy in the bathroom.*

*So and the frog goes in the bathroom and it go inside in the bath where are the boy and his frog.*

*Finally they all are happy”.*

The reason that this text was assessed as A1 high is because this child has produced a rather fair narration of the picture story. He is able to understand his task thoroughly and he manages to get all of the main information regarding the plot of the story. Also, some of the English grammar issues he faces during his narration are not so crucial to his communicative purpose. His language repertoire is quite rich with regard to the A1 level and most of his vocabulary is to the point. Every time he needed some help to overcome certain vocabulary knowledge that he might had lacked he overcame this obstacle by seeking the appropriate word in Greek. He uses adverbs and conjunctions in a meaningful way showing his knowledge on their proper use and he shows a command of his first phrasal verbs. Also, his few Greek transfers are located in the proper word order that the English one would appear. Therefore, he shows a good command of his knowledge in English and he was assessed as an A1 high sublevel learner since his basic communicative needs were met.

Following the same rationale as the previous text we provide another one below, which was assessed as A1 high and there was some usage of Albanian too.

*“One day one boy with the dog were going to the forest to catch some frogs.*

*Then he tried to catch one frog but he can't και πέφτει στη λίμνη.*

*Then he sees the frog behind him.*

*When he want to catch him the frog go away.*

*And then the boy was not happy because the frog was joking with him.*

*Then he says to the dog to catch the frog.*

*The two of them go to the te pema to catch the frog.*

*Then when the boy was catching it he did something bad and catch his dog.*

*Then he was angry because he catch his dog and the frog goes away.*

*Then the boy goes away and he was angry. The frog was sad.*

*Then the boy goes and the frog was really-really sad.*

*The boy was going to home and the frog was staying by his own.*

*Then the frog was having none.*

*He was alone.*

*Then she goes after the boy and she goes into his house.*

*He sees that boy was having a bath and he goes in there.*

*Then he goes into the bathroom and go in there.*

*Then the boy and the frog and the dog were really friends”.*

The above text indicated a rather good command of English and the child seemed to be able to use his languages in order to succeed his communication goal. Furthermore, his narration as a whole indicates a language user who is capable of expressing himself in a rather satisfactory way and employs all of his linguistic means in order to overcome some of his language difficulties in his L3. He uses some cohesive devices and he has a first grasp of some phrasal verbs that clearly have just started to emerge as an extra element of his classes. Although, he has some grammatical issues they do not interfere with the meaning of his utterances. Therefore, his communicative purposes were met and he was assessed as an A1 high sublevel participant.

*A1 medium:*

1.

*“And the boy looked the frog.*

*The frog look the boy and the boy λέει to the dog to go out.*

*The boy jump into the tree and catch the frog and dog.*

*The boy παίρνει την απόχη για να το πιάσει και το σκυλί το ίδιο and the boy catch the dog no catch the frog.*

*The boy catch the dog and put in the water.*

*The frog go to the rock.*

*The boy φωνάζει and frog look the boy.*

*The boy go and the frog is sad.*

*Boy and dog go a front and the frog is back to the river.*

*The frog look the footsteps of the boy and dog and go to the house of the boy.*

*Boy go to the toilet and πλένεται and frog look.*

*The boy happy because look the frog and the frog go to στη μπανιέρα.*

*Boy dog and frog is friends.”*

2.

*The picture saw a little boy να περπατάει with a dog and a κουβαδάκι.  
I saw a little boy να ανεβαίνει a tree.  
The dog looked sky.  
The little boy looked βάτραχος.  
The boy προσπαθεί catch the frog.  
But boy fall down.  
Fall in the λίμνη.  
The boy is very dissapoint with dog.  
Boy προσπαθεί πάλι να το πιάσει but frog έφυγε.  
The boy is very dissapoint and φώναζε a dog.  
The boy up to tree προσπαθούσε catch frog.  
In the end catch a dog.  
The boy is very unlucky and a frog is περίεργος.  
A boy έφυγε, φωνάζει.  
The boy and the dog go.  
The frog is dissapoint.  
The boy is very angry – θυμωμένος and frog dissapoint.  
A frog went the house a little boy's a little boys doing shower.  
The frog is looking.  
The boy is very happy and frog πήδηξε μέσα στη μπανιέρα.  
In the end a frog έγιναν φίλοι.*

These children were assessed as A1 medium due to their lack of communicative means during their narration. In particular their vocabulary repertoire was a bit poor, they showed some difficulty in producing correct grammatical structures and they did not exhibit command of the cohesive devices. They seemed to lack the flexibility to overcome their difficulties by producing English equivalents every time they could not come up with the word they aimed for in English and, what is more, they resorted to code switches in Greek by creating full utterances in order to get their message across. However, they showed an understanding of the task and they managed to narrate the picture story in such a manner that allowed the addressee to follow the sequence of the events. Their overall narration was well organised and any words that were not English were actually situated in the place of the English equivalents, thus indicating their linguistic awareness.

A1 low:

1.

*“I see one boy with his dog to walk in a park.*

*The boy βλέπει κάτι go to see the frog and περπατάει στο βουνό, σκοντάφτει σε ένα ξύλο and throw down in a river.*

*The boy throw down in the river and see the frog.*

*The frog πηδάει ψηλά, το παιδί διώχνει το σκυλί, το παιδί πάει να πιάσει το βάτραχο.*

*Το παιδί πιάνει το σκυλί, ο βάτραχος πέφτει κάτω, το βατράχι νευρίασε.*

*The boy go to his house, the frog κάθεται μόνο του and the frog go to the boy’s house.*

*The boy and his dog κάνουν μπάνιο.*

*The frog μπαίνει μέσα στη μπανιέρα and the boy, dog and the frog are friends.”*

2.

*“The boy and the dog go μια βόλτα.*

*Το παιδιά ανεβαίνει σε ένα δέντρο and the dog looking he.*

*The dog and the boy looking one frog.*

*Το παιδί και ο σκύλος πάνε να πιάσουνε το βάτραχο και το παιδί και ο σκύλος τρέχουν.*

*Πέφτουν στο νερό.*

*Αναποδογυρίζουν και οι δύο.*

*Και ο βάτραχος φεύγει.*

*The frog the boy looking.*

*The boy says the dog να βγει έξω.*

*The boy and the dog πάνε να πιάσουν το βάτραχο.*

*The frog πέφτει από το δέντρο.*

*The boy πιάνει the dog and the frog go.*

*The boy looking the frog and go.*

*The boy and the dog go to the house.*

*The frog is alone.*

*The frog go to house boy and dog.*

*The boy and the dog κάνουν μπάνιο and the frog looking they.*

*The frog κάνει μπάνιο.*

*The boy, frog and dog κάνουν μπάνιο.”*

Both of the above texts were assessed as A1 low due to the poor English vocabulary the children showed. There is a presence of nouns and articles but other than that the children seem to be unable to express themselves in a satisfactory and meaningful way in English. If it wasn't for their transfers from Greek the children would have not been able to narrate the story and therefore they are really beginners even within the A1 level standards.

### 4.3. Procedures

The participants were randomly located and they lived in Athens (the capital of Greece) and Trikala (a suburban city). The participants initially found would lead to the next ones and each one was mainly located from their friends or from teachers who had this specific kind of trilinguals in their classes (i.e. Greek and Albanian either as an L1 or an L2 and currently learning English as their L3 at school). Both of these stakeholders helped to get in contact with additional participants. This method of finding informants is called the snowball-effect (cf. Scott 2000, in Li and Moyer 2008: 83, and Dörnyei 2007: 129), which is when key respondents are “asked to recruit further participants who are similar to them in some respect central to the investigation.” (Dörnyei 2007: 129). The method above has to some extent been applied, but the most dominant method is the convenience sampling method, which, as the name suggests, is a method where the researcher uses the informants that are available. Dörnyei calls this method the “least desirable, but the most common sampling strategy” (2007: 129), although he adds that the advantage is that the researcher usually gets willing informants, which in turn leads to a rich dataset.

For this research, we used the same series of picture stories that Cenoz (2001) had in her study in order to elicit the children's free narration. In particular we used the picture story “A boy, a dog and a frog” (Appendix A). Before the narration procedure the participants were asked to fill in a questionnaire which aimed at obtaining information regarding their language biography history (see more at 4.4. below). This information was planned to be correlated later on with the data that would come from the assessment of their narrations with regard to their L3 proficiency and the analysis of their speech productions.

Furthermore, while the children were answering the questionnaire, the researcher kept them relaxed by reading the questions aloud to them in order to create a more informal situation. The children who were more anxious about the process seemed to feel more at ease with this method in order to fill in the ques-

tionnaire. Moreover, the calm voice tone and the narration-like manner that the questionnaire was read to them seemed to create the necessary atmosphere for the next step of the picture story narration task.

After the first step of the questionnaire process was done the children were told that they were going to narrate a story according to the picture book that they were shown (see more at 4.4). They were told that every child can narrate as he/she likes and that the researcher was interested in listening to the same story told by every child in their own way. It was believed that this clarification would give more freedom to the children and that there would not be some kind of embarrassment on behalf of them with regard to their produced narrations. This introduction was tested with the first five children of the research and it was seen that it made them feel more at ease with the whole procedure. The definite indication though that this kind of introduction was indeed effective with the children was the smiles that all of them gave to the researcher right after and their general attitude which was friendlier and more playful. This also indicated that the children were less self-conscious and effectively their narrations would be more spontaneous and their speech productions less “controlled”.

#### **4.4. The tools and the narration elicitation method used**

As already mentioned, the children who participated in the study were first asked to fill in a questionnaire which aimed at obtaining information regarding these learners’ language learning biographies and their use of the three languages in their social network (i.e. their age and sex, the class they attended, which was their L1 and their L2, the way they learnt their languages, the period of exposure and use of each of their three languages as well as the networks that they use each one of them).

The questionnaire was designed according to Daller’s (1999) model which has been used by other similar studies (e.g. Sagin Simsek, 2006) and some original items were edited for the purpose of this study (see Appendix B). Since our participants were quite young we kept the core of the rationale of Daller’s questionnaire model and we simplified its format, its register and the way the questions were asked. The questionnaire

The wordless picture story “A boy, a dog and a frog” (appendix A) by Mercer



Mayer (1967), part of the same book series that Cenoz (2001) also used was chosen for this study too. Researchers in many countries have used Mercer Mayer's wordless "frog story" picture books as a tool for eliciting narrative descriptions for language studies. The "frog stories" are also listed in the CHILDES archive and the method of approaching and explaining the task to the children of this study was according to the one provided by this archive (<http://childes.psy.cmu.edu/>).

The children were asked to narrate the picture story in English, their third language. This would provide us with information regarding their languages interaction as well as cross linguistic influence, such as code switching and code mixing, every time their L1 and/ or L2 would appear during their narration. Moreover, the narrations of the children would actually have a twofold role; they would be a medium for assessment of the children's L3 proficiency and they would also be the medium for the texts analysis in terms of cross-linguistic influence as well as the Content and Function usage per language.

The children were made aware right from the beginning that they were to tell a story. The researcher followed the guidelines provided by the CHILDES archive. So, the children were first asked to look through the picture story and then to narrate it while looking at the pictures. The children were oriented to the book as presenting a "Story" before they would start their narration: "Here is a book. This book tells a story about a boy [point to picture on cover], a dog [point], and a frog [point]. First, I want you to look at all the pictures. Pay attention to each picture that you see and afterwards you will tell the story."

Then, the children were told: "Now, I would like you to tell me this story in English. You will look at the pictures and you will help me understand what happened. If at any point you feel that you can't find the right word in English, remember that you are free to use any of your other languages. After all, they are all yours!"

As CHILDES researchers that used the same picture story the interviewer had to make sure that the narrations would be completely the child's task and that there would be no scaffolding by her. The interviewer had to make sure that her verbal feedback would be limited to neutral comments, so that the child's form of expression would not be influenced in any manner. To this end, the interviewer had to avoid any kind of prompts that could alter the child's narration, such as a choice of verb, aspectual marking, or her perspective on the story. Also, the following prompt types were used as a neutral way to reinitiate the children's storytelling:

(1) silence or nod of head, (2) “uh-huh,” “Okay,” “yes,” (3) “Anything else?” (4) “and...?”(5) “Go on”, following the instructions provided by the CHILDES archive.

## 4.5. The transcriptions

The narration of each child was transcribed and utterance boundary decisions were based on intonation contours and pauses. In order to achieve an accurate transcription children that used Albanian during their narrations were identified at the time of interview, their audio file was archived in a specific folder and they were all given to an Albanian native speaker to transcribe them. The interpreter has been in Greece for over twenty years and her command of Greek is excellent. In order to make sure that the transcription would be done according to a unified manner with the rest of them, the researcher was present during the task; she cooperated with the interpreter and supervised each one of the produced “texts”. Also, the researcher filled in the Greek and English words during these specific transcriptions.

## 4.6. Texts and data analysis

Each one of the forty nine texts that were finally chosen to be part of the study was analyzed in terms of part of speech in each language used and the instances of code switching and code mixing were identified. The target language of the narration was English; therefore code switches were identified as whole utterances in Greek or Albanian. Code mixes were identified as those utterances that Greek and/or Albanian and/or English were used in the same utterance, in accordance to Muysken (2000).

For each utterance and for each one of the three languages in question the parts of speech were divided in two categories: Content and Function words. Content words include: nouns, verbs, adjectives, adverbs and numerals. Function words include: prepositions, conjunctions, determiners and pronouns. Each one of the words of each utterance was appointed to the relevant part of speech of one of the three languages that was used. (Appendix E)

Then, the parts of speech of each language were grouped in Content and Function words. Therefore, the participation of Content and Function words of each one of the three languages of the participants was examined to determine how cross linguistic influence (via code switching and code mixing) affected Content and Function words.

Moreover, through the text analysis the source languages of transfer were investigated. Each source language of transfer would be correlated with the children's L1 and we would try to find out if a speaker's L1 or L2 is more influential while speaking their L3. As aforementioned, so far bibliography has suggested that L2 has played the role of the "bridge language" and that speakers of L3 have been found to resort to their L2 instead of their L1 in order to get their message across. Therefore, one of our own research questions aimed at finding if our participants' L2 would be the one that they would seek more help from during their narration in their L3.

Furthermore, below we present the way the dataset of the corpus we obtained from the narrations of our participants came up and was analysed. We created an excel sheet where the answers of the children were codified entries according to the questionnaire they had filled in. Therefore, for each child we had a specific line and a specific column regarding each one of the variables/ questions (Appendix E).

Each text was analysed per utterance in terms of the languages that have been used, the number of words per language used, and the number of words per language that were Content or Function ones as well as their kind (e.g. noun or preposition respectively). Then for each one of the texts we calculated the total of utterances within the categories that we investigated (i.e. the code switches and the code mixes according to the combination of languages that was used from the children) as well as the total of the words per kind of Content and Function words in every code switch and code mix and in every language (Greek, Albanian, English). This was a very elaborate process and the final excel file (Appendix E) was indeed rather detailed since it included all of the biographical information of our participants as well as their produced speech analysis per part of speech and per language.

These data were then entered in the respective entry for each one of the children within the same excel sheet, so that they can be studied comparatively, i.e. the specific characteristics of the language biographies in relation to the produced texts. In order to analyse these data we had to create many new variables which came up after a thorough process of the recorded information gained from both the questionnaires and the texts. Therefore, whenever these new variables are simple and justifiable they are not further explained, while whenever it is deemed necessary an explanation on their rationale and the way they were created is provided (see the "Results" chapter).

Furthermore, after the first part of the analysis of the texts produced by the forty nine participants, it was observed that there were two groups as far as the

languages the children used during their narrations. Therefore, two groups were further formed: the first group was found to have transferred only from Greek while trying to narrate in English (i.e. the target language of the narration task and their L3). This group included 43 children and their bilingual narrations are presented in Appendix D. The second group included 6 children who used both Greek and Albanian while narrating in English (the target language and their L3); hence they produced trilingual narrations (Appendix C).

Therefore, the participants were divided in two subgroups and the issue of the language (L1 or L2) that was mostly used every time they sought help in order to achieve the best possible result while narrating in their L3 was investigated. It is reminded at this point that each one of the participants had stated in the questionnaire that they had filled in before the narration took place, which one (Greek or Albanian) was the first language that they had acquired. This specific answer by the participants would give their own perception of their first language. We need to point out that although all of the children had been born and raised by Albanian immigrant parents they had been motivated by their parents to speak Greek at home (the official language of Greece) in order to assimilate in the society in an easier way (parents' verbal answer to the researcher's inquiry on the matter).

Moreover, we went on to find the reasons that may have caused the transfer from their L1 or their L2 according to several factors (e.g. age, sublevel of A1 proficiency, frequency of use of their L1 and their L2 etc.) After the first part of the performed correlations regarding our participants' biographical language data, we wanted to further explore the possibility of common characteristics that our more successful L3 learners may have shared. Having said that, we used the data we had obtained from the questionnaires the participants had filled in and we performed new correlations that focused on three sublevels of A1 level according to CEFR and the three groups' relation to several biographical data (e.g. their L1 and their L2, years of speaking their L1, L2, L3, frequency of use of their languages, occasions of usage of their languages (i.e. at home, with their friends, at school), method of learning their L2 (i.e. natural learning or formal instruction) etc.

Through this part of the research we hoped that we would gain some information that could also contribute in forming a profile of the more successful L3 learners of our participants. This could probably be a basis for future understanding of those elements that may influence an L3 learner's language learning career. Furthermore, such a profiling attempt could serve as a way to incorporate those characteristics in

our view of these specific L3 learners in a fuller and more comprehensive way and allow us to understand the elements they consist of as far as their former language experience is concerned. To conclude, an L3 learner's former language biography can serve as a way to realize the process he/she goes through during his languages learning and the reasons that may constitute to a more successful command of an L3. Finally, such a profiling with regard to a language learner's history has not been found in so far bibliography (at least to our knowledge) and could therefore assist in future research. Below (section 4.8.) we present how the present research was designed and implemented in a step by step manner.

### 4.7. The parts of the research design

Below we present the parts of the research design as they were constructed and implemented:

**Part 1:** Mapping of the Participants: their age, sex, languages biography and usage.

**Part 1b:** Correlations of the data obtained by the first part.

**Part 2:** The texts produced via narrations were assessed according to the children's level in English (L3) in three subgroups: A1 high, A1 medium and A1 low according to the CEFR "can do" statements. This assessment focused on the communicative abilities of the speaker and not as much on the grammatically and syntactically "correct" utterances and narrations.

**Part 3:** For each one of the English level subgroups (A1 high, medium and low) data from the children's questionnaires were analysed in order to find out common backgrounds.

**Part 4:** Correlations in order to come up with a profiling of the more successful learners of English as an L3 and the common characteristics that these participants share.

**Part 5:** The two groups of the participants were divided according to the languages they used during their narrations. "Group A" included 43 children who used Greek while narrating in English. "Group B" included 6 children who used Greek and Albanian while narrating in English. In that view, we aimed to find the reasons that may have influenced the children's transfer from their L1 or their L2.

**Part 6:** We went on by analyzing the texts that were produced by all of our participants in terms of parts of speech. This was a rather elaborate stage of the research since in each one of the texts we distinguished the words according to the

language they belonged to and then according to the parts of speech. We created excel files (Appendix E) that shaped the full picture of each text. This way we had at any time needed the whole view of the participant's narration in terms of languages he/she used, the parts of speech he/she used per language, and the code switches and code mixes he/she produced along with their biographical information.

**Part 7:** Finally, all of the texts and their analysis would serve both for the speech production discussion and the correlations regarding language choices made in the text in relation to the child's language biography. More specifically, the texts and the data regarding the children's language biographies were correlated every time a question regarding their speech production had to be "located" within their language biography. In the following Chapter 5 the results of our research are being presented.

## 4.8. Statistical tests and procedures

In this section we describe the statistical tests that we used in order to obtain the information we needed for the research questions we had set. Frequency tables were used to review how the categories of categorical variables were distributed within our participants.

Contingency tables (cross tabulation) were used to examine frequencies of observations that belonged to every unique combination of the values of cross tabulated categorical variables. Contingency tables allowed us to identify relations between cross tabulated variables.

Descriptive statistics of scale variables:

- measurements of central tendency: mean, median
- measurements of dispersion: minimum and maximum value, standard deviation

Graphemes (pie charts, bar charts, stacked bar charts) were often used to represent the data and/or to compare subsets of the data. Graphemes were chosen because they can convey information quickly and easily, and they can highlight relations between variables more clearly than frequency or contingency tables.

Inferential procedures:

The common Pearson chi-squared test was performed to test the significance of the relationship between two categorical variables. However, when more than 20% of the cells of the corresponding contingency table have expected count less than 5, then the Fisher's exact test was used for 2x2 contingency tables, and the Freeman-Halton extension of the Fisher's exact test for larger contingency tables.

In order to evaluate whether there was a significant difference between the means (of a scale variable) within two different groups the common independent t-test was used.

Analysis of variance (ANOVA) was used to test for significant differences between means of a (scale) variable (dependent variable) while controlling one or more factors (independent variables). When there were several factors and each has been measured using different participants, then independent factorial ANOVA was performed. In the cases of several independent variables that some have been measured with different participants whereas others used the same participants, a mixed-design ANOVA was performed.

Finally, The accepted level of significance was set to be 0,05. Whenever post-hoc pair wise comparisons were performed, the accepted significance level was corrected using Bonferroni correction.

The statistical analyses were performed via IBM SPSS v. 21.0, and the graphemes were performed using MS Excel 2007. All of the statistical tests and analysis for this research was performed by a statistician (holding an Msc) with significant experience in education and language projects. The collaboration with a statistician was deemed necessary by the researcher in order to make sure that the analyses would be thorough and unquestionable. Moreover, the extent of the research questions and the correlations that were finally needed to be performed required a professional to guarantee for the outcomes of the research and its results.





## 5. Results

In this chapter the results of our study are being presented following the same order of the research design described in the Methodology section.

### 5.1. Mapping of the participants of the study

As previously mentioned, initially we had gathered eighty participants. After an elimination process according to qualitative criteria (see Methodology) we ended up with forty nine participants that met all of the preset criteria. Below we present the profile of our participants which was extracted by means of the questionnaire they were asked to fill in before the narration of the picture story.

**Age of the participants:** Most of the children were twelve years old (n: 27) and less of the children that finally took part in the study were between the age of nine and eleven years old (n: 22), (See Figure 5.1).

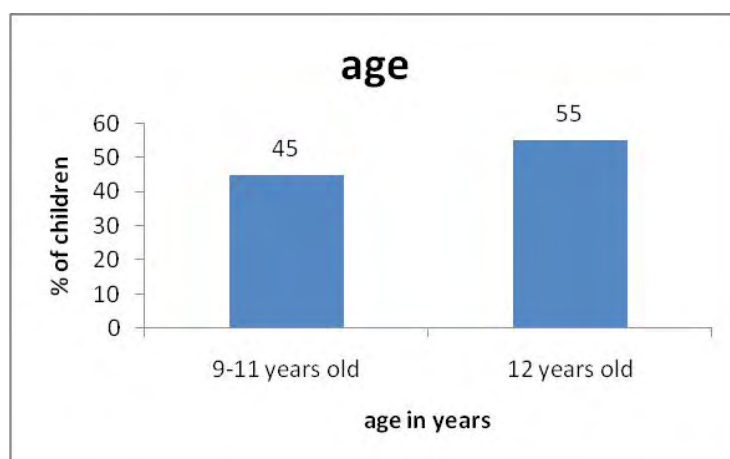
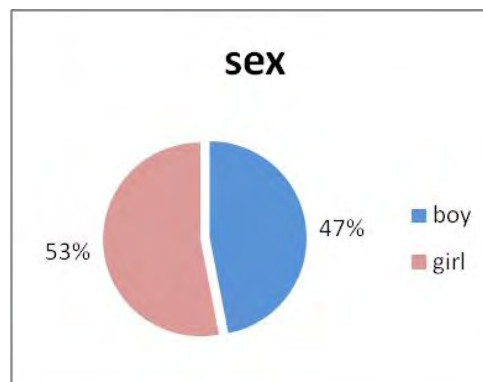


Figure 5.1.: percentage of age of the participants

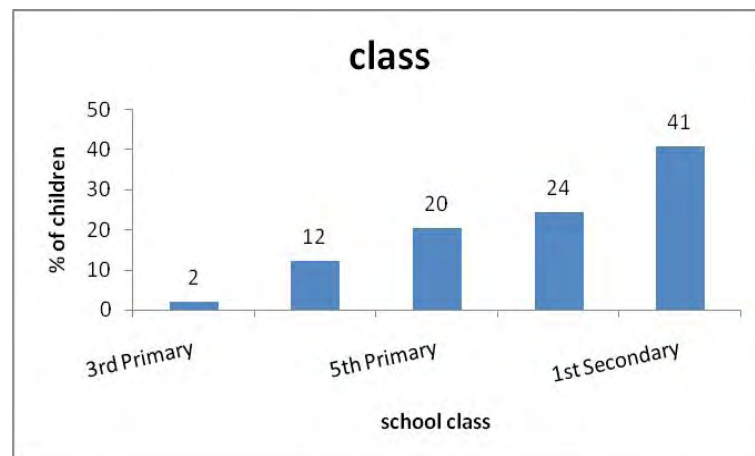
**Sex of the participants:** There were more girls than boys that took part in the study. Specifically, there were twenty six girls and twenty three boys (See

Figure 5.2).



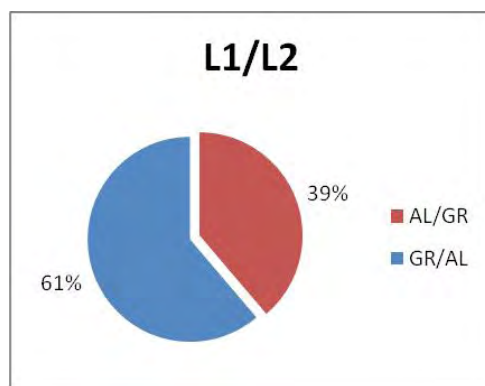
**Figure 5.2.:** percentage of boys and girls of our participants

**Class they attended:** Most of the children (20 out of 49) had just graduated public primary school and were in the beginning of the 1st class of public gymnasium (the interviews were conducted at the beginning of the school year, during autumn). Fewer children were attending the last two classes of primary school (See Figure 5.3).



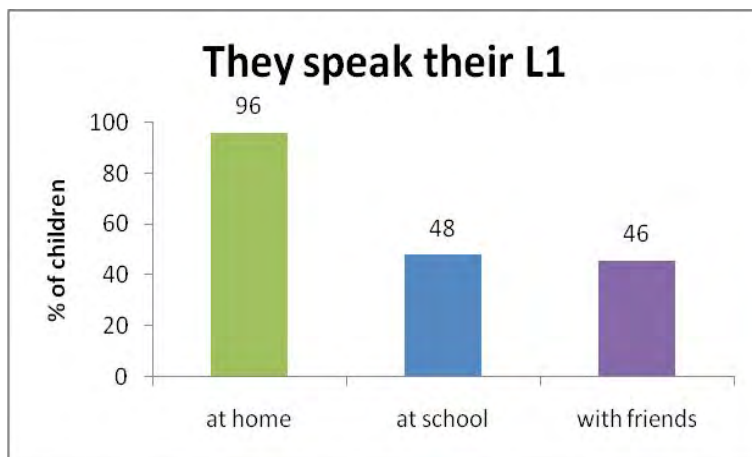
**Figure 5.3.:** percentage of the participants and the class they attended

**L1 of the participants:** The majority of the children had as their L1 Greek and L2 Albanian (n: 30; 61%). Fewer children stated as their L1 Albanian and L2 Greek (n: 19; 39%). (See Figure 5.4)



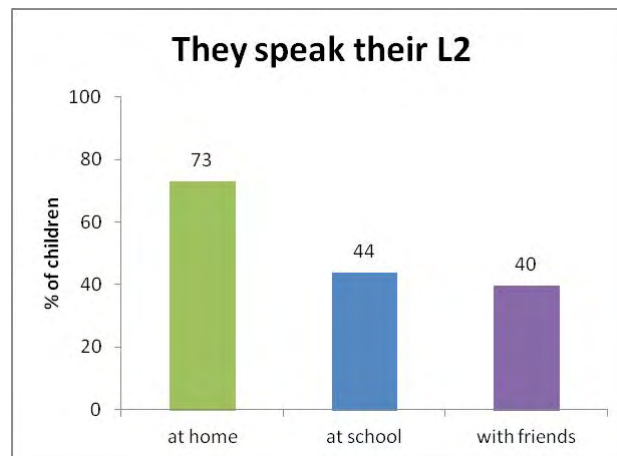
**Figure 5.4.:** percentage of L1 (Albanian/ Greek) of our participants

**The environment the participants speak their L1:** The majority of the children (96%) speak their L1 at home, 48% speak their L1 at school and 46% speak their L1 with their friends (See Figure 5.5).



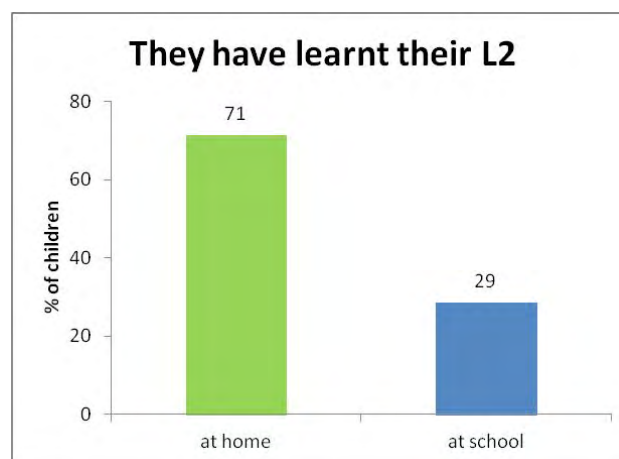
**Figure 5.5.:** the depiction of the environment the participants speak their L1

**The environment the participants speak their L2:** The majority of the children (73%) speak their L2 at home, 44% speak their L2 at school, and 40% with their friends (see Figure 5.6).



**Figure 5.6.:** the depiction of the environment the participants speak their L2

**How our participants have learnt their L2:** Taking for granted that our participants have learnt their L1 via their parents and their contact with their family (besides all of them had been raised bilingually) we only asked them how they have learnt their L2. So, the majority of our participants (71%) have learnt their L2 at home whereas 29% of them have learnt their L2 at school, through typical teaching (see Figure 5.7).



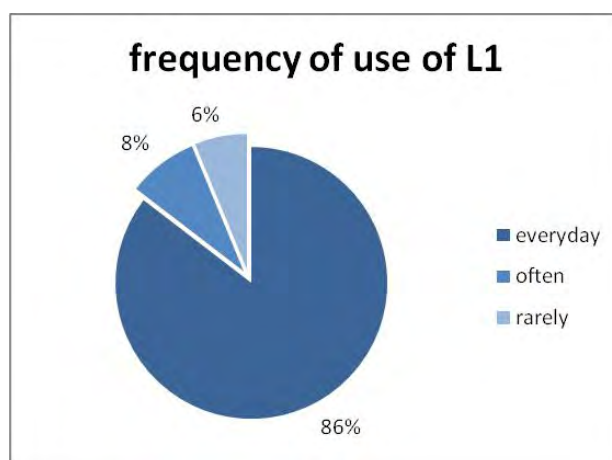
**Figure 5.7.:** depiction of how our participants have learnt their L2

**The time of contact with their L2:** The majority of our participants (81%) had been speaking it from three to five years. Fewer participants stated that they had been speaking their L2 from one to three years (see Figure 5.8).



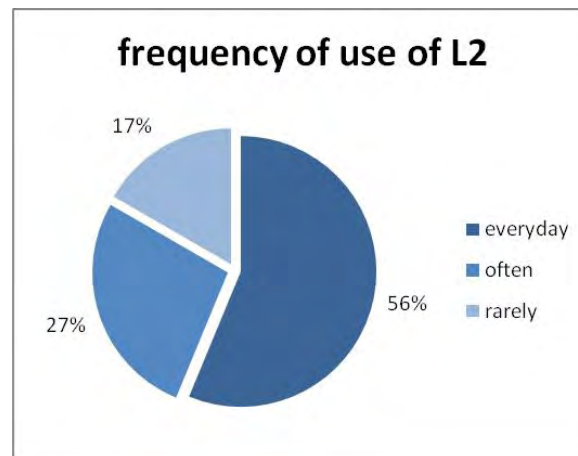
**Figure 5.8.:** depiction of the years the participants speak their L2

**The frequency of use of the participants' L1:** The majority of our participants (86%) stated that they use their L1 every day. A few of our participants (8%) use their L1 often and only 6% of the children rarely use it (see Figure 5.9).



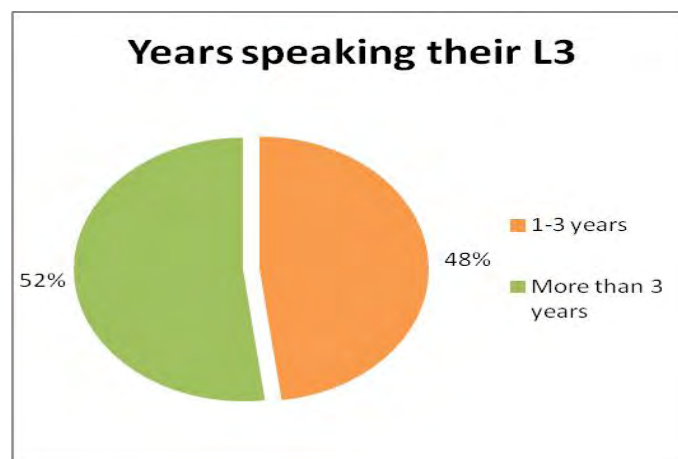
**Figure 5.9.:** depiction of the frequency of use of the participants' L1

**The frequency of use of the participants' L2:** Most of the children (56%) stated that they use it every day and 27% of them use it often. A few children said that they rarely use their L2 (see Figure 5.10).



**Figure 5.10.:** depiction of the frequency of use of the participants' L2.

**The time of contact with their L3:** The amount of learning of their L3 was relatively the same for all of the participants, i.e. most of them had been learning English as their L3 for three to five years (see Figure 5.11).



**Figure 5.11.:** depiction of the years the participants speak their L3

### 5.1.1. Correlations performed regarding the role of the children's L1 and L2

At this point we aimed to investigate the influence the children's L1 may have had on learning their L3. More specifically, in order to trace what is the effect of

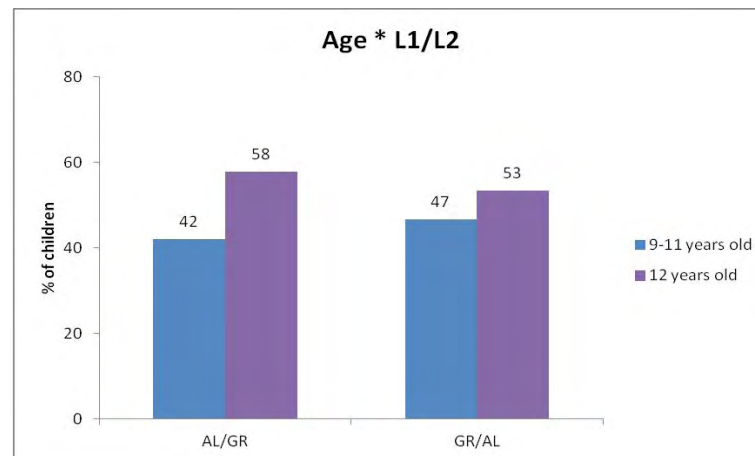
the participants' L1 we performed correlations with several factors that were part of the questionnaire they had initially filled in. As previously mentioned in the Methodology section, these correlations were meant to give us a fuller picture of the relationship of the children's languages as well as their possible influence on the children's language learning "career". Moreover, since one of the languages involved is a heritage one of families of an immigrant background, we aimed to find out whether Greek as an L1 (the community language) would show a different kind of "behaviour" and usage during the narration compared to Albanian as an L1 (an immigrant's language and therefore emotionally charged).

The factors investigated in relation to L1 were: age, sex, school class, way of learning their L2, the time they have been learning their L2 and their L3, the occasions they use their L1 and L2 and the frequency they use their L1 and L2. Below we present the results of the aforementioned correlations we surveyed in order to form a better view of the relationship of the three languages involved along with their language biographies.

**The relation of L1 and L2 and the participants' age:** The participants were distinguished in two groups; the one that the children had as their L1 Albanian and the ones that had Greek as their L1.

With regard to the first group the majority of the children who had as their L1 Albanian (58%) were twelve years old, whereas 42% of the children were from nine to eleven years old.

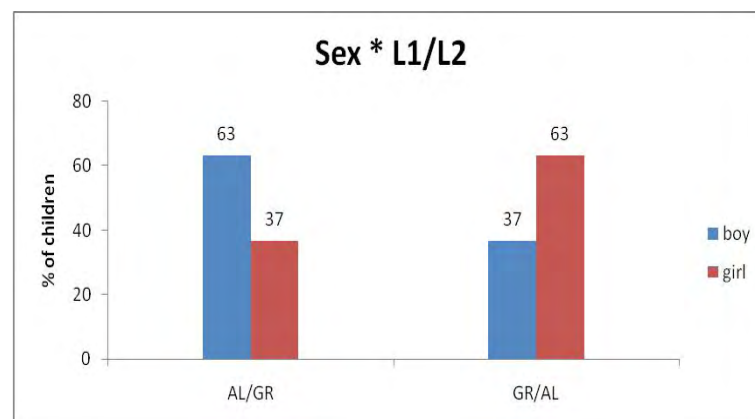
As far as the second group is concerned, most of the children who had as their L1 Greek were twelve years old, and 43% of them were from nine to eleven years old (Figure 5.12).



**Figure 5.12.:** depiction of the participants' L1 and L2 in relation to their age group

**The participants' L1 in relation to their sex:** The participants were distinguished in two groups; the first one that their L1 was Greek and the second one that their L1 was Albanian.

As far as the first group, the majority of the children (63%) were boys and 37% of the children were girls. Children in the second group, whose L1 was Albanian, were exactly the opposite in the percentages of the sexes; i.e. 63% of the children of this group were girls and 37% of the children were boys (see Figure 5.13).



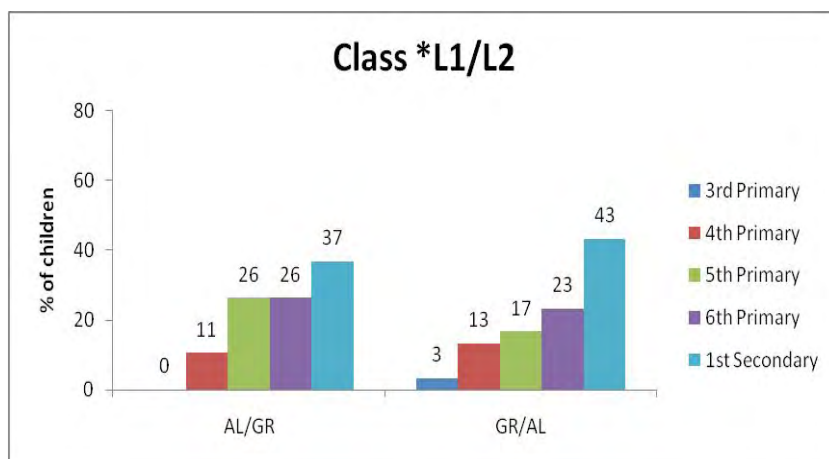
**Figure 5.13.:** depiction of the participants' L1 in relation to their sex

**The participants' class of attendance in relation to their L1:** we distinguished two groups according to their L1, either Albanian or Albanian. In the first group most children (37%) had just enrolled in the first class of gymnasium, whereas 26% of the children were attending the fifth and sixth class of primary



school. In the second group that children had Greek as their L1, most children were again in the first class of the gymnasium (43%), whereas 23% of this group was in the sixth class of primary school.

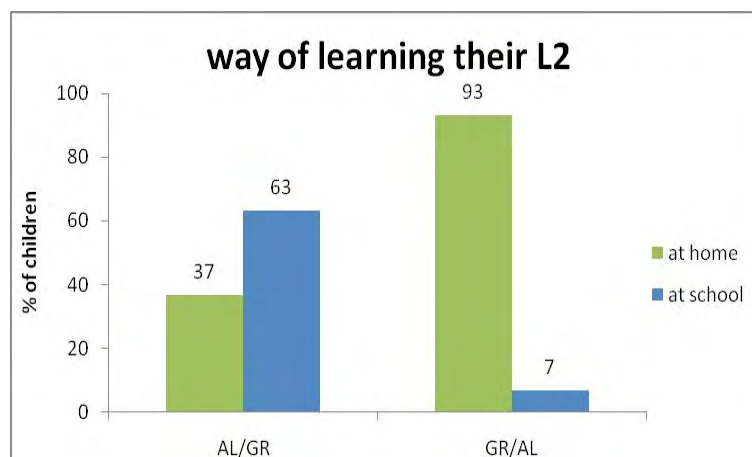
In both groups we see that our participants are mostly children who attended higher grades of education, they have acquired a great extent of literacy and have been in contact with formal types of learning. Since their L3 (English) is a taught language their contact with formal instruction is a useful tool that these participants have surely employed during their taught courses of their L3 (see Figure 5.14).



**Figure 5.14.:** depiction of the participants' class of attendance in relation to their L1

**The participants' L1 in relation to their way of learning their L2:** we distinguished two separate groups according to the children's L1 and we sought to see how they had learnt their L2. The first group was children that stated that their L1 was Albanian and the second group those that their L1 was Greek.

In the first group the majority of the children (63%) that their L1 was Albanian had learnt their L2 (Greek) at school. In the second group the vast majority of the children that their L1 was Greek (93%) stated that they had learnt their L2 (Albanian) at home. This is relevant with our personal conversations with the participants that there was no one attending evening classes in their heritage language. This information was sought since there are nowadays many children coming from Albanian families that attend classes in their heritage language (see Figure 5.15).

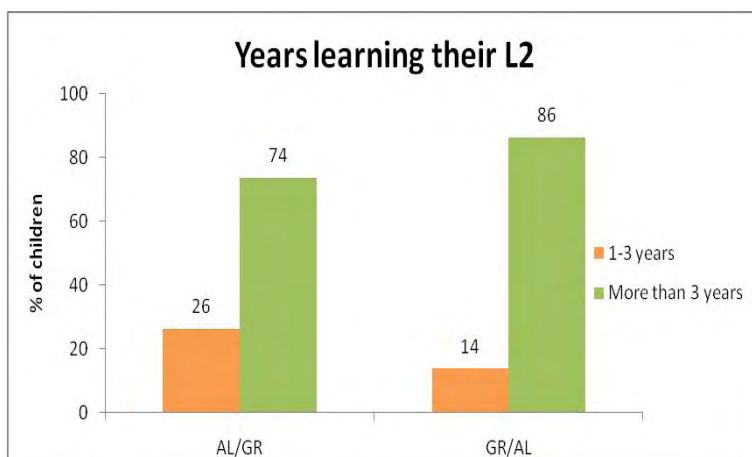


**Figure 5.15.:** the participants' way of learning their L2 in relation to their L1

**The participants' L1 in relation to the years they have been learning their L2:** we distinguished two groups according to the children's L1 and we looked whether they were fresh learners of their L2 or "older" ones. The first group was the one that their L1 was Albanian and the second group was the one that their L1 was Greek. The questionnaire (Appendix B) included a question regarding the years the participants had been learning their L2 and their L3 in order to find out how experienced our learners were in their languages.

In the first group that their L1 was Albanian 72% of the children stated that they had been learning their L2 (Greek) for more than three years. In the second group there was an even greater majority of the children (86%) that their L1 was Greek and they had been learning their L2 (Albanian) for more than three years (Figure 5.16).

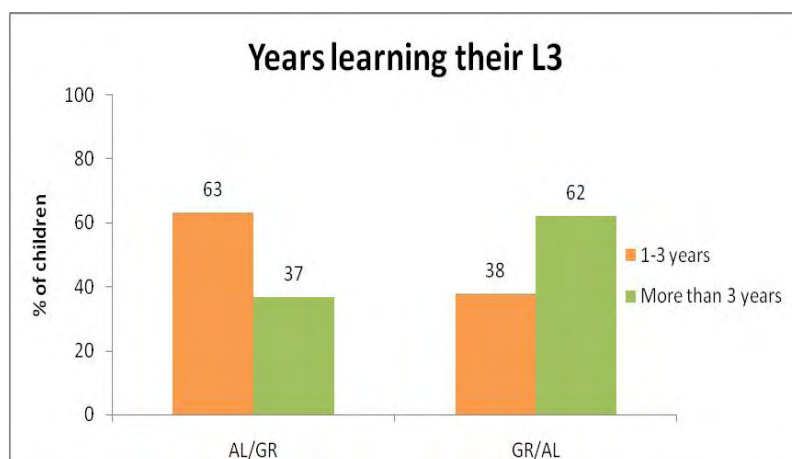
Therefore, we deduct that the majority of our participants were not fresh learners in their L2 and they had already acquired their L2 (either Greek or Albanian) for more than three years. There was a smaller number of children that had been learning their L2 from one to three years in both groups. Hence, the majority of our participants had some experience in their L2 (either Greek or Albanian), (Figure 5.16).



**Figure 5.16.:** the participants' L1 in relation to the years they have been learning their L2

**The participants' L1 in relation to the years they have been learning their L3:** we distinguished two groups according to their L1 (Greek or Albanian) and we aimed to find out how experienced our learners of L3 were.

In the first group that the participants' L1 was Albanian the majority of the children (63%) had been learning their L3 (English) for more than three years. Likewise, in the second group that their L1 was Greek the participants showed the same experience in their L3 (62%). Therefore, the majority of the children that took part in the study had received the same amount of instruction in their L3 (see Figure 5.17).

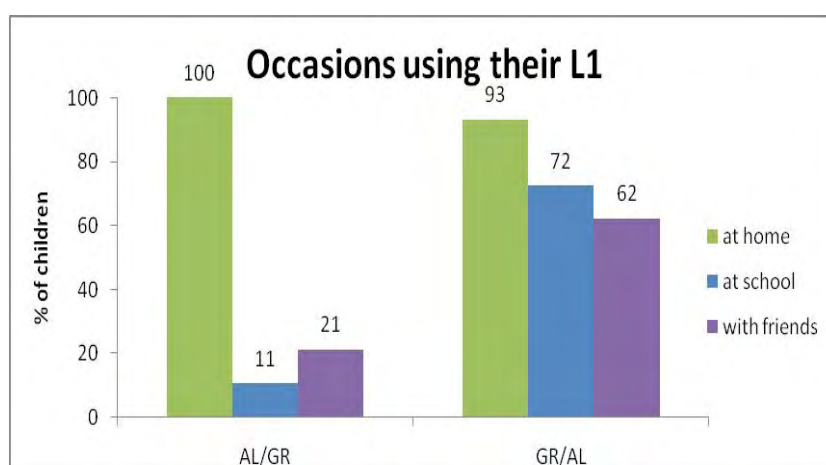


**Figure 5.17.:** the participants' L1 in relation to the years they have been learning their L3

**The participants' L1 in relation to the occasions they speak it:** we distinguished two groups according to their L1. We aimed to find out on what occasions our participants use their L1, i.e. at home, at school, or with their friends. The participants could choose more than one of the options given in the questionnaire (Figure 5.18).

In the first group that their L1 was Albanian all of our participants stated that they use it at home, a few with their friends, and some use it at school too (meaning with their friends who come from Albanian families and can speak their heritage language).

In the second group that their L1 was Greek the majority of our participants use it at home, as well as at school and with their friends (see Figure 5.18 below).



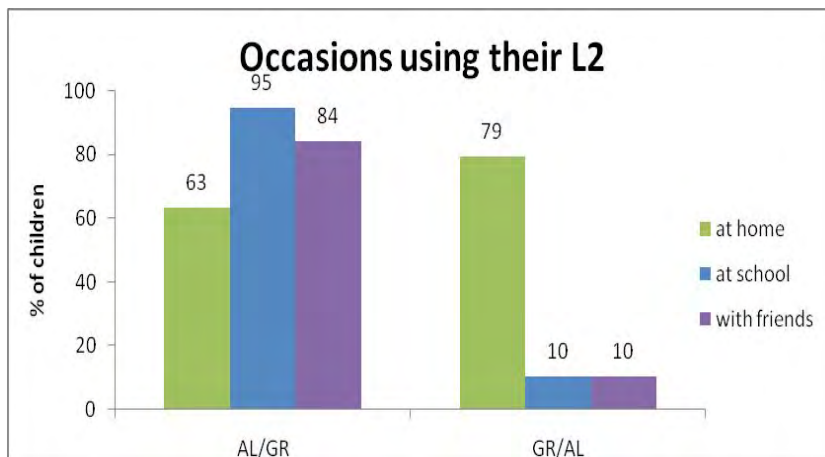
**Figure 5.18.:** the participants' L1 in relation to the occasions they use it

**The participants' L1 in relation to the occasions they speak their L2:** we distinguished two groups according to their L1 and we wanted to see the occasions our participants use their L2. Again, our participants could choose more than one of the options given in the questionnaire (Figure 5.19).

In the first group that the children's L1 was Albanian the majority of them (95%) stated that they use their L2 (Greek) at home and 84% of them said that they use their L2 at school too. Fewer children (63%) use their L2 (Greek) with their friends.

In the second group that their L1 was Greek the majority of the children (79%) use their L2 (Albanian) at home. Only a few children (10%) stated that they use their L2 (Albanian) at school and with their friends. Therefore, we can assume that for the children of the second group their L2 (Albanian) is less active in terms

of their social environment (see Figure 5.19 below).

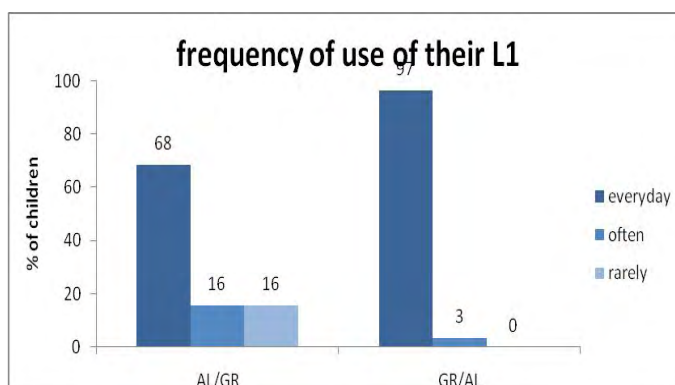


**Figure 5.19.:** the participants' L1 in relation to the occasions they use their L2

**The participants' L1 in relation to the frequency of its use:** we distinguished two groups according to their L1 and we aimed to see how often they use it.

The first group that their L1 was Albanian uses it every day in 68% of the children, whereas only some of them said that they use it often or rarely (16% in both cases).

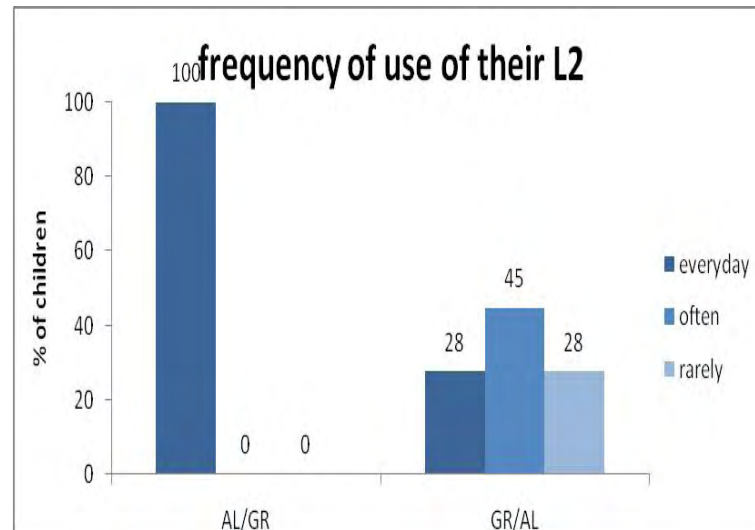
In the second group that their L1 was Greek the vast majority (97%) uses it every day, which seems quite expected since it is the official language of the country they grow up in and they need to interact in Greek every day (Figure 5.20 below).



**Figure 5.20.:** the participants' L1 in relation to the frequency of its use

**The participants' L1 in relation to the frequency they use their L2:** we distinguished two groups according to their L1 and we aimed to see what the frequency they use their L2 is.

All of the participants in the first group that their L1 was Albanian use their L2 (Greek) every day. Most of the children of the second group (45%) use their L2 (Albanian) every day. Less children use it often or rarely (28%) (Figure 5.21 below).



**Figure 5.21.:** the participants' L1 in relation to the frequency they use their L2

### 5.1.2. The factors that might have contributed to the making of the more successful L3 (English) learners

In this section we present the results deducted from the correlations we performed in order to find out possible factors that may play an influential role in the making of the more successful third language learners. For this matter we correlated several factors that were part of the questionnaire the participants had filled in to find which, if any, seemed to be more influential.

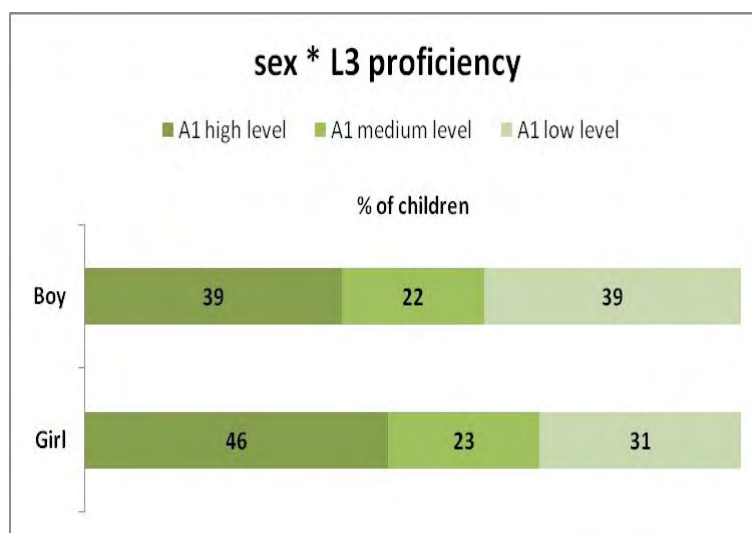
As previously mentioned in the Methodology section, we had assessed the “texts” produced by the narrations of the children according to the CEFR, and we had rated them in three different sublevels of A1 level. Therefore, each factor was seen in relation to the three sublevels of A1; high, medium and low in terms of their L3 proficiency. This part of the results presents the correlations performed in

order to find out if the more successful L3 learners had some factors in common which seemed to be rather influential. The factors investigated were: age, sex, L1, frequency of use of their L1 and L2, the way they have learnt their L2, the years they have been learning their L2 and their L3 and the language they mostly use at home. Below we present the results of these correlations:

**The participants' sex in relation to their L3 proficiency:**

we distinguished the participants in two groups, boys and girls, and we looked into their proficiency in terms of their A1 sublevel (Figure 5.22).

Boys (the first group) who were assessed as high A1 were less than girls, 39% and 46% respectively. Medium A1 level was found to be almost equal for both girls and boys, whereas more boys were assessed as low A1 sublevel compared to girls. However, the analysis showed that it was not a statistically significant finding; Pearson chi-square test:  $X^2(2, N = 49) = 0.396, p = 0.820$ .



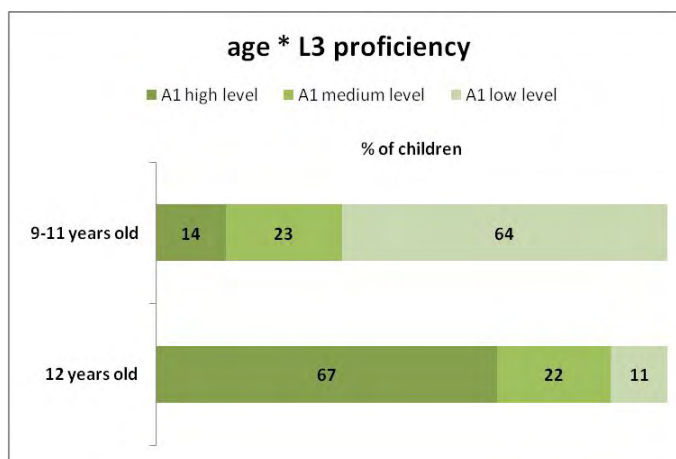
**Figure 5.22.:** the participants' age in relation to their L3 proficiency

**The participants' age in relation to their L3 proficiency:** we distinguished two groups; children aged from nine to eleven years old and twelve years old.

It was clear from our results that older children, i.e. twelve years old, outperformed the younger ones. Specifically, high A1 sublevel children were found to be 67% of the twelve years old compared to the younger ones since only 14% of them were assessed as high A1 (Figure 5.23).

Likewise, 11% of the older children (twelve years old) were assessed as low A1 Sublevel, whereas 64% of the younger ones were assessed as low A1. The Pearson chi-square test showed that it was a statistically significant finding;  $X^2(2, N = 49) = 17.596, p < 0.001$ .

Therefore, we may assume that these children's age is a factor that could probably be found to be influential if tested on another group of participants.



**Figure 5.23.:** the participants' age in relation to their L3 proficiency

**The participants' L1 in relation to their L3 proficiency:** we distinguished two groups according to the children's L1 (either Greek or Albanian). We aimed to find whether a child's L1 may result in different level of L3 proficiency (either higher or lower). The first group was children whose L1 was Albanian and the second group the ones that their L1 was Greek.

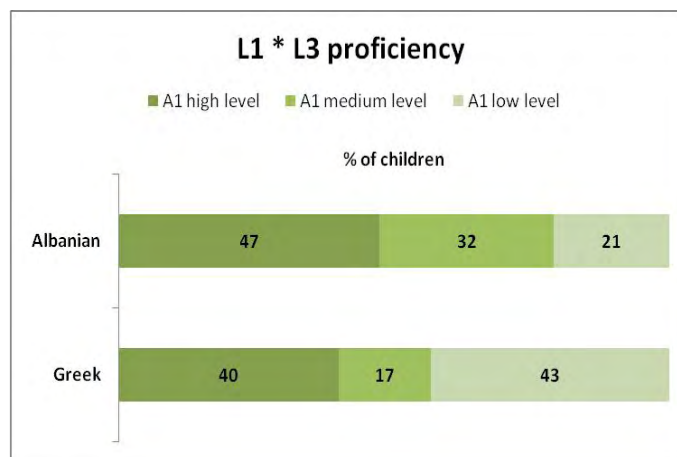
Children of the first group (L1 Albanian) showed a tendency towards higher proficiency, since 47% of them were assessed as High A1 sublevel, 32% of them were assessed as medium A1 sublevel, and 21% of them were assessed as low A1.

Children of the second group (L1 Greek) showed lower performance compared to children of the first group. Specifically, 40% of them were assessed as high A1 sublevel, 17% of them were assessed as medium A1 sublevel and 40% of them as low A1 sublevel (see Figure 5.24).

We checked the second group's age to see whether they were mainly younger children; however 16 out of 30 of these children were twelve years old. Therefore, we could not assign this finding to this group's age. However, the statistical test showed that it was not statistically significant therefore we cannot claim generalization of



this finding; Pearson chi-square test:  $X^2(2, N = 49) = 2.964, p = 0.227$ .



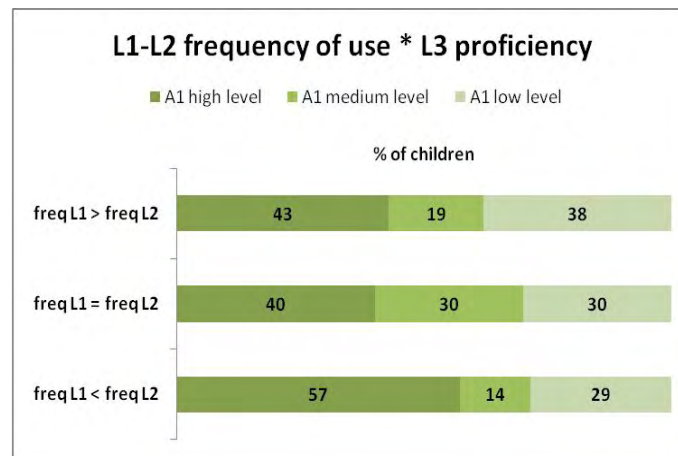
**Figure 5.24.:** the participants' L1 in relation to their L3 proficiency

**The participants' L1 and L2 frequency of use in relation to their L3 proficiency:** we looked into the matter of frequency of use of the participants' L1 and L2 in relation of their L3 proficiency by distinguishing three kinds of frequency, i.e. a) Frequency of use of L1 is greater than L2, b) L1 and L2 are used with the same frequency, c) frequency of use of L2 is greater than L1.

The first correlation (a) showed that when L1 is more frequently used than L2 the participants' L3 seems to be better, since 43% of the specific participants were assessed as high A1 sublevel. Also, 19% of these children were assessed as medium A1 sublevel. The children that were of low A1 were 38% which indicated that the overall picture revealed a tendency for medium/ high performance in these children's L3 proficiency (Figure 5.25).

The second correlation (b) performed showed that when L1 and L2 are used with the same frequency more children, 40% of them, were in the high A1 sublevel. However, there was not any difference in those that were in the medium and low A1 sublevel (both of them were 30% in each one of the aforementioned A1 sublevels).

Finally, the third correlation (c) that we performed showed that when L2 is more frequently used than L1, children were of higher A1 sublevel (57% of them). Fewer participants (14%) were in the medium A1 sublevel of proficiency whereas 29% were in the low A1 sublevel (Figure 5.25). However, the Pearson chi-square test revealed no statistically significant difference:  $X^2(2, N = 48) = 0.505, p = 0.777$ , so we can not claim research value of this finding.

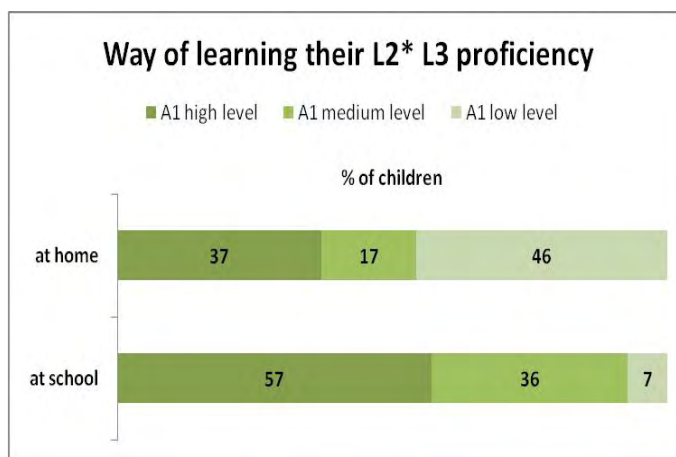


**Figure 5.25.:** the participants' L1 and L2 frequency of use in relation to their L3 proficiency

This overall question whether frequency of use of L1 and L2 may influence L3 proficiency seen through (a), (b) and (c) correlations was not found to be statistically significant according to the Freeman-Halton Test,  $p = 0.880$ . However, correlation (c) on L2 being more frequently used than L1 and whether this may have an impact on L3 proficiency indicated some connection that would be interesting to look it more thoroughly with another set of participants. Anyhow, our participants seemed to be in a “line” of language learning mode, in which L2 which was time wise closer to L3 may have influenced their higher proficiency (more on this matter in the Discussion of results chapter).

**The participants' way of learning their L2 in relation to their L3 proficiency:** we distinguished two groups of children, i.e. those that had learnt their L2 at home and those that had learnt it at school. We aimed to see whether the manner of learning of their L2 would influence these children's L3 proficiency.

The first group that had learnt it at home did not seem to be greatly influenced by the relation of learning an L2 in a non instructed way. Specifically, 37% of the first group was of high A1 sublevel in their L3, while 17% of the same group was of medium A1. However, 46% of this group was of low A1 sublevel, which raises some issues regarding the matter in question (Figure 5.26).

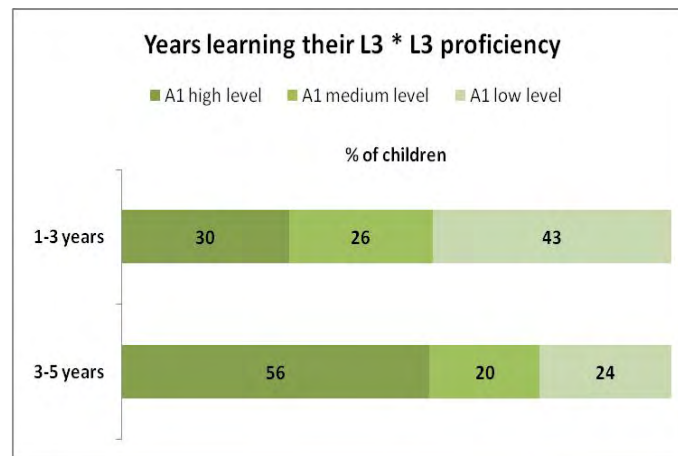


**Figure 5.26.:** the participants' way of learning their L2 in relation to their L3 proficiency

Interestingly, children of the second group who had learnt their L2 at school, showed greater L3 proficiency; 57% of them were assessed as high A1 sublevel and 36% of them were of medium. Really few children (7%) were assessed as low A1 sublevel. This finding is statistically significant according to the Freeman-Halton Test,  $p = 0.023$ . Therefore, the factor of learning an L2 within formal instruction was found to be an influential one towards L3 proficiency.

**The period of exposure the participants have had in their L3 in relation to their L3 proficiency:** we distinguished two groups, the first being children who have been learning English as their L3 for one to three years and the ones who have been learning their L3 for three to five years. We aimed to verify whether the participants who have been L3 learners for longer period of time would show greater L3 proficiency. This was in accordance with so far research that had suggested that the longer the contact with learning a language the higher their proficiency is (Figure 5.27).

As hypothesized children who had been in contact for longer period of time showed greater proficiency in their L3. Specifically, 56% of the children of the second group that had been learning their L3 for three to five years were assessed as high A1 sublevel and 20% of this group was of medium A1 sublevel. To top it up, 24% of this group was assessed as low A1 (see Figure 5.27 below).



**Figure 5.27.:** the time the participants have been learning their L3 in relation to their L3 proficiency

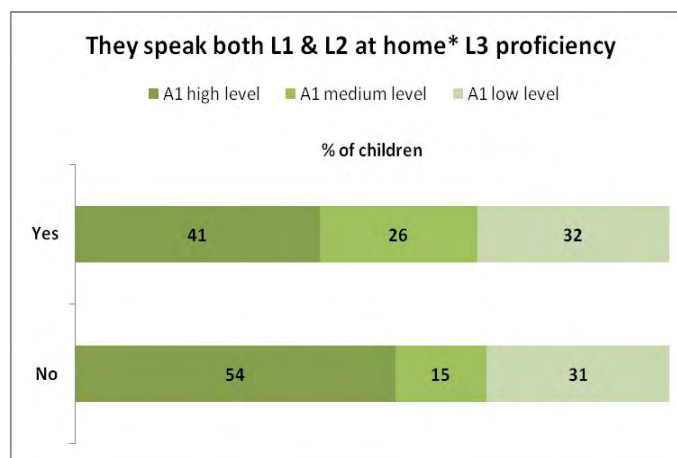
In comparison, the first group that had been learning English for one to three years did not show the same levels of L3 proficiency. Specifically, 30% of this group was high A1 sublevel and 26% of the group was medium A1. It is worth noticing that 43% of this group was low A1 sublevel which indicates the significance of the period of language learning as a factor. This was not found to be a statistically significant finding within our research and this is probably due to our study limitations, i.e. number of participants, (Pearson chi-square test:  $X^2(2, N = 48) = 3.347, p = 0.188$ ) so far literature supports the impact of this factor on L3 proficiency .

**The language they speak at home in relation to the participants' L3 proficiency:** we distinguished two groups of participants, the ones that use both L1 and L2 at home and the ones that do not. We aimed to see whether children who use both of their two languages at home may be more proficient in their L3 than those who only use one of their languages at home. This correlation would show if children that are in “good terms” and more language experienced by using both of their two first languages would be more competent with their third one

The first group of children that used only one of their languages at home showed more competency in their L3 compared with the second group. More specifically, 54% children that used only one of their languages at home were of high A1 sublevel and 15% of the same group was of medium A1. Children that were of low A1 sublevel were 32% of this group.

The second group on the other hand that used both of their languages at home did not show the same level of proficiency in their L3. Specifically, 41% of the

children were assessed as high A1 sublevel and 26% of this group was assessed as medium A1 sublevel. Low A1 sublevel was 32% of the second group (see Figure 5.28 below).



**Figure 5.28.:** the occasions of usage of L1 and L2 in relation to the participants' L3 proficiency

However, the statistical test indicated that this was not a statistically significant result (Pearson chi-square test:  $X^2(2, N = 47) = 0.839, p = 0.657$ ) as far as our participants is concerned. It is to be taken into account that out of 47 children that answered this question 34 of them use both languages at home (12 of them have as their L1 Albanian and 22 of them have as their L1 Greek) and 13 of them use only one of the two languages they know; these children speak only their L1 at home (7 children have as their L1 Albanian and 5 children have as their L1 Greek) and only 1 child used his/her L2 at home (Albanian).

**Table 5.1.:** Depiction of the languages the children spoke at home

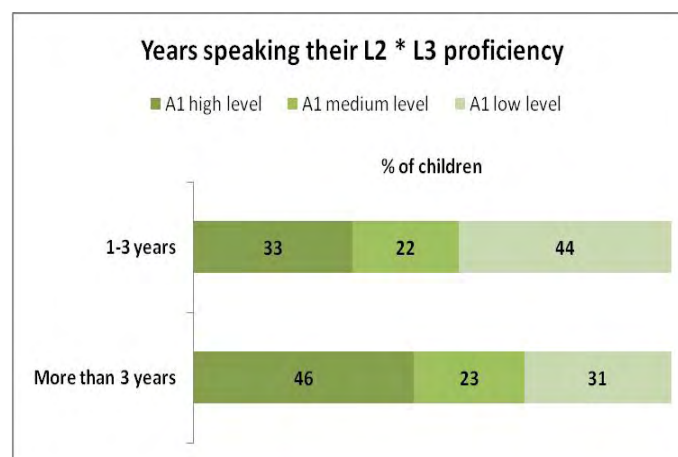
	L1					
		Albanian		Greek		
		Count	Column N%	Count	Column N%	
<b>They speak at home</b>	only L1	7	36,8	5	17,9	
	only L2	0	,0	1	3,6	
	both L1 & L2	12	63,2	22	78,6	
	Total	19	100,0	28	100,0	

### The time the participants had been speaking their L2 in relation

**with their L3 proficiency:** we distinguished two groups according to the time they had been in touch with their L2. We aimed to see whether the more a speaker is acquainted with his/ her second language the more proficient may be in his L3.

The participants of the first group that had been in touch with their L2 for one to three years showed lower proficiency scores in comparison with the second group. More specifically, 33% of the first group was assessed as high A1 sublevel, 22% were medium A1 and 44% were low A1 sublevel (see Figure 5.29 below).

Participants of the second group (that they had been in touch with their L2 for more than three years) showed higher levels of proficiency compared to the first group. Specifically, 46% of the participants were high A1 sublevel, 23% of them were medium A1 sublevel and 31% were low A1.



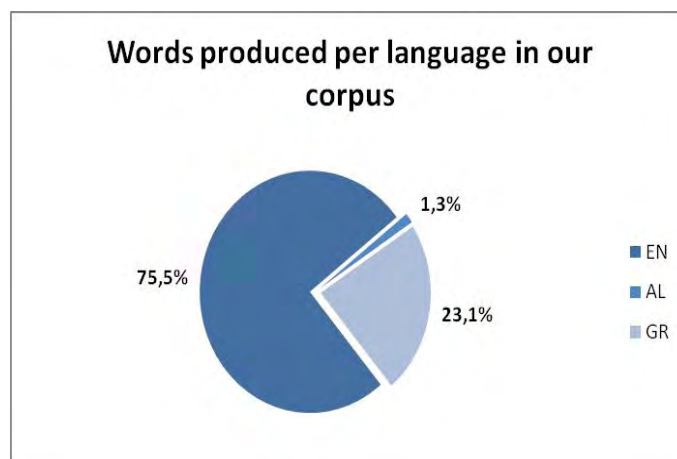
**Figure 5.29.:** the time the participants had been speaking their L2 in relation with their L3 proficiency

The statistical test indicated that it was not a statistically significant finding: Freeman-Halton Test,  $p = 0.810$ . Therefore, this indicates that the children who had stated that they were in contact with their L2 for a shorter period of time were also younger at the same time. Age was found to be a significant factor within our research too.

## 5.2. Description of the corpus: the texts the children produced

### 5.2.1. General description of the corpus

There were forty nine texts produced in total, i.e. the number is equivalent to the number of the participants. In the total of the forty nine texts there were 8993 words, of which 6793 are English (75, 5%), 2080 are Greek (23, 1%), while only 120 words (1, 3%) are Albanian (Figure 5.30 below).



**Figure 5.30.:** depiction of the percentages of the words per language produced in the corpus

#### Further description of the corpus per languages:

1. The smallest text in our corpus consisted of 93 words, the largest text consisted of 279 words and the mean length was 184 words (see Table 5.2 below).
2. The minimum number of *English words* in the texts was 28 words and the maximum number was 251, while the mean number was 138,6 words (Table 5.2). The median value of the English words was 150,00, i.e. 50% of the texts consisted of 150 or more English words (the target language of the narration).
3. There are texts that did not contain any *Greek words*. The maximum number of Greek words was 173 and the mean number was 42,5 words (Table 5.2). The median value of Greek words was 27,00, i.e. 50% of the texts consisted of 27 or more Greek words.

4. There are texts that did not contain any *Albanian words*. The maximum number of Albanian words was 64, while the mean number was 2,4 words (Table 5.2). The median value was 0,00, which means that 50% of the texts did not contain any Albanian words.
5. Regarding the sentences produced their total number was 875 sentences in a sum of 49 texts (the entire corpus) (Table 5.2).
6. The minimum number of the sentences was 8, the maximum number was 27, while the mean value was 17,9 sentences. The median value was 19,00 which means that 50% of the texts included 19 sentences or more (Table 5.3 below).

**Table 5.2.:** Measures of central tendency and dispersion of the number of words of each language

Words	Minimum	Median	Maximum	Mean	Std Deviation	Sum	% of words in corpus
EN	28,00	150,00	251,00	138,63	58,48	6793	75,5
GR	0,00	27,00	173,00	42,45	43,94	2080	23,1
AL	0,00	0,00	64,00	2,45	10,31	120	120
Words(all)	93,00	186,00	279,00	183,53	43,41	8993	100

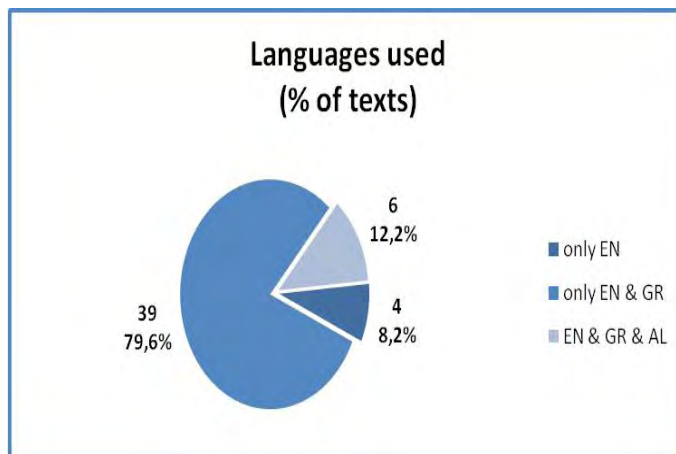
**Table 5.3.:** Measures of central tendency and dispersion of the number of sentences

	Minimum	Maximum	Median	Mean	Standard deviation	Sum
Sentences	8,00	27,00	19,00	17,86	4,68	875

#### 5.2.1.1. Code switching and code mixing in our corpus

Most of the children (79,6%) used English and Greek during their narrations while 6 children (12,2%) used English, Greek and Albanian in the same sentences. There were 4 children (8,2%) that used only English (the target language) during their narration (Figure 5.31 below).





**Figure 5.31.:** depiction of the language usage during the narrations

As far as the target language, the code switches and the code mixes are concerned our participants produced the following combinations of languages:

1. English (target language),
2. Greek switches (full utterances in Greek),
3. Albanian switches (full utterances in Albanian),
4. English- Greek code mixes,
5. English- Albanian code mixes,
6. Greek – Albanian code mixes,
7. Greek – Albanian – English code mixes.

### Target Language production

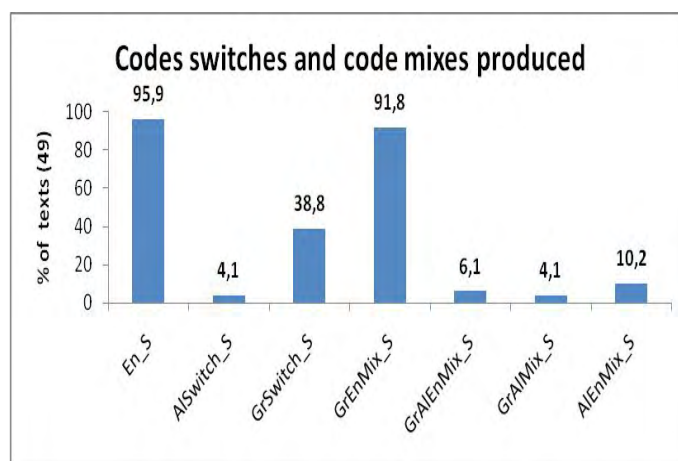
As depicted in Figure 5.32 below, the vast majority of the children (95,9%) that participated in our study produced English sentences (target language). In fact only two children out of the forty nine did not produce any English sentences at all.

### Code switches

A considerable number of the children (38,8%) produced Greek code switches, whereas only 4,1% of the children produced Albanian code switches (Figure 5.32).

### Code mixes

As depicted in Figure 5.32 below, the majority of the children (91,8%) produced English- Greek code mixes. Also, fewer children (10,2%) produced English- Albanian code mixes while even fewer of our participants (6,1%) produced English- Greek- Albanian code mixes. There was a 4,1% of the children that produced Greek- Albanian code mixes (none of which though was a target language).



**Figure 5.32.:** depiction of the code switches and code mixes our participants produced

**On a sentence level** the sentences produced by our participants are as follows (Figure 5.33 for a percentage depiction and Table 5.3 for a detailed analysis per number of sentences):

#### Target language production

Out of a total of 875 sentences of our corpus about half of them (50,9%) are English.

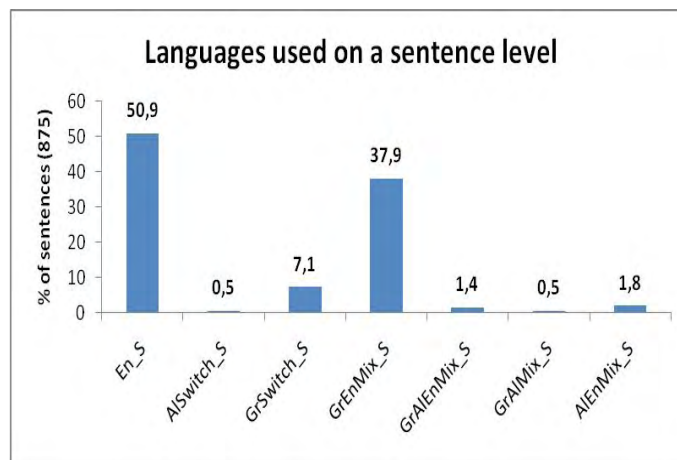
#### Code switches

A few sentences were Greek code switches (7,1%). Only 4 out of 875 sentences (0,5%) were Albanian switches.

#### Code mixes

A considerable number of the sentences (37,9%) are English-Greek code mixes. Other combinations of languages used in the same sentences are rather scarce. Specifically, there are only 12 sentences (1,4%) that English- Greek-Albanian are used (all of the three languages the children own). Also, there are 4 sentences in

our corpus using both Greek and Albanian and there are 16 sentences (1,8%) using English and Albanian (Figure 5.33 below).



**Figure 5.33.:** depiction of the percentage of the languages used on a *sentence* level

**On a words level the languages used are as follows (Figure 5.34 for a percentage depiction and Table 5.3 for a detailed analysis per number of words):**

The distribution according to the words used is similar to the one that we saw on the sentence level.

### Target language

Specifically, out of a total of 8993 words of our corpus about half of them (49,7%) are located in English sentences (target language).

### Code switches

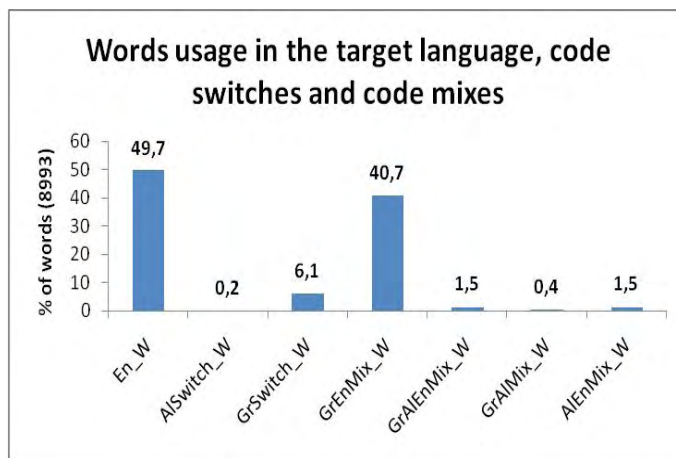
The higher usage of a specific language other than the target one was found with Greek words; 6,1% (n: 549) of the words of our corpus are in Greek switches. Albanian words in Albanian switches was rather low, i.e. 0.2%, (18 words).

### Code mixes

With regard to the usage of words in code mixes, the majority of the words, 40,7% (n: 3663), are found in English-Greek code mixes.

In the English-Greek-Albanian code mixes we observe a significantly limited usage of words, i.e. 1,5% (n:131). The exact picture is seen with English-Albanian code mixes too.

In Greek-Albanian code mixes (none of which a target language) the percentage of words used is even lower, i.e. 0,4% (n: 35).



**Figure 5.34.:** depiction of the word distribution in sentences produced in the target language (English), in code switched and in code mixes

The way the corpus is analysed in terms of texts, sentences and words is shown in Table 5.4 below:

**Table 5.4.:** Analysis of the corpus in terms of texts, sentences and words

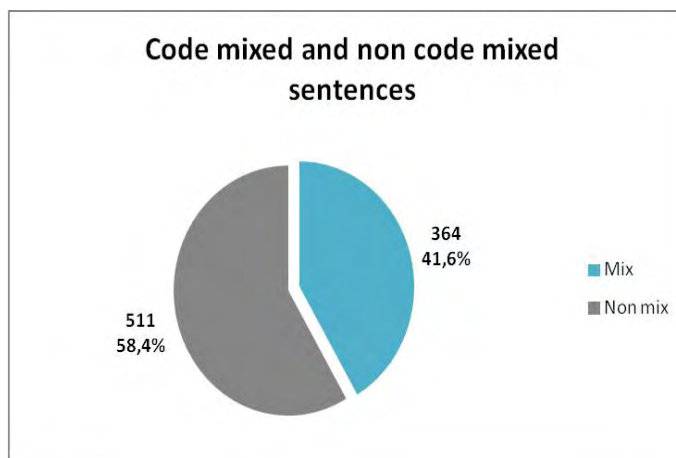
	Texts	% Texts	Sentences	% Sentences	Words	% Words
English (target)	47	95,9	445	50,9	4466	49,7
Albanian Switches	2	4,1	4	0,5	18	0,2
Greek Switches	19	38,8	62	7,1	549	6,1
Greek/English-Mixes	45	91,8	332	37,9	3663	40,7
Gr/Al/En/Mixes	3	6,1	12	1,4	131	1,5
Gr/Al Mixes	2	4,1	4	0,5	35	0,4
Al/En Mixes	5	10,2	16	1,8	131	1,5
Total	49	100,0	875	100,0	8993	100,0

### 5.2.1.2. Code mixes and their distribution of languages

#### A) Code mixed and non code mixed sentences within our entire corpus.

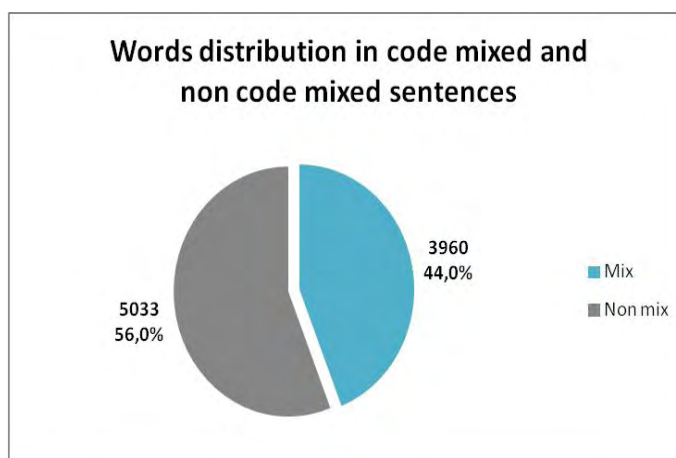
Code mixes are actually present in 45 of the 49 texts of our corpus. This means that, by effect, 45 out of 49 children of our study code mixed during their

narrations. There are totally 364 code mixed sentences (41,6%) in our corpus which consists of 875 sentences (Figure 5.35 below).



**Figure 5.35.:** depiction of the percentage of the code mixed and non code mixed sentences of our corpus

These code mixed sentences consist of 3960 words (44%) of the 8993 words of our corpus (Figure 5.36 below).

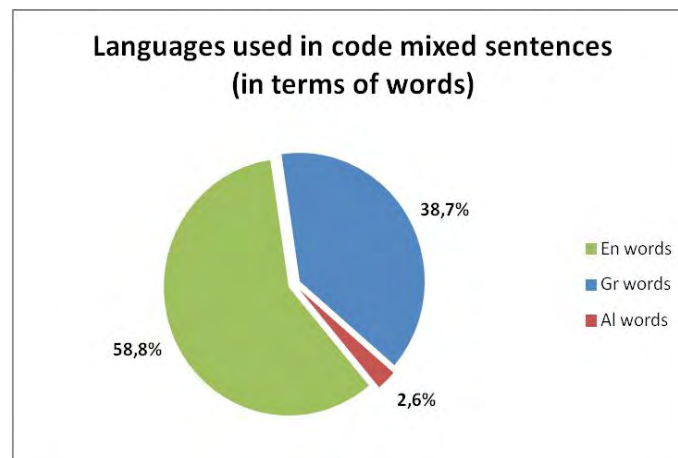


**Figure 5.36.:** depiction of word distribution in code mixed and non node mixed sentences of our corpus

**B) Participation of the three languages within the code mixed sentences.**

The majority of the words in the code mixed sentences are English (58,8%), which was the target language. Fewer words are Greek (38,7%), while only 2,6% are

Albanian (Figure 5.37). Therefore, Greek either L1 or an L2 takes up more space within the code mixed sentences than Albanian.



**Figure 5.37.:** use of the languages in the code mixed sentences in terms of words

**C) There are four different sets of code mixed sentences in our corpus.**

The code mixed and non code mixed sentences within our entire corpus are:

1. English-Greek code mixes (45 texts, 332 sentences, 3663 words),
2. English-Albanian code mixes (3 texts, 12 sentences, 131 words),
3. Greek - Albanian code mixes (2 texts, 4 sentences, 35 words),
4. English- Greek- Albanian code mixes (5 texts, 16 sentences, 131 words).

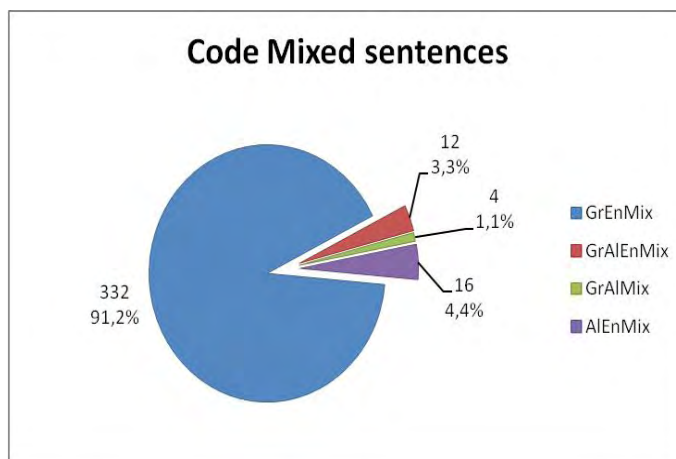
These data are presented in Table 5.5 below:

**Table 5.5.:** Analysis of the code mixed sentences

	Texts	Sentences	Words
Gr/En Mixes	45	332	3663
Gr/Al/En Mixes	3	12	131
Gr/Al Mixes	2	4	35
Al/En Mixes	5	16	131
Total mixes	45	364	3960

It is pointed out that the *vast majority of the code mixes are English – Greek ones (91,2%)* while the rest of the set of the languages located in our corpus are more rare to find (Figure 5.38 below).

In Figure 5.38 we see the kinds of sets of languages found in our corpus and the percentages of their participation. The percentages below are measured on the basis of the total of the *code mixed sentences* (not on the total of the sentences of the corpus as this was already previously presented in 3.2.1.).

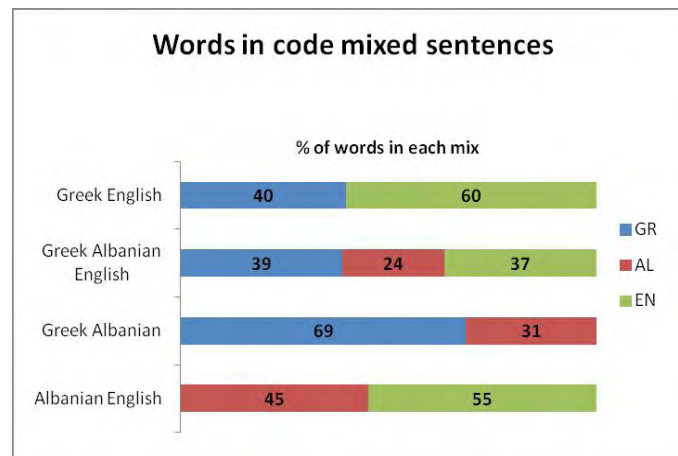


**Figure 5.38.:** Categories of code mixed sentences (number of the sentences)

In Table 5.6 below we can see more analytically the sets of code mixes and the analogy of the words in code mixed sentences (also depicted in Figure 5.39 below).

**Table 5.6.:** The percentage of words in each set of code mixed sentences

	Total words	English words	Greek words	Albanian words	% English words	% Greek words	% Albanian words
Gr/ En Mixes	3663	2207	1456		60,3	39,7	
Gr/Al/En/ Mixes	131	48	51	32	36,6	38,9	24,4
Gr/Al Mixes	35		24	11		68,6	31,4
Al/ En Mixes	131	72		59	55,0		45,0
Total mixes	3960	2327	1531	102	58,8	38,7	2,6



**Figure 5.39.:** The percentage of words in each set of code mixed sentences

In Greek- English code mixed sentences (which is the vast majority of the code mixes) English language is outperforming the Greek one since it is the target language of the narration (60% - 40% respectively).

In the Greek- Albanian- English code mixes, the percentage of English and Greek words is 37% and 39% respectively, while Albanian words are 24% of the **L1/L2 Transfer** total words of the sentences.

In the Greek – Albanian code mixes (none of which is a target language of the narration) the majority of the words used (69%) are Greek, while in the Albanian – English code mixes the majority of the words (55%) are English.

### 5.3. The transfer of L1 and/or L2 during narration in L3 in our corpus

We aimed to investigate the following issues:

1. The degree of transfer of our participants' L1 and/or L2 during narrating in their L3 and the factors that may have influenced the transfer from a particular language (L1 or L2).
2. Greek (the dominant language of Greece) as a source of transfer and the factors that may have influenced its presence during narration in L3.



3. Whether cross-linguistic influence affected Content and Function words.

### **5.3.1. The degree of transfer of our participants' L1 and/or L2 during narrating in their L3 and the factors that may have influenced the transfer from a particular language (L1 or L2)**

In order to determine the degree of the participants' L1 or L2 presence we looked into several factors that may have affected this issue. The factors that we examined were: the participants' age (two groups, i.e. 9-11 years old and 12 years old children). Their level of proficiency (it is looked into by means of A1 high, medium and low level as so far described in our study), their L1 (Greek or Albanian) and the frequency of use of their L1 (i.e. every day, often, rarely), their L2 (Greek or Albanian) and the frequency of use of their L2 (i.e. every day, often, rarely).

For each one of the children that took part in the study we recorded the number of words that he/ she produced as well as how many of them were in their L1, their L2 or their L3. Then, the following three variants were produced (values for each one of the children). These variants are given in percentages and their values are from 0- 100:

1. The transfer of L1 which is the percentage of the words produced in their L1 out of the total words generated in our corpus.
2. The transfer of L2 which is the percentage of the words produced in their L2 out of the total words generated in our corpus.
3. The transfer of L1/L2 which is the percentage of the words produced in their L1/L2 out of the total words generated in our corpus.

Also, the main effects were always tested. Two-way interaction effects were only tested when there was sufficient data. Therefore, we came up with the following descriptive statistics per question stated:

**Question 1: Is the transfer of L1/ L2 affected by age and the level of proficiency of the children?**

The two variants of age (two separate groups) were analysed in terms of their L3 proficiency (three different levels of A1). The independent ANOVA performed regarding the effect of age and L3 proficiency on the degree of L1/L2 transfer revealed the following results (Table 5.7).

**Table 5.7.:** Summary results of 2 (age) x 3 (L3 proficiency) independent ANOVA (DV: degree of L1/L2 transfer)

L1/L2 transfer		Number of subjects	M	SD	df	F-ratio	p-value
Age	9-11 years old	22	43.6	25.09	1	11.97	.001*
	12 years old	27	10.8	12.35			
L3 proficiency	A1 high level	21	7.6	9.71	2	7.22	.002*
	A1 medium level	11	32.4	22.72			
	A1 low level	17	43.2	25.75			
Age x L3 proficiency					2	1.90	.162

\*Indicates statistical significance

The results show that there is a significant effect of the age factor on the degree of L1/ L2 transfer,  $F(1, 43) = 11.97$ ,  $p < 0.01$ .

The degree of L1/L2 transfer is greater for the children aged between 9-11 years old ( $M = 43.6$ ,  $SD = 25.09$ ) than for the 12-year-old children ( $M = 10.8$ ,  $SD = 12.35$ ).

Moreover, there is a significant main effect of the L3 proficiency on the degree of L1/L2 transfer,  $F(2, 43) = 7.22$ ,  $p < 0.01$ .

Post-hoc t-tests (using the Bonferroni correction, i.e. the accepted significance level is set to be 0.0167) revealed statistically significant difference of the degree of L1/L2 transfer between A1 High level ( $M = 7.6$ ,  $SD = 9.71$ ) and A1 Medium level ( $M = 32.4$ ,  $SD = 22.72$ ):  $t(11.95) = -3.459$ ,  $p < 0.01$ .

Also, the difference between A1 High level and A1 Low level was found to be statistically significant ( $M = 43.2$ ,  $SD = 25.75$ ):  $t(19.688) = -5.396$ ,  $p < 0.001$ .

On the other hand, the difference between A1 Medium level and A1 Low level in terms of the transfer of L1/ L2 was not found to be statistically significant:  $t(26) = -1.131$ ,  $p = 0.268$ .

Finally, there is a non-significant interaction effect between age and L3 proficiency on the degree of L1/L2 transfer:  $F(2, 43) = 1.9$ ,  $p = 0.162$ , since the relation

of age and L3 proficiency is not a linear one.

**Question 2: Is L1 transfer affected by age, the level of L3 proficiency, their L1 (Greek and Albanian) and their frequency of use of their L1?**

In order to examine the effect of age, L3 proficiency, L1 language and L1 frequency of use on the degree of L1 transfer, the 2 (age) x 3 (L3 proficiency) x 2 (L1 language) x 3 (frequency of L1 use) independent ANOVA was performed (Table 5.8 below).

There is a significant effect of the L1 language on the degree of L1 transfer:  $F(1, 36) = 13.411, p < 0.001$ . The children that have Greek as their L1 transferred from their L1 in a greater extent ( $M = 22.4, SD = 24.5$ ) while narrating in their L3 in comparison to the degree of L1 transferred by those having Albanian as their L1 ( $M = 0.7, SD = 2.86$ ).

The main effect of age [ $F(1, 36) = 1.222, p = 0.276$ ], L3 proficiency [ $F(2, 36) = 2.574, p = 0.09$ ] and L1 frequency of use [ $F(2, 36) = 0.396, p = 0.676$ ] are non-significant as well as all the two-way interaction effects tested.

**Table 5.8.:** Summary results of 2 (age) x 3 (L3 proficiency) x 2 (L1 language) x 3 (frequency of L1 use) independent ANOVA (DV: degree of L1 transfer)

L1 transfer		Number of subjects	M	SD	df	F-ratio	p-value
Age	9-11 years old	22	24.3	26.96	1	1.222	.276
	12 years old	27	5.6	11.54			
L3 proficiency	A1 high level	21	2.6	4.15	2		.090
	A1 medium level	11	15.8	21.87			
	A1 low level	17	26.9	27.67			
L1 language	Albanian	19	.7	2.86	1		.001*
	Greek	30	22.4	24.45			
Frequency of L1 use	Everyday	41	14.6	21.60	2		.676
	Often	4	4.2	8.46			
	Rarely	3	.3	.56			
Age x L1 language					1	2.223	.145
L3 proficiency x L1 language					2	.853	.435
Age x L3 proficiency					2	2.164	.130

\*Indicates statistical significance

**Question 3: Is L2 transfer affected by age, level of L3 proficiency, the L2 itself (Greek/ Albanian) and its frequency of use?**

In order to examine the effect of age, L3 proficiency, L2 language and L2 frequency of use on the degree of L2 transfer, A 2 (age) x 3 (L3 proficiency) x 2 (L2

language) x 3 (frequency of L2 use) independent ANOVA was performed (Table 5.9 below).

There is a significant effect of the L2 language on the degree of L2 transfer:  $F(1, 39) = 19.393, p < 0.001$ . The children that have Greek as their L2 transfer from their L2 in a greater extent ( $M = 27.4, SD = 24.77$ ) while narrating in their L3 in comparison to the degree of L2 transferred by those who have Albanian as their L2 ( $M = 1.5, SD = 6.32$ ). Therefore, the L2 “bridge language” role that research has so far indicated is only applicable to the L1 Albanian participants of our research; they mostly transfer from their L2 Greek.

The main effect of age [ $F(1, 39) = 3.764, p = 0.06$ ], L3 proficiency [ $F(2, 39) = 1.805, p = 0.178$ ] and frequency of L2 use [ $F(2, 39) = 0.024, p = 0.976$ ] are non-significant as well as all the two-way interaction effect of age and L3 proficiency [ $F(2, 39) = 0.642, p = 0.532$ ], (Table 5.9 below).

**Table 5.9.:** Summary results of 2 (age) x 3 (L3 proficiency) x 2 (L2 language) x 3 (frequency of L2 use) independent ANOVA (DV: degree of L2 transfer)

	L2 transfer	Number of subjects	M	SD	df	F-ratio	p-value
Age	9-11 years old	22	19.3	27.19	1	3.764	.06
	12 years old	27	5.2	8.93			
L3 proficiency	A1 high level	21	5.0	10.22	2	1.805	.178
	A1 medium level	11	16.6	22.74			
	A1 low level	17	16.3	26.43			
L2 language	Albanian	30	1.5	6.32	1	19.393	<.001*
	Greek	19	27.4	24.77			
Frequency of L2 use	Everyday	27	20.5	24.08	2	.024	.976
	Often	13	.4	1.57			
	Rarely	8	.5	1.01			
Age x L3 proficiency					2	.642	.532

\*Indicates statistical significance

**Question 4: Is L1 or L2 the main supplier during narrating in their L3? Are the following factors (i.e. age, level of L3 proficiency, relative frequency of use of L1 and L2 and their specific L1, Greek/ Albanian) influencing the degree of transfer by the children’s L1 and L2?**

Regarding the relative frequency of use of L1 and L2 a new variable was created that was formed based on the answers the children gave on how often they

use these two languages (i.e. every day, often, rarely according to the questionnaire they filled in). There were three different values: “more frequent use of L1”, “same frequency of use of L1 and L2”, “more frequent use of L2”.

In order to assess the effect of age, L3 proficiency, relative use of L1/L2, L1 language and language of transfer on the amount of language transfer, a 2 (age) x 3 (L3 proficiency) x 3 (relative use of L1/L2) x 2 (L1) x 2 (Language of transfer) mixed-design ANOVA was performed and the results are reported in Table 5.10 below.

**Table 5.10.:** Summary results of 2 (age) x 3 (L3 proficiency) x 3 (relative use of L1/L2) x 2 (L1 language) x 2 (Language of transfer) mixed-design ANOVA (DV: degree of transferred language)

		Number of subjects	L1 Transfer		L2 Transfer		Difference		df	F-ratio	p-value
			M	SD	M	SD	M	SD			
Age		49	14.0	21.88	11.5	20.41			1	0.012	0.915
	9-11 years old	22	24.3	26.96	19.3	27.19	5.1	47.99	1	0.062	0.805
	12 years old	27	5.6	11.54	5.2	8.93	.4	16.52			
L3 Proficiency	A1 high level	21	2.6	4.15	5.0	10.22	-2.4	12.20	2	0.449	0.641
	A1 medium level	11	15.8	21.87	16.6	22.74	-8	38.40			
	A1 low level	17	26.9	27.67	16.3	26.43	10.7	47.59			
L1 language	Albanian	19	.7	2.86	27.4	24.77	-26.6	24.96	1	18.203	<0.001*
	Greek	30	22.4	24.45	1.5	6.32	21.0	25.01			
Relative use of L1 & L2	freq L1=freq L2	20	7.9	13.70	23.0	26.15	-15.1	34.15	2	1.059	0.356
	freq L1>freq L2	21	21.0	25.83	.5	1.35	20.5	24.95			
	freq L1<freq L2	7	2.6	6.34	13.3	16.26	-10.8	19.58			

\*Indicates statistical significance

The degree of L1 transfer ( $M = 14, SD = 21.88$ ) and L2 transfer ( $M = 11.5, SD = 20.41$ ) do not significantly differ, if no other factor (except for the language of transfer) is taken into account:  $F(1, 41) = 0.12, p = 0.915$ .

**There is a statistically significant effect of L1 language on the difference between L1 and L2 transfer:**  $F(1, 41) = 18.203, p < 0.001$  (see Table 5.12). The mean degree of L1 transfer ( $M = 22.4, SD = 24.45$ ) is greater than the mean degree of L2 transfer ( $M = 1.5, SD = 6.32$ ) for the children that have Greek as L1 language, while the mean degree of L2 transfer ( $M = 27.4, SD = 24.77$ ) is greater than the mean degree of L1 transfer ( $M = 0.7, SD = 2.86$ ) for children that have Albanian as L1. *Therefore, L1 Albanian speakers transferred more from their L2 (Greek) than from their L1.*

On the other hand, there is not a significant effect of age [ $F(1, 41) = 0.062, p = 0.805$ ], L3 proficiency [ $F(2, 41) = 0.449, p = 0.641$ ], and relative use of L1/L2 [ $F(2, 41) = 1.059, p = 0.356$ ] on the difference between L1 and L2 transfer (Table 5.10).

**Summing up of the results to the questions stated:**

1. **As far as age and L3 proficiency is concerned we found that there is not a significant interaction effect of the two factors in terms of L1 and L2 transfer. This is attested to the non-linear relation of these two variables.**
2. **Greek as an L1 is transferred more in comparison to Albanian as an L1.**
3. **Greek as an L2 is transferred more in comparison to Albanian as an L2.**
4. **Those children that their L1 is Greek transfer more from their L1 than from their L2 (Albanian). On the other hand, the children that their L1 is Albanian transfer more from their L2 (Greek) than from their L1.**

While there seems to be a resemblance amongst results of questions 2 and 3 with those of question 4, this is not the case. In question 2 and 3 we examined the transfer of L1 and the transfer of L2 separately. In question 4 we examined the transfer of L1 and L2 comparatively. To make it more clear, the results to questions 2 and 3 show us that Greek is transferred more than Albanian, either as an L1 or an L2. However, the results in question 4 show us that children whose L1 is Greek transfer more from their L1, whereas children whose L1 is Albanian transfer more from their L2 (Greek).

### **5.3.2. Greek (the community's language) as a source of transfer and the factors that may have influenced its presence during narration in L3.**

We examined some further issues regarding Greek, which is the main language that our participants transferred from during narrating in their L3. For this matter

the following variables were created and all of them are in percentages (i.e. their values are from 0 to 100). We then went on to *see whether these variables are affected by the factors of age, the level of L3 proficiency and their L1*. We excluded the factor of the frequency of use of Greek because all of the children (apart from one) had stated that they use it on an everyday basis.

**Transfer from Greek:** the number of Greek words (for each one of the children) that are transferred while narrating in their L3. This is calculated on the total number of words produced in our corpus.

**Transfer from Greek in code switches:** the number of Greek words which are transferred in Greek code switches while narrating in their L3. This is calculated on the total number of words produced in our corpus.

**Transfer from Greek in code mixes:** the number of Greek words which are transferred which are transferred in code mixes while narrating in their L3. This is calculated on the total number of words produced in our corpus.

#### **5.3.2.1. Transfer from Greek; the effect of age, their L1 and their L3 proficiency.**

In order to test the effect of age, L3 proficiency and L1 language on the degree of Greek words transferred while narrating in their L3 we performed A 2(age) x 3(L3 proficiency) x 2 (L1) independent ANOVA (Table 5.11 below).

*The main effects of age* [ $F(1, 39) = 6.812, p < 0.02$ ], *L3 proficiency* [ $F(2, 39) = 7.89, p < 0.001$ ] and *L1 language* [ $F(1, 39) = 4.168, p < 0.05$ ] are statistically significant. **The younger children transfer more Greek words while their L3 production** ( $M = 41.1, SD = 25.43$ ) **than the 12-year-old children** ( $M = 10.8, SD = 12.37$ ). This will be further commented in the discussion of results chapter.

**The children that have Albanian as their L1 transfer from Greek in a greater degree during their L3 production** ( $M = 27.4, SD = 24.77$ ) **compared to the children that have Greek as their L1** ( $M = 22.4, SD = 24.45$ ).

Post-hoc t-tests (using the Bonferroni correction, i.e. the accepted significance level is set to be 0.0167) revealed **statistically significant difference of the degree of Greek transfer between A1 High level** ( $M=7.6, SD=9.73$ ) and **A1 Medium level** ( $M = 31, SD = 22.31$ ) :  $t(12.036) = -3,328, p < 0.01$ . **Also, there is a statistically significant difference between A1 High level and A1**

**Low level** ( $M = 40.7SD = 25.99$ ) :  $t(19.639) = -4.988$ ,  $p < 0.001$ . However, the difference between A1 Medium level and A1 Low level in terms of the transfer from Greek was not found to be statistically significant:  $t(23.806) = -1.053$ ,  $p = 0.303$ . Moreover, all two-way interaction effects were not found to be statistically significant:

**Table 5.11.:** Summary results of 2(age) x 3(L3 proficiency) x 2 (L1 language) independent ANOVA (DV: degree of Greek transfer).

	Greek Transfer	Number of Subjects	M	SD	df	F-ratio	p-value
Age	9-11 years old	22	41.0	25.43	1	6.812	.013*
	12 years old	27	10.8	12.37			
L3 proficiency	A1 high level	21	7.6	9.74	2	7.890	.001*
	A1 medium level	11	31.0	22.31			
	A1 low level	17	40.7	25.99			
L1 language	Albanian	19	27.4	24.77	1	4.168	.048*
	Greek	30	22.4	24.45			
Age x L1 language					1	.003	.960
Age x L3 proficiency					2	2.106	.135
L3 proficiency x L1 language					2	.360	.700

\*Indicates statistical significance

### 5.3.2.2. Transfer from Greek in code switches; the effect of age, L1 and L3 proficiency

In order to test the effect of age, L3 proficiency and L1 language on the degree of Greek words in Greek code switches we performed: A 2(age) x 3(L3 proficiency) x 2 (L1) independent ANOVA. It was found that all main and two-way interaction effects are not statistically significant. That is, the amount of Greek transferred is not affected by any of these factors (Table 5.12 below).



**Table 5.12.:** Summary results of 2(age) x 3(L3 proficiency) x 2 (L1 language) independent ANOVA (DV: degree of Greek in code switches)

Greek transfer in Greek code switches		Number of subjects	M	SD	df	F-ratio	p-value
Age	9-11 years old	22	13.4	16.42	1	2.646	.112
	12 years old	27	1.7	4.72			
L3 proficiency	A1 high level	21	.6	2.08	2	2.434	.101
	A1 medium level	11	12.3	15.73			
	A1 low level	17	11.3	15.52			
L1 language	Albanian	19	4.0	6.71	1	2.022	.163
	Greek	30	8.8	15.35			
Age x L1 language					1	1.539	.222
Age x L3 proficiency					2	1.300	.284
L3 proficiency x L1 language					2	.965	.390

\*Indicates statistical significance

### 5.3.2.3. Transfer from Greek in code mixes; the effect of age, L1 and L3 proficiency

In order to test the effect of age, L3 proficiency and L1 language on the degree of Greek words which are transferred in code mixes while narrating in their L3 we performed A 2(age) x 3(L3 proficiency) x 2 (L1) independent ANOVA and the results are presented in Table 5.13.

**The main effects of age** [ $F(1, 39) = 4.445, p < 0.05$ ], **L3 proficiency** [ $F(2, 39) = 6.737, p < 0.01$ ] **and L1 language** [ $F(1, 39) = 15.023, p < 0.001$ ] **are statistically significant.** Also, **the younger children transferred more Greek words in code mixes that contain Greek while narrating in their L3** ( $M = 27.6, SD = 21.21$ ) **than the 12-year-old children** ( $M = 9.1, SD = 9.51$ ). Therefore, the younger ones had not acquired sufficiently their L3 and had to resort to another language in a greater extent than the older ones.

**The children that have Albanian as their L1 transferred a greater number of Greek** ( $M = 23.3, SD = 22.39$ ) **into code mixed sentences** that contained Greek while producing their L3 compared to the corresponding number transferred by the children with Greek as their L1 language ( $M = 13.7, SD = 14.22$ ).

Post-hoc t-tests (using the Bonferroni correction, i.e. the accepted significance level is set to be 0.0167) **revealed statistically significant difference of the number of Greek transfer between A1 High level** ( $M = 7, SD = 8.02$ ) **and A1 Medium level** ( $M = 18.7, SD = 19.17$ ) :  $t(30) = -2,457, p < 0.05$ .

Also, there is a statistically significant difference between A1 High level and A1 Low level ( $M = 29.4, SD = 19.76$ ) :  $t(20.258) = -4.399, p < 0.001$ . However, the difference between A1 Medium level and A1 Low level in terms of the transfer of Greek words is not statistically significant:  $t(26) = -1.413, p = 0.169$ . Also, all two-way interaction effects were not found to be statistically significant.

**Table 5.13.:** Summary results of 2(age) x 3(L3 proficiency) x 2 (L1 language) independent ANOVA (DV: degree of Greek in code mixes)

Greek transfer in Greek code mixes		Number of subjects	M	SD	df	F-ratio	p-value
Age	9-11 years old	22	27.6	21.21	1	4.445	.041*
	12 years old	27	9.1	9.51			
L3 proficiency	A1 high level	21	7.0	8.02	2	6.737	.003*
	A1 medium level	11	18.7	19.17			
	A1 low level	17	29.4	19.76			
L1 language	Albanian	19	23.3	22.39	1	15.023	<0.001*
	Greek	30	13.7	14.22			
Age x L1 language					1	1.192	.282
Age x L3 proficiency					2	.542	.586
L3 proficiency x L1 language					2	1.297	.285

\*Indicates statistical significance

#### 5.3.2.4. Greek in code switches and in code mixes

We also wanted to see if *the difference in terms of the transfer of Greek words in Greek code switches* and code mixes is affected by age, L3 proficiency and the children's L1 language.

Moreover, in order to assess the effect of age, L3 proficiency, L1 language and mode of transfer (2 levels: code switching, code mixing) on the degree of Greek transfer, a 2 (age) x3 (L3 proficiency) x 2 (L1) x 2 (mode of transfer) mixed-design ANOVA was performed and the results are reported below.

**Table 5.14.:** Summary results of a 2 (age) x3 (L3 proficiency) x 2 (L1 language) x 2 (mode of transfer) mixed-design ANOVA (DV: degree of Greek transfer).

		Number of subjects	Greek in code switches		Greek transfer in code mixes		Difference		df	F-ratio	p-value
			M	SD	M	SD	M	SD			
Age	9-11 years old	49	6.9	12.84	17.4	18.24	-10.5	19.94	1	20.018	<0.001*
	12 years old	22	13.4	16.42	27.6	21.21	-14.2	28.15	1	0.007	0.933
	12 years old	27	1.7	4.72	9.1	9.51	-7.4	8.52			
L3 proficiency	A1 high level	21	.6	2.08	7.0	8.02	-6.4	6.51	2	3.160	0.052
	A1 medium level	11	12.3	15.73	18.7	19.17	-6.4	27.07			
	A1 low level	17	11.3	15.52	29.4	19.76	-18.1	24.24			
L1 language	Albanian	19	4.0	6.71	23.3	22.39	-19.3	21.88	1	11.259	0.002*
	Greek	30	8.8	15.35	13.7	14.22	-4.9	16.67			

\*Indicates statistical significance

The degree of Greek transfer in code switches ( $M = 6.9, SD = 12.84$ ) and in code mixes ( $M = 17.4, SD = 18.24$ ) significantly differ, if no other factor (except for the specific language of transfer) is taken into account:  $F(1, 41) = 20.018, p < 0.001$ .

Age does not have a significant effect on the difference of the amount of Greek transferred in Greek code switches and code mixed sentences that contain Greek [ $F = (1, 41) = 0.007, p = 0.933$ ].

L3 proficiency effect is also non-significant [ $F(2, 41) = 3.16, p = 0.052$ ]. However, **the child's L1 has a significant effect:**  $F(1, 41) = 11.259, p < 0.01$ . *The children that have Albanian as their L1 language transfer more Greek words into code mixes that contain Greek than in Greek code switches.* On the other hand, for the children that have Greek as their L1, the amount of Greek transferred into Greek switches does not significantly differ from the amount of Greek transferred in code mixes.

Therefore, we observe that the degree of Greek words that is transferred in code switches is not affected by age, the level of L3 proficiency and the child's L1. *On the other hand, the degree of transfer of Greek words in English – Greek code mixes is affected from all of these three factors (i.e. age, the level of L3 proficiency and the child's L1).*

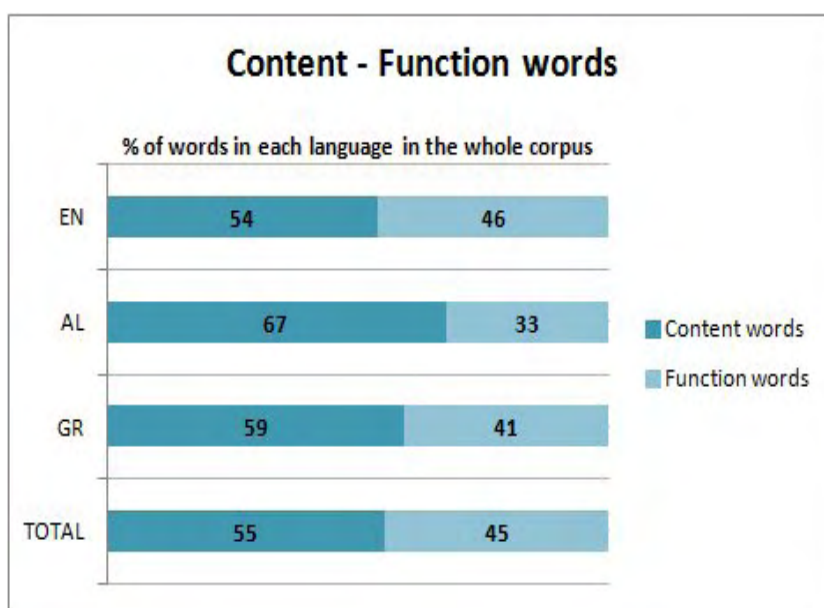
By comparing the transfer of Greek in code switches and code mixes we observe that the children that their L1 is Albanian transfer more Greek words in code mixes than in code switches, while this is not the case with children that their L1 is Greek (the difference that exists is not statistically significant though).

Also, if we do not take into consideration any factor at all then we deduct

that Greek is generally more present in English- Greek code mixes than in Greek code switches.

### 5.3.3. The effect of cross linguistic influence on Content and Function words; their ratio and the effect of the L1

To begin with, we wanted to see what the percentages of the content and function words in each one of the three languages in our entire corpus (Figure 5.40). We found out that as far as the English language is concerned, content words were more than the function ones, which measured to 54% and 46% respectively. The Albanian content words were again more compared to the function ones, and in fact the majority of the Albanian words were Content ones (68%). The Greek content words were again more than the function ones, although their difference was not so great (59% to 41% respectively). As far as the total words found in our corpus, our results showed that the total content words outperformed the total function words and their difference was quite high (55% to 45% respectively).

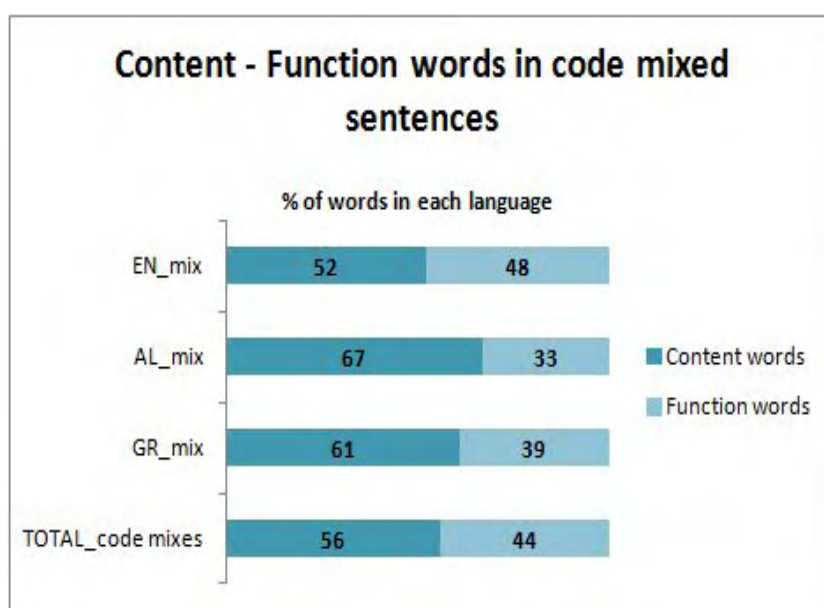


**Figure 5.40.:** depiction of the percentages of the content and function words in each language in the whole corpus

We then proceeded to see the distribution of content and function words within the code mixed sentences. As seen in figure 5.41 below, we immediately observe that Content and Function words were approximately the same in the to-

tal of the texts and at the same time in the code mixed sentences that contained English. The code mixed sentences that contained Albanian showed a different distribution since the percentage of the content words was higher compared to that of the Function words (67% and 33% respectively). The same differentiation was found with code mixes that contained Greek since the percentage of Content words outperformed that of the Function words (61% and 39% respectively).

This finding shows us that the analogy of Content and Function words seems to remain the same in the texts produced. More specifically, the parts of speech of each language retain the same “space” in the children’s narrations even in the code mixed sentences.

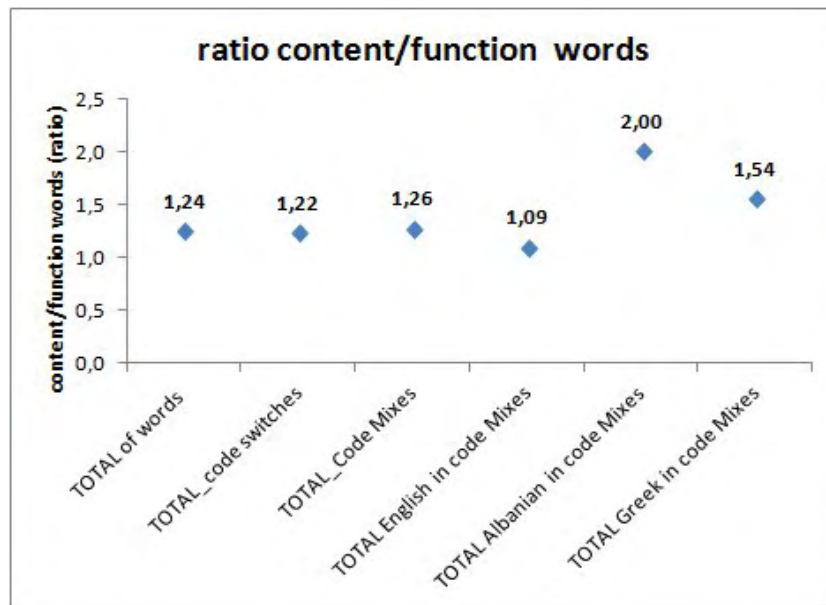


**Figure 5.41.:** distribution of the Content and Function words within the code mixed sentences and in the total of the code mixes produced in our corpus

When we had code mixed sentences and Albanian language was used in it, Content words were more than Function words. This outperformance of Content words compared to Function words was found in such a greater ratio only with Albanian and Greek (2 and 1,54 respectively) which are highly inflected languages – although the children borrowed more Content words from Albanian than from Greek.

Also, English had a Content/ Function words ratio close to 1, which means that their usage was almost the same. Furthermore, the same ratio, close to 1, was

found in the Total of Content and Function words produced in all of the texts as well as in the total of code switches and in the total of the code mixes produced (Figure 5.42 below).



**Figure 5.42.:** depiction of the ratio of Content and Function words in code switches, code mixes and the entire corpus

For those children that narrated in their L3 and they only transferred from Greek we calculated their ratio in English-Greek code mixes by distinguishing them in Greek and English words. Therefore, two new variables were created for each one of the children:

- a) “Ratio of Greek Content/ Function words”: the ratio of Greek content and function words in English - Greek code mixed sentences.
- b) “Ratio of English Content/ Function words”: the ratio of English content and function words in English - Greek code mixed sentences.

**We investigated whether the children’s L1 affects the ratio of *English Content/ Function words*.**

This question was tested via independent t-test. It was found that the children’s L1 does not have an effect on the ratio of English C/F words:  $t(34) = 0.3$ ,

$p = 0.976$ .

**Table 5.15.:** Descriptive statistics of the ratio of the Greek content to function words within the categories of L1 language

	<b>L1 language</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Greek ratio Content/Function	Albanian	17	1.8	0.78
	Greek	19	2.8	1.87

**Table 5.16.:** Descriptive statistics of the ratio of the English content to function words within the categories of L1 language

	<b>L1 language</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
English ratio Content/ Function	Albanian	17	1.2	0.57
	Greek	19	1.2	0.49

Moreover, we went on to see whether the children's L1 affects their ratio of *Greek Content/ Function words*. This question was tested via independent t-test. *The children's L1 has a significant effect on the ratio of the Greek Content/ Function words:  $t(24.625) = 2.136, p < 0.05$ .*

**Finally, the ratio of Greek Content/Function words was found to be greater for those children whose L1 is Greek ( $M = 2.8, SD = 1.87$ ) compared to the children whose L1 is Albanian ( $M = 1.8, SD = 0.78$ ) (see Table 5.15).**

In the next chapter we will discuss the results obtained from the statistical analysis performed according to the research questions we had initially set in our study. Also, we will try to draw some conclusions regarding our participants' profiles along with their speech production and try to suggest possible explanations on our findings.





## 6. Discussion Of The Results

In this chapter we will present the discussion of the results we obtained from our analysis. The presentations will be done according to the order they were presented in the previous chapter (“Results) and they will be further analysed according to the relevant literature. This will give us a more shaped image on our findings as well as a view on their implications on the current literature in trilingualism and more specifically, trilingualism of children.

### 6.1. The general profile of our participants

To begin with, it is to be noted, since this is deemed as a rather significant point to the further understanding of this thesis, that this was a research focusing on the participants’ speech production in their L3. The use of the language biographies of the participants aimed to give us an overview and to be used as a guide of the sort towards their trends; therefore we do not claim any sort of generalization. However, the data obtained from their speech production should be considered as a valid depiction of the narration they uttered. They were gathered and analysed in an extremely detailed manner using statistical tests and they have been performed and verified by a qualified statistician. This introduction to this chapter was believed to be necessary in order to ensure that the readers of this thesis comprehend the whole rationale of its research (aims and focus).

### 6.2. Overview of the profile of the total of the participants

Below there is a more brief presentation of the profile of the participants of this study in order to gain an overview of their biographical data as we go on with the Discussion chapter:

**Age of the participants:** Most of the children were twelve years old (n:

27) and less of the children that finally took part in the study were between the age of nine and eleven years old (n: 22).

**Sex of the participants:** There were more girls than boys that took part in the study. Specifically, there were 26 girls and 23 boys.

**Class they attended:** Most of the children (20 out of 49) had just graduated public primary school and were in the beginning of the 1st class of public gymnasium (the interviews were conducted at the beginning of the school year, during autumn). Fewer children were attending the last two classes of primary school. According to this data we can gather that the children had acquired a certain level of literacy since they had been in contact with structured learning for a reasonable number of years. What is more, we aimed at studying older children and not younger one, i.e. under the age of 9 years old, since we wanted to investigate the speech production of children who were not fresh beginners in terms of their L3 (English). Most of the children in Greece tend to learn English shortly after the age of 7, at least in private English schools which take place in the evening, after morning school. Moreover, English is taught at most public primary schools at the third class of primary school (when children are approximately 8 years old). There has been a pilot project implemented in 800 public primary schools that English was introduced to children attending the first class (around the age of 6 for most children), however none of our participants had attended such a school. Therefore, the first contact with English (at least with a structured and within a formal instruction frame) was around the age of 8. This also explains our participants' A1 (top achievement) level although they were later classified in three different sublevels of A1 (see Methodology section for a detailed analysis).

**L1 of the participants:** The majority of the children had as their L1 Greek and L2 Albanian (n: 30; 61%). Fewer children stated as their L1 Albanian and L2 Greek (n: 19; 39%). The fact that most children had as their L1 Greek may be explained by two factors:

a) The children may have thought that this is a more “legitimate” answer as they may carry some sort of psychological burden regarding their cultural and hence linguistic identity. Studies have referred to the fact that children with an immigrant background feel that the status of their heritage language is not high enough compared to that of the majority's language. Gogonas (2009) has mentioned in the results from his study with Albanian children and their parents: “Some pupils, however, seem to ‘hide’ their knowledge of Albanian. This tendency on the part of

Albanian pupils to avoid speaking Albanian is best explained as a reaction to the stigmatization of their ethnic group. The Albanian pupils, not wishing to associate with a stigmatized group and language, downplay their knowledge of Albanian, and consequently use Greek whenever they have the opportunity to do so. The following excerpt from an interview with an Albanian mother clarifies this tendency on the part of some Albanian children to distance themselves from the Albanian language:

*“When my youngest daughter was at the kindergarten she came home from school very sad. Then, her elder sister addressed her in Albanian. The younger one then, shouted at her angrily: ‘Don’t speak to me in Albanian. I don’t understand Albanian! Can’t you understand this?’ The child was ashamed of her language because she had felt a racist atmosphere at school”* (Albanian mother, 40).

During our research we did ask these children at the time of our communication and before the narration of the picture story took place whether it was Greek that they remember first using/learning or Albanian. Most of them insisted that they remember themselves using Greek at first with their parents and their siblings. However, a certain caution might be needed regarding this finding, although we do believe that the answers the children finally gave should be considered as their view of their language biographies. Therefore, we take the stance that their answer on this matter represents their own reality and we do not aim to question it as such.

b) The children might indeed have been introduced with more Greek during their first years or so, and therefore identify this language as their first. This may have been done as a method by their parents to make sure that they will adapt to Greek society easier and they will not be identified as “foreigners” by their teachers or their classmates as soon as they sign in for nursery school. We should not neglect the fact that although these children were all born and raised in Greece their parents have been carrying the “stigma” of the foreigner and what is more the identity of the Albanian. This fact is rather crucial to the understanding of the Albanians’ status in Greece, since although they have been residing in the host country for more than twenty years (most of the immigrants came in Greece in the 1990’s) they do not feel psychologically accepted or integrated by the society yet. Also, the acceptance of the Albanians and of the immigrants in general by the Greek population still remains problematic. As Gogonas (2007, 2009, 2010) pointed out, the Greek people were neither prepared for the immigration wave which randomly arrived in the last twenty years and until today, nor for the settlement of such large numbers of people of different ethnic, religious and cultural backgrounds. Moreover, immigrants,

especially Albanians, have been attributed many minor or major crimes, mainly at the beginning of their arrival in Greece. However, during the last ten years the unprecedented levels of illegal immigration from several countries and the subsequent rise of criminality has been mainly attributed to the presence of immigrants, “thus contributing to their collective demonization” (Chatzidaki & Xenikaki, 2012: 6). Therefore, these factors could provide an explanation for the wish of our participants’ parents to denote to their children and by extension to their social environment that they aim for their acceptance, thus aiming for another kind of status within Greek society. Besides, language has always been a medium of identity and a way to overcome cultural barriers set by any society. Using language in a native like way promised more chances of integration and approval.

**The environment the participants speak their L1:** The majority of the children (96%) speak their L1 at home, 48% speak their L1 at school and 46% speak their L1 with their friends (for further discussions see the correlations that follow).

**How our participants have learnt their L2:** Taking for granted that our participants have learnt their L1 via their parents and their contact with their family we only asked them how they have learnt their L2. So, the majority of our participants (71%) have learnt their L2 at home (in this case Albanian) whereas 29% of them have learnt their L2 at school (in this case Greek), through typical teaching.

**The time of contact with their L2:** The majority of our participants (81%) were speaking it from three to five years. Fewer participants stated that they were speaking their L2 from one to three years (this is obviously in accordance with their age).

**The frequency of use of the participants’ L1:** The majority of our participants (86%) stated that they use their L1 every day. A few of our participants (8%) use their L1 often and just a 6% of the children rarely use it.

**The time of contact with their L3:** The amount of learning of their L3 was relatively the same for all of the participants; i.e. most of them had been learning English as their L3 for three to five years.

Below is a presentation of the correlations we performed in order to see the influence of the children’s L1 in relation to several factors.

### **6.3. The children's L1 in relation to language biographical factors as well as their L2 and L3**

We aimed to investigate the relationship of the children's L1 (either Greek or Albanian) with their L2 and their learning of their L3. More specifically, in order to trace what is the effect of the participants' L1 we performed correlations with several factors that were part of the questionnaire they had initially filled in. Below is a brief presentation of the factors surveyed and their further discussion:

**The relation of L1 and the participants' age:** The majority of the children who had as their L1 Albanian (58%) were twelve years old, whereas 42% of the children were from nine to eleven years old. Whereas, most of the children who had as their L1 Greek were twelve years old, and 43% of them were from nine to eleven years old. The difference we observe is not significant between the ages of the two L1 groups. However, we do see that in both L1 groups most of the children were closer to the age of twelve rather than younger.

**The participants' L1 in relation to their sex:** The majority of the children (63%) whose L1 was Greek were boys and 37% of the children were girls. Children whose L1 was Albanian, were exactly the opposite in the percentages of the sexes; i.e. 63% of the children of this group were girls and 37% of the children were boys.

**The participants' class of attendance in relation to their L1:** Most children (37%) whose L1 was Albanian had just enrolled in the first class of gymnasium, whereas there were a 26% of the children attending the fifth and sixth class of primary school. The majority of the children, who had Greek as their L1, were again in the first class of the gymnasium (43%), whereas 23% of this group was in the sixth class of primary school.

In both groups we see that our participants are mostly children who attended higher grades of education, they have therefore acquired a greater extent of literacy in Greek (either as an L1 or an L2) and have been in longer contact with formal forms of learning. Since their L3 (English) is a taught language their contact with formal instruction is a useful tool, since they can apply the grammatical and syntactical structures of language and these participants had the advantage of employing them during their taught courses of their L3 too. Therefore, they are considered as more experienced in terms of literacy compared to any learners with no prior formal learning of any language. Of course, this could apply to either younger learners

(i.e. before the age of six) or learners who have limited access to school. The latter possibility though is rather scarce in our days and has not been a matter of study in terms of so far trilingualism literature for apparent reasons (especially since most of the research on this field has been conducted in Europe, USA and Australia where the vast majority of children are attending school irrespectively of their ethnic backgrounds).

### **The participants' L1 in relation to their way of learning their L2:**

The majority of the children (63%) that their L1 was Albanian had learnt their L2 (Greek) at school. The vast majority of the children that their L1 was Greek (93%) stated that they had learnt their L2 (Albanian) at home. This is relevant with our personal conversations with the participants that there was no one attending evening classes in their heritage language.

This information was sought since there are nowadays many children coming from Albanian families that attend evening classes in their heritage language. These classes are arranged by local Albanian communities since lately there has been an effort on behalf of their families to maintain the language and offer reading and writing lessons to their children. Moreover, this trend is in line with the economic crisis and the possibility of returning to Albania, thus needing a more thorough knowledge of their heritage language.

At this point we need to clarify that immigrant children are mainly entitled to the teaching of Greek as a Second language in Reception or Tutorial classes in mainstream schools (Dimakos & Tasiopoulou, 2003). Moreover, the current legislation (law 2413/96 on Intercultural Education) “has not ensured the kind of policies that would permeate the whole educational system, enhancing students’ awareness of and acceptance of cultural diversity among them (Damanakis, 1997; Mitakidou, Tressou & Daniilidou, 2007 in Chatzidaki & Xenikaki, 2012:6). Furthermore, while the language of the school, Greek, is used and taught as an L1 for all of the pupils attending it, in reality for certain pupils Greek is their L2. Therefore, while the teacher may choose to ignore the pupils’ L1, this language is also essential for their further development and their cognitive advancement, since they will use their heritage language for their knowledge building (Σκούρτου, 2002).

Largely, as Tsokalidou (2005) pointed out, children’s bilingualism (when it comes to immigrant and minority languages) remains largely “invisible” and absent from the school. On the contrary, bilingualism that is associated with languages that are attributed prestige and higher status is not only accepted but also admired and

perhaps promoted. Teachers do not hinder children from speaking languages from Northern or Southern Europe (e.g. French, Swedish, German, Spanish or Italian). These languages have always been associated with higher status not only in Greece but generally in most European countries. These languages are even taught in evening foreign language schools and parents coming from different backgrounds will dedicate their efforts and endure a significant financial cost in order to make sure that their children will learn how to speak them and what is more, sit exams and receive a certificate for their language proficiency. On the other hand, Greek companies that have been cooperating with Albania or have expanded their business with branches in Albania cannot easily recruit Greeks to work there if Albanian language knowledge is a prerequisite. In that case though, Albanian immigrants who have been living or were raised in Greece and speak Greek in a native-like way have been found to be the perfect candidates for such jobs.

At this point it should be added that many teachers, especially those belonging to an older generation as well as those who have not received further training on multicultural education, advise parents to speak only Greek at home or they think that the children's heritage language is more of an obstacle regarding the pupils' further educational advancement. Therefore, heritage languages are surely not promoted within school; however they are not even accepted as a child's identity (Gkaintartzi & Tsokalidou, 2011; Gogonas, 2007; Kassimi, 2005). To be fair though, we need to clarify that teachers have not been given any sort of guidance from the Ministry of Education or from relevant authorities. Only recently in Greek Universities there have been given some optional courses within Primary Education Teachers Degrees which provide the future teachers with relevant information and knowledge on current trends and research on the benefits of maintaining heritage languages.

Concluding, the main responsibility for the maintenance of bilingualism with regard to heritage languages is purely on the shoulders of the families and this is supported by our data as well, since their L2 when it comes to Albanian is learnt at home, most of the times without enough, if any, literacy. This tendency is ascertained by Gogonas (2009) who interviewed children coming from Albanian background and some of their parents. His findings indicate that "while 98.6% of pupils report fair or very good reading skills in Greek, only half report similar skills in the Albanian language. An even bigger difference is noted in writing ability: 98.5% report writing in Greek fairly or very well, while only 32.8% can write fairly or very

well in Albanian” (p. 104). This finding is also attributed by Gogonas on the issue we discussed, that is, the lack of teaching in these children’s heritage language. Also, Γκαϊνταρτζή & Τσοκαλίδου (2012) have interviewed parents coming from Albania and they surveyed the children’s literacy. They have found that nowadays parents believe it is important for their children to be literate in Albanian as they understand that the language shift that has been taking place has to be addressed properly in order to prevent it by establishing a language school for their heritage language.

### **The participants’ L1 in relation to the years they have been learning their L2:**

Since we wanted to find out whether our participants were “fresh” learners of their L2 or “older” ones we had included a question regarding the years the participants had been learning their L2 and their L3 in order to find out how experienced our learners were in their languages, thus gaining some information on their most recent “foreign” languages. We use the term “foreign” to indicate the closeness to their third language, English, which is surely identified as a foreign one. Also, within the line of order of acquisition and within the factor of the “L2 effect” this will be found useful in our further discussion.

We deduced that the majority of our participants were not “fresh” learners in their L2 and they had already acquired their L2 (either Greek or Albanian) for more than three years. There were a smaller number of children that had been learning their L2 from one to three years in both groups. Hence, the majority of our participants had some experience (in a gradient scale) in their L2 (either Greek or Albanian).

### **The participants’ L1 in relation to the years they have been learning their L3:**

The majority of the participants whose L1 was Albanian (63%) had been learning their L3 (English) for more than three years. Likewise, the participants whose L1 was Greek showed the same experience in their L3 (62%). Therefore, the majority of the children that took part in the study and had different L1s had received the same amount of instruction in their L3. This information is quite important since the majority of our participants had similar experience in their L3, thus paving the way to explore their speech production in their L3 with similar qualitative characteristics. Besides, the factor of experience with their L3 was a



determining factor that made us exclude many of the participants at the beginning of this research (we remind that out of the 80 initial participants we ended up with 49 and one of the reasons for this elimination process was their low experience with their L3).

#### **The participants' L1 in relation to the occasions they speak it:**

We aimed in finding out in what occasions our participants use their L1, i.e. at home, at school, or with their friends. All of the participants whose L1 was Albanian stated that they use it at home, a few with their friends, and some use it at school too (meaning with their friends who come from Albanian families and can speak their heritage language).

The majority of our participants whose L1 was Greek use it at home, as well as at school and with their friends. This is a natural finding since Greek is the majority language and the medium for everyday communication. Also, it is the language for academic use since it is taught at public school to all of the pupils. Moreover, the Greek educational system has not been providing extra heritage language classes within the school schedule, so it is the only de facto language taught and spoken within school premises, at least with regard to official communication. Within Greek public schools the language wealth is such that we could characterize it as "a garden of languages", since there are many children coming from different backgrounds. Children use it with their friends during breaks or for their person to person communication even during classes but not with a relative freedom or confidence due to its foreignness and its status (See also previous discussion on "how they have learnt their L2", this chapter).

#### **The participants' L1 in relation to the occasions they speak their L2:**

The vast majority of the children whose L1 was Albanian (95%) stated that they use their L2 (Greek) at home and 84% of them said that they use their L2 at school too. Fewer children (63%) use their L2 (Greek) with their friends.

The majority of the children whose L1 was Greek (79%) use their L2 (Albanian) at home. Only some children (10%) stated that they use their L2 (Albanian) at school and with their friends. Therefore, we can presume that for the children whose L1 is Greek their L2 (Albanian) is less active in terms of their social environment. This is in line with the findings of Chatzidaki & Xenikaki (2012) who found that children coming from an Albanian background would use Greek with their friends at school and outside school in 68% and 64% respectively, whereas Albanian was used

in 17% in both cases. This indicates the higher degree of use of Greek with friends who are the same age and the tendency of language shift which has been occurring especially lately.

### **The participants' L1 in relation to the frequency of its use:**

The children whose L1 was Albanian uses it every day in 68% of the children, whereas only some of them said that they use it often or rarely. The vast majority of the children whose L1 was Greek (97%) uses it every day, which seems quite expected since it is the language of the wider community and they mainly need to interact in Greek. However, these findings point to the language shift discussed above regarding the occasions they use it, since our participants seem to be resorting to Greek more and more lately. The fact that these children are the second generation of their immigrant parents in Greece, as well as the fact that they were born and raised in Greece, clearly indicates their will to be regarded as part of the Greek society without any foreign tags. However, Chatzidaki & Xenikaki (2012) have summed up this tendency that they themselves observed by saying that “the younger one is, the more one uses the Greek language and vice versa”, thus clearly suggesting that this second generation of immigrant background families shows that they have a preference for Greek compared to Albanian as far as their everyday communication is concerned. Although, they might use it with some members of their family or with some friends, Albanian is, at least at this point of time, associated with another country's language or with a home language which is currently still far away. Their reality is surrounded by Greek and thus heritage language maintenance issues have started to emerge. To this end, we mention a quote that Gogonas (2009: 105) has provided indicating that parents are more and more judging their language choices and might even feel a sense of guilt for not favouring their heritage language enough:

*“Unfortunately this is something that happens without realizing it. Sometimes I catch myself speaking in Greek to my son and then I feel bad about it, but I don't do it consciously. I even consider other Albanians who speak in Greek to their children silly but unfortunately I am one of them too”* (Albanian father, 45).

### **The participants' L1 in relation to the frequency they use their L2:**

All of the participants that their L1 was Albanian use their L2 (Greek) every day. Whereas most of the children whose L1 was Greek (45%) use their L2 (Albanian) every day. Less children use it often or rarely (28%). These findings are again in line with the previously discussed issue of language shift towards Greek and the

fact that children are regarding Albanian to be a more “only home” language bound to limited use. Greek appears to be the language they find it more natural to use in their every day communication, even when it is stated that it is their L2 and not their L1. In this sense, it is not important which language they identified as their L1 even from a psychological aspect, and clearly it does not indicate a higher comfort with it. *Greek has become their lingua franca even within the home boundaries.*

## **6.4. The factors that may have contributed to the making of our more successful L3 (English) learners**

In this section we discuss the results deducted from the correlations we performed in order to find out possible factors that may have played an influential role in the making of the more successful third language learners. According to the sublevel of A1 level in English that our participants were classified we searched for those factors that might appear to be more common in those that have shown higher performance during their speech production in their L3 (English).

### **6.4.1. The participants’ L1 in relation to their L3 proficiency**

We distinguished two groups according to the children’s L1 (either Greek or Albanian). We aimed to find whether a child’s L1 may result in different level of L3 proficiency (either higher or lower). The first group was children whose L1 was Albanian and the second group the ones that their L1 was Greek.

Children of the first group (L1 Albanian) showed a tendency towards higher proficiency, since 47% of them were assessed as High A1 sublevel, 32% of them were assessed as medium A1 sublevel, and 21% of them were assessed as low A1.

Children of the second group (L1 Greek) showed lower performance compared to children of the first group. Specifically, 40% of them were assessed as high A1 sublevel, 17% of them were assessed as medium A1 sublevel and 40% of them as low A1 sublevel (see Figure 5.24).

We checked the second group’s age to see whether they were mainly younger children; however 16 out of 30 of these children were twelve years old. Therefore, we could not assign this finding to this group’s age. Also, the statistical test showed that it was not statistically significant therefore we cannot claim generalization of

this finding.

According to our findings the specific language a child has learnt as its first one (L1) does not affect its future L3 proficiency. Therefore, it is apparent that several voices suggesting a certain “superiority” of some languages can not be heard as there are no studies indicating such a finding. Besides, our finding points to the opposite direction; what matters are the specific characteristics and personality of a child. It is not a child’s mother tongue which may or may not facilitate their future language learning career, it is the specific factors (such as age, motivation, personal goals of the learner, learning styles, frequency of use of the second/ foreign languages, exposure to the languages, etc.) which interact with the languages they learn and these play a pivotal role in their higher or lower proficiency of any second or foreign language learnt after all. Further on we present the investigation of these factors in order to see which of them, if any, are more influential with regard to higher attainment of an L3.

#### **6.4.2. The participants’ sex in relation to their L3 proficiency**

Within second language acquisition research, the concept of gender has been given a lot of interpretations. Ellis (1994) maintained that there was nothing conclusive in studies of gender differences in second language acquisition regarding achievement, attitudes and strategy use. However, Kimura (2000) found that in terms of verbal abilities, girls usually start speaking earlier than boys and they use longer sentences. Their articulation and grammar are more correct and as a result they have a richer vocabulary. Moreover, they are better at spelling, reading and tests in which they have to generate words according to a certain rule (e.g. words that start with a certain letter).

In that sense, in our study the boys who were assessed as high A1 were less than the girls, i.e. 39% and 46% respectively. Medium A1 level was found to be almost equal for both girls and boys, whereas more boys were assessed as low A1 sublevel compared to girls. However, the analysis showed that it was not a statistically significant finding, which could be attributed to the number of the participants per sublevel though. However, we could only claim that this finding might be only a brief look in the general frame of sexes and their language proficiency and a targeted study on this aspect could point to more reliable results. The fact that girls have generally been regarded as “better” language learners should be seen with the necessary caution as it could prove to be only a sort of “urban legend” as they

say. Likewise, any beliefs regarding boys' alleged abilities should be substantiated with relevant data to confirm any such assumptions. However, our results show that there is a tendency on behalf of the girls in higher proficiency in their L3 although not found to be statistically significant. Therefore, it is only a hint and further investigation could probably shed more light on this issue.

### **6.4.3. The participants' age in relation to their L3 proficiency**

It was clear from our results that older children, i.e. twelve years old, outperformed the younger ones. Specifically, high A1 sublevel children were found to be 67% of the twelve years old compared to the younger ones since only 14% of them were assessed as high A1.

Likewise, 11% of the older children (twelve years old) were assessed as low A1 Sublevel, whereas 64% of the younger ones were assessed as low A1. The Pearson chi-square test showed that this was a statistically significant finding. Therefore, we may assume that these children's age is a factor that could probably be found to be influential if tested on another group of participants and might be related to their greater amount of exposure via instruction to their L3.

Our finding is in line with Munoz (2010) who found that when a foreign language is learnt by means of formal instruction older children showed higher proficiency compared to the younger ones. The formal instruction way of learning versus the naturalistic one differs significantly as Munoz suggests some crucial points: "(1) instruction is limited to 2-4 sessions of approximately 50 minutes per week; (2) exposure to the target language during those class periods may be limited both in source (mainly the teacher) and quantity; (3) the target language is not the language of communication between peers; (4) the teacher's oral fluency in the target language may be limited; and (5) the target language is not spoken outside the classroom" (p. 41). Furthermore, the contexts of acquiring an L2 compared to that of acquiring a foreign language differ significantly (Cenoz, 2003b) and research has turned its focus towards this area of investigation, since scholars have been trying to answer questions regarding the optimal age for the onset of instruction of a foreign language. Later on, our study sees into the factor of formal instruction in the L2 and its effect on L3 higher proficiency.

In that sense, our participants have been learning their L3 (English) by means of formal instruction. However, Munoz mainly focused on the age of onset regarding their L2 proficiency whereas we aimed to see their overall attained proficiency in that

specific time that this research took place in order to have an overview of their A1 level status. We do consider though that the amount of exposure may be also influential in their L3 language proficiency, since older children had received longer instruction, although we could not have a picture on the quality of their instruction since this was not a research focus and it was not a longitudinal study. For a more detailed discussion on this matter and the time of onset of formal instruction see Munoz, 2010; Cenoz, 2003b amongst others).

However, Cenoz (2003b) does mention in her longitudinal study that better results were obtained by the older learners in oral proficiency (one of the tasks that her participants performed). Since our own study involved a free narration task it could be linked that older children tend to be better in their oral productions or even better narrators. Of course, this should have to be proven by another kind of study, possibly investigating several tasks and comparing their performance in each one of them. Our study only included the free narration task in order to gain results from the children's spontaneous speech production.

Below we continue with our discussion on our results by presenting the data drawn by the correlation between time of exposure and the children's L3 level of A1 in order to see whether this factor could prove to be as significant as age.

#### **6.4.4. The period of exposure the participants have had in their L3 in relation to their L3 proficiency**

Through this correlation we aimed to verify whether the participants who have been L3 learners for a longer period of time would show greater L3 A1 level. This was in accordance with so far research that had suggested that the longer the contact with learning a language the higher their proficiency is.

As expected the children who had been in contact for a longer period of time with their L3 showed greater A1 level attainment. Specifically, 56% of the children of the second group that had been learning their L3 for three to five years were assessed as high A1 sublevel and 20% of this group was of medium A1 sublevel. On the other hand, 24% of this group was assessed as low A1.

In comparison, the first group that had been learning English for one to three years did not show the same levels of L3 proficiency. Specifically, 30% of this group was high A1 sublevel and 26% of the group was medium A1. It is noticeable that 43% of this group was low A1 sublevel which indicates the significance of the period of contact with language learning as a factor. Although, this was not found to be

a statistically significant finding within our research and this is probably due to our study limitations, i.e. number of participants, there is another explanation that could be for such a finding; the fact that the progress a learner makes in learning a language is non linear. Munoz (2010) states that “learners’ amount of instruction can be expected to correlate with proficiency scores, although research has shown that the relation of time spent learning a language and the level of proficiency achieved is not always linear” and she cites Alderson, 2000; Kalberer, 2007; also see Murphy, 2001 for a discussion).

Therefore, even though a learner may have been learning a language for a shorter period of time he/she could still be assessed as a more successful user of this language. Indeed, some of our participants that had been learning their L3 for one to three years were assessed as A1 sublevel (seven children compared to 14 that had been learning English for three to five years). This surely makes sense as learning a language is dependant on the individual characteristics and the motivation one may show. As Torfadóttir et al (2006 in Stefánsson 2013) have demonstrated motivation and a positive attitude towards the target language tend to lead towards better grades.

#### **6.4.5. The participants’ L1 and L2 frequency of use in relation to their L3 proficiency**

We looked into the matter of frequency of use of the participants’ L1 and L2 in relation of their L3 proficiency by distinguishing three kinds of frequency, i.e. a) Frequency of use of L1 is greater than L2, b) L1 and L2 are used with the same frequency, c) frequency of use of L2 is greater than L1.

The first correlation (a) showed that when *L1 is more frequently used than L2 the participants’ L3 A1 level seems to be higher*. The children that were of low A1 were 38%, which indicated that the overall picture revealed a tendency for medium/ high performance in these children’s L3 proficiency (Figure 5.25). The second correlation (b) performed showed that *when L1 and L2 are used with the same frequency more children were in the high A1 sublevel*. However, there was not any difference in those that were in the medium and low A1 sublevel (both of them were 30% in each one of the aforementioned A1 sublevels). Finally, the third correlation (c) that we performed showed that *when the L2 is more frequently used than the L1, the majority of the children were of higher A1 sublevel*.

However, the Pearson chi-square test revealed no statistically significant dif-

ference, so we can not claim generalization of this finding. We regard this finding to be linked to the low number of participants which could not have yielded different results as far as the statistical significance is concerned.

However, it is apparent from our results that:

- When the L1 is more frequently used than the L2 the participants' L3 A1 level seems to be higher.
- When L1 and L2 are used with the same frequency more children were in the high A1 sublevel.
- When the L2 (Greek) is more frequently used than the L1, the majority of the children were of higher A1 sublevel.

As far as the latter finding it is rather interesting and it seems that the higher frequency of usage of the L2 is linked with L3 higher attainment of their L3 (57% of our participants), (see also Figure 5.25). Although the number of these children is rather low to draw any safe conclusions a trend seems to exist regarding this specific parameter.

However, since the number of participants was really low in this specific correlation it would be very useful and interesting if a future study investigated the relation between the frequency of use of an L2 with L3 higher proficiency with a larger number of participants. If this finding was found to be statistically significant it would indicate that the more an L2 is used the higher attainment of the L3 succeeded. This kind of association between the frequency of usage of the L2 and the successful attainment of the L3 could probably be attributed an explanation, such as "*the L2 effect*" but from a *frequency of use point of view*; even if this attribution may not sound so apparent at first sight there seems to be some sort of connection. Also, since in this case L2 was Greek, which is the wider society's official language and therefore the main medium of communication for our participants, it also means that the element of the frequency of its use is strongly related to sociological and sociolinguistic aspects.

Moreover, since formal instruction has been suggested to be different from the naturalistic way of learning we will now present the relation of our participants' L3 A1 level with the context they had acquired their L2. The reason for investigating



this type of relation was because we believed that children who had received formal instruction in their L2 would probably show higher proficiency in their L3 too. This relation was assumed to exist due to their higher metalinguistic awareness developed through structured learning of the language systems and the employment of the same mechanisms that the learners had already used during their L2 teaching.

#### **6.4.6. The participants' way of learning their L2 in relation to their L3 proficiency**

We distinguished two groups of children, i.e. those that had learnt their L2 at home and those that had learnt it at school. We aimed to see whether the manner of learning of their L2 would influence these children's L3 proficiency.

Children that had learnt their L2 at home did not seem to have a higher positive influence through learning an L2 in a non instructed way. Specifically, 37% of them were of high A1 sublevel in their L3, while 46% of them were of low A1 sublevel, which raises some issues regarding the matter in question (see Figure 5.26). Interestingly, children who had learnt their L2 at school, showed greater L3 proficiency; 57% of them were assessed as high A1 sublevel and 36% of them were of medium. Really few children (7%) were assessed as low A1 sublevel. Therefore, children who had learnt their L2 at school within an instructed context showed greater proficiency in their L3. Of course, these children had already acquired their L2 (Greek in this case) in a naturalistic manner, however they also enhanced their language knowledge by learning its structural and grammatical features as early as six years old, when they entered the first class of primary school.

**This finding is statistically significant, according to the Freeman-Halton Test**, therefore, the factor of learning an L2 with formal instruction was found to be an influential one towards L3 proficiency. This factor of literacy seems to be some sort of an "X Factor" regarding these children's higher attainment of their L3.

Their L3 was introduced to them at around the age of seven to eight years old and they had already an experience in how a language is structured with all of its basic elements through their formal instruction in their L2. So, when they went on to learning English as their L3 they had already established their literacy skills in their L2. Therefore, their L3 seems to have had a solid ground to grow on as far as literacy

and the basic structures of language are concerned. Also, the language strategies used the first time they were requested to learn a language with its grammatical and structural constraints may have been used when they were requested to learn their L3 with a foreign language methodology. According to Odlin (1989) learners who have highly developed language skills (such as reading, writing and richness of vocabulary) in their native language will most likely find that these skills facilitate second language acquisition. By extension, we could consider that the same line of reasoning seems to apply with L2 highly developed language skills when it comes to L3 learning. Odlin, however, mentions that the effects of high L1 literacy may be the result of transfer-of-training which seems to be in accordance with our presumption that these children may have duplicated the strategies already used when they had learnt their L2 in their process of learning their L3 too.

Furthermore, Murphy (2003) has pointed out that most studies have so far been conducted with children attending secondary education or even university. Therefore, our study which focused on primary education pupils may be useful in that it posed a question regarding literacy issues and its effect on the L3 proficiency and it also proved to give statistically significant results. So, this finding could be found to be influential if tested with different participants of another similar research on the subject of trilingualism. Murphy (2003) also suggested that since much of the research on multilingualism comparing speakers of different social and educational backgrounds is done from a sociolinguistic rather than a psycholinguistic perspective, future L3 acquisition research needs to take educational background into account since it relates directly to metalinguistic awareness (p.12).

In that sense, we may assume that our participants had higher metalinguistic awareness since they had been learning their L2 through formal instruction thus pointing to the parameter of the educational background. We may also assume that it may be the case that the children who had acquired their L2 (Albanian) only by contact with a naturalistic environment (their families, their friends and the general community they live in) may have lacked the development of their metalinguistic awareness skills (at least in the same degree as the rest of the participants who had learnt their L2 through formal instruction), since we have mentioned earlier before that all of our participants had not been attending any classes in the Albanian language and therefore have not developed any literacy skills in it.

Walqui (2000) explains the several advantages of higher literacy and enhanced metalinguistic development with respect to a language learner's proficiency: "The

student's level of proficiency in the native language - including not only oral language and literacy, but also metalinguistic development, training in formal and academic features of language use, and knowledge of rhetorical patterns and variations in genre and style - affects acquisition of a second language. The more academically sophisticated the student's native language knowledge and abilities, the easier it will be for that student to learn a second language. This helps to explain why foreign exchange students tend to be successful in American high school classes: They already have high school level proficiency in their native language".

Besides, on the matter of transfer-of-training suggested by Odlin (1989), according to Sollars (2002) "for any transfer of skills and knowledge to occur, it is assumed that when children are developing their literacy in a second language, they have some foundation of literacy in their first language" (p. 8), which we extend it in terms of literacy in a foreign language since their L3 (English) is not only taught with a foreign language methodology but also is not a medium of every day communication and is only confined within class - although it is a highly occurred language in terms of media, advertisements and films in Greece (see also Galantomos, Andreou & Anastassiou, 2010). Consequently, since these children lacked the training in acquiring their second language in its formal structured way as well as the literacy in it, the effect of these two factors may have influenced their general attainment of their third language which also happens to be a foreign one.

Furthermore, Sollars (2002) pointed out that there are cases of children who are acquiring their **first literacy** in a second language or in a foreign language. In such cases "there may be little information or meta-linguistic knowledge related to reading skills to transfer from the knowledge of a previous language" (p. 8). To that end, we need to stress out that in our case the children who had lower degree of attainment of their L3 were not formally introduced to their L2, and therefore they lacked their L2 training-of-transfer during the acquisition of their L3. Since, they had not received any formal instruction in their L2 it looks like there does seem to exist some sort of "literacy gap" which was created between their L1 and their L3.

*In this line of reasoning, it seems that L2 instruction may have served as a kind of "bridge" for those children who showed higher proficiency in their L3.* Therefore, more research on this matter could reveal interesting facts and probably verify our own presumption on the **sequence of literacies**; if there is L1 literacy and then directly L3 literacy, and if the pivotal role of L2 literacy is absent from the literacy sequence then L3 proficiency might be affected or at least weakened. This

could be explained by the so far literature that in order for a second language literacy to be achieved L1 literacy must be established as firmly as possible. In that respect, if L2 literacy is not established at all this might mean that L3 competencies might be delayed in some degree depending, of course, on the personal characteristics of each learner too.

So far research (see Sollars, 2002) has indicated that children, who already have solid literacy skills in a language, seem to be more “qualified” to acquire a new language efficiently. Our finding is therefore showing that literacy obtained through formal instruction may also enhance L3 proficiency when this is also acquired within a school context. The steps followed by a learner from his first and especially from his second language in a formal context seem to pave the way for a more firm establishment of the third language. Therefore, it should be rather interesting to see if this finding could be also proved to be the case in similar studies on L3 acquisition through formal instruction, as this could provide pedagogical insight for language learning methodologists and teachers.

#### **6.4.7. The language they speak at home in relation to the participants’ L3 proficiency**

We distinguished two groups of participants, the ones that use both L1 and L2 at home and the ones that do not. We aimed to see whether children who use both of their two languages at home may be more proficient in their L3 than those who only use one of their languages at home. This correlation would show if children that are in “good terms” in their L1 and their L2 as well as more language experienced by using both of their two first languages would be more competent with their third one.

The first group of children that used only one of their languages at home showed more competency in their L3 compared with the second group. More specifically, 54% children that used only one of their languages at home were of high A1 sublevel and 15% of the same group was of medium A1. Children that were of low A1 sublevel were 32% of this group.

The second group on the other hand that used both of their two languages at home did not show the same level of proficiency in their L3. Specifically, 41% of the children were assessed as high A1 sublevel and 26% of this group was assessed as medium A1 sublevel. Low A1 sublevel was 32% of the second group. However, the Pearson Chi Square test did not reveal a statistically significant result. Wang (2008)

has provided her own experience in raising her children as trilingual and she has not mentioned any negative effect of speaking all of their languages at home. In fact, there was none language being disfavored compared to the progress made in each one of them. However, she did mention that although their heritage language was adequately developed it lacked the naturalistic everyday input, the home contexts of conversations were limited to specific subjects and thus the children did not own the pragmatic features of their heritage language as effectively.

#### **6.4.8. The time the participants had been speaking their L2 in relation with their L3 proficiency**

We distinguished two groups according to the time they had been in touch with their L2. We aimed to see whether the more a speaker is acquainted with his/her second language the more proficient may be in his L3.

The participants of the first group who had been in touch with their L2 for one to three years showed lower proficiency scores in comparison with the second group. More specifically, 33% of the first group was assessed as high A1 sublevel, 22% were medium A1 and 44% were low A1 sublevel (see Figure 5.29).

The participants of the second group (that they had been in touch with their L2 for more than three years) showed higher levels of proficiency compared to the first group. Specifically, 46% of the participants were high A1 sublevel, 23% of them were medium A1 sublevel and 31% were low A1.

The statistical test indicated that it was not a statistically significant finding, however, the children who had stated that they were in contact with their L2 for a shorter period of time were also younger at the same time. Age was found to be a significant factor within our research too, so the period of exposure to their L2 might have been influential to their L3 learning. Moreover, the fact that the more years of contact with their L2 seemed to be connected with higher L3 attainment can also be explained by the overall higher metalinguistic awareness. Our finding was not statistically significant and this could be attributed to the low number of our participants - maybe with a larger number this correlation could be verified to be associated. Tremblay (2006) found that greater exposure to an L2 raises its influence on L3 and that the effect of L2 proficiency might be less important. However, this matter would need a larger number of participants in order to verify our results.

### 6.4.9. Conclusions of the analysis of the factors

In conclusion, the investigation of the more influential factors towards the higher proficiency of our participants (A1 level according to CEFR) has shown that the most significant ones are the age of these children and their formal instruction in their L2. With regard to age, our study showed that the older the children were the higher their attainment in their L3 was. This was in line with Munoz (2010) who had found that when a foreign language is learnt by means of formal instruction older children showed higher proficiency compared to the younger ones. Furthermore, the second most influential finding was that the participants who had received formal instruction in their L2 showed higher attainment of their L3. As discussed earlier, we gathered that the connection of the mechanisms employed during their teaching of their L2 (Greek in this case) were replicated during their instruction in their L3. This follow up of the same learning techniques and strategies seemed to make the learner benefit and progress more. Besides, the fact that our participants had only become literate in Greek (for most of them their L2) and none of them in Albanian may suggest that there is a linkage between literacy in one language and the higher attainment of another second and/ or foreign one which is also being taught and on which learners acquire literacy.

The two aforementioned factors of age and formal instruction have been found as statistically significant within our study. However, other factors that have not been found statistically significant did seem to indicate a certain trend of impact on L3 proficiency. Therefore, the factors of exposure to the L3, frequency of use of L1 and L2, the languages that they speak at home (L1 and/or L2) as well as the time they have been speaking their L2 have indicated some trends of influence, although they did not yield statistically significant results. As previously discussed, these correlations may have given such a result due to the number of our participants. It is worth noting though, that most studies had fewer participants but they had concentrated on longitudinal observation and analysis (e.g. Davidiak, 2010 who studied two siblings throughout a whole year). However, our study tried to reach some conclusions by focusing on qualitative criteria and therefore the number of forty nine participants was deemed a rather sufficient one concerning our focus. Besides, the main aim of our study was the language interaction amongst the three languages of our participants and the analysis of their speech production. The previous section showed the trends regarding our participants' languages usage and the way their L1 and/ or L2 might have influenced their L3 attainment.

In the next chapter we will present the analysis of the children's speech production which was our main research focus. For this kind of analysis the number of the forty nine participants has been estimated as rather sufficient, considering that there have been previous theses that surveyed the speech production of less than five children. This is mainly because the analysis of children's speech production is a qualitative one and the conclusions that one reaches concern the specific set of the participants investigated. It should be noted, though, that the analysis of the speech production of our children yielded rather interesting findings and its implications for the future third language acquisition research could be found to be useful in their own right. Furthermore, the combination of the specific languages investigated in our thesis has not been previously studied and therefore it could provide more insight in these languages' interaction.

### **6.5. Analysis of the speech production of the children; the corpus**

As stated above the specific combination of the three languages involved in our thesis had not been investigated before in so far literature. Therefore, the investigation on the way these languages (Greek, Albanian and English) interact and the degree of the L1 and L2 (either Greek or Albanian) transfer during the L3 production (English) could provide us with useful information regarding our participants' use of their languages as well as certain language dominance or language shift issues. Furthermore, the factors that may have played a role towards the L1 or L2 transfer will be tried to be answered in order to locate the reasons behind it.

#### **6.5.1. The corpus our participants produced and the languages involved; a general picture**

To begin with we will present and discuss the corpus these children produced, i.e. the sum of the texts that were the result of their narrations. Since the target language for the narrations was English the majority of the words in our corpus were in English (75,5%). The Greek transfer was fewer (23%) while the Albanian transfer was a rather small amount of the corpus (1,3%).

According to the analysis of the measures of central tendency and dispersion of the number of words of each one of the languages 50% of the corpus contained 150 or more English words (see Table 5.2). Therefore, the participants had a relatively

extensive use of the target language during their narrations. However, the interesting part is mostly with the Greek and Albanian transfers. There were children who did not use any Greek words during their narration in their L3. The Greek transfers though had a mean number of 42,5 words and the median value was 27,00, that is, 50% of them or more had used 27 or more Greek words. Likewise, the Albanian transfer was of mean number of 2,4 words whereas the median value was 0,00, which means that there were 50% or more texts which did not contain any Albanian transfer.

This finding clearly sets the scene as far as the use of the languages within our participants' narrations, since it is evident that as far as transfer is concerned the Greek language appears to be more extensively used compared to the Albanian one. Therefore, our participants resorted to Greek a greater deal in order to overcome any difficulties they faced to express themselves in English. In contrast, the Albanian language was used less as far as transfer is concerned. This clearly points to the direction of the Greek language dominance in these children's lexicon. However, at this point we need to point out that the general environment that the meeting and the task of the narration took place was a "more Greek one". The majority of the researcher's meetings with the participants were within school premises where the official and widely accepted language is naturally Greek. The language that all of the children use with their teachers and their classmates is mostly Greek and according to the questionnaire, which our participants had filled in before the narrations the majority uses Greek with their friends and at school. Apart from the fact that Greek is by far the language for their everyday communication it is also the "powerful" language as far as its status is concerned. As previously discussed Albanian is perceived as a low status language and the children have probably had this kind of information and feedback from their socialization as well as from their families. The general psychological parameter regarding their heritage language might have played a role in their subsequent less usage of it too. This is also consistent with their questionnaire answers regarding the frequency of their heritage language usage, since the majority uses it more rarely compared to Greek. However, to go back to the general environment factor that these narrations took place, it is quite possible that these children might have felt more self conscious as far as using Albanian within the Greek school premises. The importance of their getting accepted by their classmates without carrying any sort of "foreign" identity label is great and this might mean that they were more "cautious" and might have consciously controlled



their production of the Albanian transfer. However, it is still a fact that we can mostly base our conclusions on their produced narrations; therefore, although the psychological parameter is still under consideration, the corpus produced points to the direction of a language shift regarding the Albanian language.

We need to make sure that our discussion on these findings is taking into account all of the factors that might have influenced these children's overall narrations. Therefore, their answers in the questionnaires do suggest that they do not use Albanian as much as Greek in their everyday life, let alone at school. Besides, personal observations of the researcher from several playtimes of children in the neighborhoods of Athens have shown that children coming from Albanian families do use Greek as the main language for their communication with their friends who also share the same background. This means that Greek has become the main language and probably the most well established one in these children's mental lexicon. They are the second generation of the Albanian immigrant families in Greece and they have now become native speakers of Greek with a more confined usage of their heritage language, strictly restricted within their family boundaries as well as with some of their friends (who also share the same ethnic background). Although, they do code mix Greek with Albanian, this phenomenon is more scarce compared to the all - Greek utterances they tend to produce during their everyday communication. These observations of playtime of randomly found children in Athens have clearly helped to understand and more effectively interpret the results of this research. It was a way to see in a less "sterilized" and natural setting the interaction of such children and to realize that the second generation of the Albanian families is showing a conscious preference for Greek or that they have been subconsciously extracting Greek from their lexicons during their everyday communications.

In conclusion, although we do take into account the fact that these data were obtained from interviews within their school premises where Greek is naturally used, as well as the fact that their interlocutors were quite possibly identified by the children as non Albanian speaking, their everyday usage and the questionnaires point more to the direction of their heritage language shift; Albanian has become for this second generation a language for limited use and confined within family boundaries. If we add the factor of their non-getting any formal lessons of Albanian too, this generation of children is more trained in Greek and might feel that this is the language they feel more confident in. This is particularly interesting if seen in relation to the interviews conducted by Gogonas (2009) who found that children

had been found to be denying using Albanian even within their home premises. Clearly, the higher status of the Greek language and the lower status of the Albanian language, especially because of the immigrant identity that it carries and the general attitude towards certain “non-powerful” languages, must have been influential as far as the transfers observed during this narration in their L3. Besides, as Ανδρέου (2012: 160) pointed out "School in our country (Greece) as well as in most countries does not evaluate the linguistic abilities of a pupil but his/her ability to use the official school language, which is not the same". Therefore, she adds that children who speak a different language or even a dialect of the national language at home, feel rather self-conscious when they enter school and quickly submerge themselves in the official language of the country in order to feel more competent as students too.

### **6.5.2. Code switching and code mixing in our corpus**

As far as code switching and code mixing is concerned the majority of our participants (79,6%) code mixed in English and Greek. Only 6 children (12,2%) code mixed in all of the three languages (English, Greek and Albanian), (see Figure 5.31). Of course, this latter finding is in line with so far literature that rarely do children code mix in more than two languages within the same utterance. As previously discussed, children tend to produce utterances by using two of their three languages and this has been found in several studies (e.g. Hoffman, 2001; Klein, 1995; Rothman and Niño-Murcia, 2007). This observation makes us deduce that it is very hard for the speakers to communicate by using all of their three languages at the same time. It could be assumed that this might be a heavy task or its “avoidance” is just a way to make things simpler for their mind. The trilingual speaker’s mental lexicon is rather rich; however, there is a need for some sort of simplification regarding its functional aspect. If the multilingual speaker preserves valuable energy during speech by simplifying the necessary procedures in order to achieve communication, the selection of two instead of three available linguistic systems would create a more manageable speech situation with regard to the process needed. This could be a way to create a less complex working environment by the trilingual speaker for him/herself. It would also be a way to explain the reason behind any language choices. This would lead to a simpler and maybe even a more minimalistic approach to explain the way multilingual speakers subconsciously choose the simpler route to their communications.

A trilingual speaker may need to adjust to the speech environment and take some subconscious decisions regarding the linguistic systems that he will allow to emerge during his spontaneous speech production. That sort of decision could mean that a trilingual speaker is flexible and tries to transform the complex situation into as simple as it can get. From the other hand, Hoffman (2001) has suggested that the fact that there is generally a rare occurrence of trilingual utterances might mean that the first two languages are perceived as one by the speakers. Therefore, they usually code mix in only two of the three linguistic systems they own since they perceive that they have at their disposal the *unified body of their first two languages and then their third one*. Hoffman believes that when we do encounter trilingual code mixes it is a case of the three linguistic systems being perceived as three autonomous ones and not two. Therefore, the first two languages are not unified and are not perceived as a single body in the mind of the trilingual speakers and they subsequently emerge freely and independently during their speech. Besides, Clyne (1986) has stated that trilinguals have a tendency to behave more like bilinguals, or “double bilinguals”, meaning with two or three sets of bilingual language combinations. In this sense, the trilinguals follow the bilingual speaker’s language combinations instead of a trilingual speech production choice. This explanation would mean that the first two linguistic systems have been acquired and developed in an (almost) synchronic way and that the third one has been an extra one that was acquired and developed in addition to the other two. We could then assume that our participants might have behaved this way with regard to their languages usage and choices; since the acquisition and development of their first two languages were synchronic they probably perceive them as a sort of a single linguistic system, although one of them (Greek) is more developed due to its everyday use and value as a medium of communication with the whole of their surrounding society. As we have already said, Albanian is mostly used with their family and in most cases its use is limited even within the home premises.

Also, there was a small number of our participants (i.e. 4 children: 8,2%) that their speech production was only in the target language (English). These children were found to be within the more proficient group of children (i.e. A1 high sublevel) which seems to indicate that these particular speakers did not need to overcome any difficulties and thus transfer from Greek or Albanian (either their L1 or their L2). This particular finding leads us to the conclusion that proficiency and code mixing may be indeed linked. This would mean that the most proficient children did not

have to resort to their other two languages since they could get their message across in the target language quite effectively. Therefore, transfer from their L1 and/or their L2 was not needed.

A significant finding was that when our participants needed to code mix *the majority of them code mixed in English and Greek during their narrations*. This could possibly be interpreted because of the language dominance of the Greek language as well as the capability of the speakers to identify their interlocutor's strongest languages. Regarding the first explanation, their Greek language was native like. What is more, they had been receiving instruction and had been educated in Greek since their first enrolment at nursery school. Then, when they enrolled in primary school they also started being taught their literacy skills in Greek. From this point of view, Greek is a rather well established language within their lexicon. As far as the second explanation is concerned, that is, their ability to perceive their interlocutor's main or strongest languages, it seems reasonable to argue that since these meetings and their task of narration took place within a Greek speaking environment (although the researcher did not tell them whether she could speak Albanian or not) could justify why they preferred to transfer only from Greek. Eventually, this would point to rather efficient speakers that can identify by non verbal signs whether another person can understand one of their languages or not. On this matter Genesee (2002) has stated that "true bilingual proficiency entails the ability to adapt one's language use on-line in accordance with relevant characteristics of the situation, including the preferred or more proficient language of one's interlocutor" (p.174). However, this does not clarify if this kind of proficiency entails interpreting non verbal signs as effectively as to locate the ignorance of a language on behalf of someone who is present and has indeed focused on maintaining a neutral behaviour and reaction to their speech productions. The researcher has followed the CHILDES archive instructions (see Methodology chapter) which specified the kind of reaction the researcher should have to the children's narrations while in the process of the task. However, it does seem a reasonable argument that a child owns intricate abilities and can tell from a very early age his/her interlocutor's linguistic systems knowledge. On this issue Dewaele (2000) has reported his daughter's ability ever since she was a toddler to identify the languages each of her friends or schoolmates spoke and accordingly address them – although in this case the girl seemed to have been acquainted with these interlocutors' ethnic background and their languages knowledge.

Moreover, although code mixing per se is not an indication of a lack of fluency, it could in some occasions be a sign of a reduction in proficiency, namely language attrition. Seliger (1996) clearly suggested that mixing “can be considered a precursor sign of primary language attrition when mixing begins to occur in contexts that are not motivated by external factors such as interlocutor, topic, or cultural environment” (p. 613). This is a further justification on the continuous evolvement of Greek compared to the relatively stable if not somehow dormant Albanian, as our results indicate. It seems safe to assume that with our participants Albanian was not a language that was going through all of the necessary stages of learning, at least not on a gradient level equal to the kind of development needed for a solid knowledge of the linguistic system, especially when seen in contrast to the development of the Greek language. This could be further backed up by the fact that many of these children had stated that they use Greek at home almost equally with Albanian. It looks like there is a tendency on behalf of the children to introduce the language of the interfamily communication in Greek. Albanian on the other hand might be less used even within the home premises as seen in the literature by Greek scholars (e.g. Gogonas, 2009). Therefore, the less our participants felt that Albanian was a “strong” linguistic system that they could turn to during their narrations the less they actually employed it every time they needed some help to get their message across. This could then be in line with Seliger’s statement regarding language attrition and could possibly justify the rather scarce employment of Albanian during the narrations included in this research. What is more, the language shift that has been taking place within this language group seems to be rather influential and could in fact be the most probable cause of the rare transfer from Albanian that was found on behalf of our participants. However, another similar study – with the same combination of languages and the same profile of participants - should be necessary in order to validate this finding.

The trend regarding the usage of Greek transfer can be more evidently seen in the combination of the languages used in our corpus, both in code switching and in code mixing. Generally, the languages along with their combinations found in our corpus are the following:

1. English (target language),
2. Greek switches,

3. Albanian switches,
4. English- Greek code mixes,
5. English- Albanian code mixes,
6. Greek – Albanian code mixes,
7. Greek – Albanian – English code mixes.

According to our corpus there was code switching in Greek and Albanian, the children's L1 and/or L2. As previously explained, we consider as code switches all the instances of full utterances in either their L1 or their L2, since the target language of the narration was in English. The Greek code switches were the ones mostly employed by our participants since they consisted of 38,8% of the whole corpus, whereas the Albanian code switches were only 4,1% of the total of the sentences found in our corpus. The prevalence of the Greek language as far as the code switches found in our corpus is in line with the so far discussed language shift towards the wider community's language. Furthermore, since our participants seem to have had a more firmly constructed Greek mental lexicon this particular language emerged in a higher degree compared to Albanian. This is again evident by means of the trend observed with code switches too. The fact that our participants felt more confident and it was perhaps easier for them to switch to the Greek language and give full utterances in this particular linguistic system instead of the target language (English) or their other language, i.e. Albanian (whether L1 or L2) is certainly important to the fuller picture of the Greek language prevalence and the shift on behalf of these children. The same trend of Greek being more employed in the whole corpus was observed with code switches as well. The great difference in terms of the code switching in Greek compared to the code switching in Albanian found in the narrations of our participants (i.e. 38,8% Vs 4,1% respectively) indicates that there was a "global" trend which applies to this speech phenomenon too as far as our participants are concerned. Therefore, the higher degree of Greek which was found in the whole corpus is also in line with the higher degree of Greek found in the occurrence of Greek code switches, especially when seen in comparison to the Albanian degree of transfer in the whole corpus as well as in the degree of Albanian code switches. Consequently, what applies for the wider picture was found to apply for this specific speech phenomenon as well.

With regard to this observation the same was found to apply for the code mixed utterances too. Hence, the majority of our participants (91,8%) produced English-Greek code mixed utterances (Figure 5.32). Few children (10,2%) produced English-Albanian code mixes and only a small number of our participants (6,1%) produced trilingual code mixes (English-Greek-Albanian). It is apparent that the Greek language was mostly used when the children were trying to speak in English and they had to import another linguistic system in order to succeed the best possible communication. The fact that the vast majority of the children imported Greek and only a few did so with Albanian is indicating that the trend that we discussed as far as the usage of the languages within the whole corpus as well as within code switches is also strong with code mixes too.

However, this trend was observed with the code mixes that did involve the target language, English. It is pointed out that there were some code mixes which involved only the children's L1 and L2 and there was not a single word in their L3. These code mixes (Albanian – Greek utterances) were only a few (4,1%) of the whole corpus. Apparently, the children who had a lower L3 proficiency would resort to their L1 and their L2 in order to go on with their narrations, especially at those points that they might have felt a bit L3 “drained”. Although, this verb might seem somehow surprising or even absolute it was apparent from the observations of the texts as well as the task of the narration, while the children were in the process of this task, that when they felt that they had exhausted their L3 (English) capacities they would use for a couple of utterances their other two languages. This practice during their narrations seemed to give them some extra “stamina” and then they would begin their utterances with their L3, at least most of the times. Therefore, this observation seems to be in a kind of connection with the previously discussed minimalistic approach with regard to the usage of two languages in their code mixed sentences and not three. This sort of explanation would lead us to gather that trilingual speakers always find a way to make as simple routes as possible. They probably have their own way to navigate themselves during their speech productions and they seem to be able to “save” themselves each time they cannot live up to the expectations of the required speech situation; in that sense, our participants managed to keep on narrating even when they could not keep on doing it in the target language (their L3) and they needed a small break. This line of thinking would be eligible for more attention, however, if it could be verified in another similar task with similar participants' profiles.

### **6.5.3. Code switching and code mixing in the sentences produced**

The previous section (6.4.2.) aimed to present and discuss the findings regarding the whole corpus as a general overview. In the following section we will discuss the findings regarding the code switches and the code mixes our participants produced by focusing on the sentence level. This will enable us to gain insight into the way our participants navigated themselves and what kind of transfers they did while they narrated in their L3. The Greek and Albanian transfers they employed as well as the combination of the languages used in the code mixed utterances will help us comprehend these children's mental lexicon dynamics and determine which language, i.e. Greek or Albanian- whether their L1 or their L2, was the main source of supplier during their narrations in their L3. Below the discussion on this research question is discussed and possible interpretations are attempted.

#### **6.5.3.1. Code switching in the sentences**

In our corpus out of the 875 sentences produced about half of them (50,9%) were in the target language (L3, English) set for the narration task (see Figure 5.32). This quite high percentage of the utterances in the target language shows that these children had implemented the rationale of the task in a rather high degree and they focused on succeeding it. However, they did produce code switches in their other two languages; there were a few Greek code switches (full utterances in Greek) and some Albanian code switches (0,5%, i.e. 4 sentences out of the 875 total sentences).

The same trend that was observed when we looked into the distribution of the languages involved within our corpus was actually seen in the sentences too. That is, the code switches were more in Greek than in Albanian. Clearly, this finding suggests the greater ease with which these children could switch to Greek and produce full utterances in this particular linguistic system compared to the Albanian one. It is evident that our participants did not feel as confident in Albanian as to produce many full utterances in Albanian. Greek is the language they mostly use, as we have already commented and therefore their greater use of it, found in code switches too, does not strike us as a surprise. The children simply resorted to the language they were more efficient in or the one that was more likely to give them a great number of items to keep on narrating with.



### **6.5.3.2. Code mixing in the sentences and the distribution of the languages involved**

Likewise, the code mixes the children produced mostly involved Greek. A considerable number of the 875 sentences they uttered were English – Greek code mixes (37,9%). Other combinations of languages used in the same sentences which resulted in code mixes were rather scarce. Specifically, out of the total of the 875 sentences in our corpus 12 sentences (1,4%) involved all of the three languages, i.e. English- Greek- Albanian. This is not a surprise since we have already discussed the fact that rarely do trilingual speakers employ all of their three languages in the same utterance. This has been attributed by the so far literature to the trilingual speakers' perception of their languages; they are believed to treat their first two languages as one linguistic system and their third one as the second linguistic system. Therefore, they tend to produce code mixes which involve two languages. This could be an explanation on why there are so rare research data which include trilingual utterances, especially when the task entails a free narration speech production task. As we will discuss later on though, the fact that trilingual speakers transfer items from their other two languages has also been linked with their lack of knowledge in the target language. In such cases the speakers seem to resort to one of their other two languages in order to communicate. The fact that they might show a higher degree of transfer from a specific language during their L3 speech production might have to do with the richness of knowledge in one of them. Although, there are cases that the first two languages are acquired either simultaneously or semi-simultaneously (in fact sometimes it is extremely hard to define which language was their L1) it has been suggested that one of these first two languages overrides the other one and eventually gains greater power within the speaker's mental lexicon. This means that one of the first two languages dominates the other one, either because it is more used or it is simply the medium for everyday communication (like in our case with Greek). The linguistic system that is mainly taking over the speaker's mental lexicon might in the course of time result in a language shift in expense of the "weaker" linguistic system. In most cases, this language shift is strongly connected with the higher status that one of the languages may have in the society and consequently in the speaker's perception. This higher status mentality is mainly found in speakers who own a linguistic system which is linked with an immigrant background, just like in our case with the Albanian language.

Moreover, the English- Albanian code mixed utterances were found to be

rather scarce since they were only 1,8% of the total of the code mixed utterances in our corpus (i.e. 16 sentences out of the 875). This is in line with the aforementioned prevalence of the Greek language as far as transfers are concerned and clearly proves that Albanian is not a strong supplier for these children.

Also, there were two children (out of the forty nine) that produced Albanian-Greek code mixes. These children produced four such code mixes which are the 0,5% of the total of the code mixed utterances found in our corpus. This rather small number of this combination of languages in a single utterance is reasonable since the target language for the narration was English and the children stayed focused on succeeding it as much as possible. We could interpret these Albanian-Greek code mixes as an effort to keep on narrating even when the children felt they needed to resort to their other two languages in a full scale. This phenomenon though was found by two children who had A1 low sublevel in their L3, English. Therefore, we may attribute it to the fact that these children lacked the general lexical knowledge and felt that they could escape this hardship by employing their other two languages, although none of which was a target language. The general guidelines given by the researcher before the interviews would start was that they could use any of their three languages if they felt that they needed to. In that sense then, these two children made use of this suggestion and kept on narrating. Their goal was to communicate what they saw in the picture story, thus in this sense they were successful in the final result; they maintained their speech production. Therefore, we could consider these speakers as successful communicators since they found a way to stick to the task they were given; the communicative purpose was fulfilled in a broader sense. However, their language proficiency assessment (A1 low sublevel) attests that they had to use their other languages to overcome their lexical needs in their L3, so they employed them in a single utterance leaving their third linguistic system aside for a bit. Besides, these two children showed lower degree of use of their L3 in their narrations in comparison to other speakers whose L3 was assessed as A1 high and/or medium sublevel. Thus, the level of proficiency in their L3 is strongly connected with the kind of code mixes our speakers produced.

Concluding, the trend observed in the whole corpus which was previously discussed (see also 6.4.2.) regarding the dominance of Greek in the whole corpus was also found in the per se “inner” investigation of the transfers in the sentences produced, both in the code switches and in the code mixes. This finding shows an agreement of the degree of the Greek transfer both in the whole corpus as well

as in the code mixed utterances themselves. Although this may seem as a natural agreement, it had to be investigated since the code mixes could present a different distribution of the languages and therefore a higher degree of transfer from Albanian. However, the investigation conducted in the code mixed utterances showed that the trend observed, that is, the Greek prevalence in terms of the transfers, was what the speakers subconsciously chose to do in order to succeed communication during their narrations.

### **6.5.3.3. The words produced in the code switched and code mixed utterances**

In this section we will briefly discuss the degree of the words found per language in both code switches and code mixes. However, special reference will be made in the code mixed utterances where transfers are located. A more thorough discussion on the distribution of the words used by each one of the three languages will be made later on (see chapter 6.5.).

As we have so far seen with the general picture of the corpus the degree of the presence of each one of the languages involved on the words level is similar within the code mixed and code switched sentences. This means that the trend observed as far as the degree of presence of the words per language within the sentences is in line with the one seen in the whole corpus.

Specifically, as far as code switches are concerned, the higher degree of usage was found in Greek code switches; This is described as follows: in 19 texts out of the 49, and in 62 utterances out of the 875, the Greek words found were 549, which is 6,1%.

In comparison to the Greek code switches Albanian switches are far less. There are only 2 texts containing Albanian code switched utterances; these 2 texts (i.e. 2 children) have produced 4 sentences which is 0,5% of the total corpus. Also, the number of the Albanian words found in these code switches is 18, that is, 0,2% of the total words of our corpus (n: 8993). This finding clearly shows that our participants resorted to full Albanian utterances far less than Greek ones and indicates that the trend observed in the whole corpus as far as the Albanian words usage is found in code switches too.

As far as code mixes are concerned the findings regarding the words usage are showing that the trend is quite similar, in that those code mixed utterances that contain Greek words are found to be more compared to the ones containing Albanian. More specifically, the majority of the words are found in English- Greek

code mixes, i.e. 40,7% (n: 3663 words).

On the other hand, in the code mixes containing English- Greek and Albanian which are rather scarce, the word usage is limited, i.e. 1,5% (n: 131) out of the total corpus. However, this makes sense since as we previously discussed that trilingual code mixes are unusual within the so far bibliography too. In our corpus the trilingual code mixed utterances were found to be 12 out of the total of 875 texts our participants produced and they were located in 3 texts (i.e. 3 children), (see Table 5.4). Therefore, the picture we gain is that the trilingual code mixes found in our data are in the same rationale of those found in the so far bibliography. Also, the degree of word usage found in them is in accordance with their relatively rare appearance in our corpus.

In our corpus there were some Greek-Albanian code mixes as well, although none of these two languages were a target language for the narration task of the picture story. These code mixes were rather few (2 utterances out of the 875) and the word usage found was 0,4% (n: 35) of the total words located in our whole corpus. The children resorted to these code mixes in order to “catch their breaths” as it seems, and then they would continue with their narrations by producing English utterances, code switches or code mixes.

In the next section we will present and discuss the inner distribution of the languages within the utterances our participants produced as well as the degree of presence of each one of the three languages. Special attention will be given to the distribution of the languages within the code mixed utterances, as these will show the degree of the transfers our participants performed and the degree of presence of the three languages our participants use.

## **6.6. The distribution of the three languages in the Code Mixed utterances**

In this section we will present and discuss the distribution of the three languages in the code mixed sentences. These code mixes were employed by our participants during their free narrations of the picture story they were given. The inner distribution of the three languages will be discussed in terms of the sentences the children produced, then in terms of the words they produced and the linguistic system they belonged to and finally in terms of the relations found within the code mixed sentences. This focus on the code mixed sentences is important since they

are the ones in which transfers are performed by the speakers. Conclusions on the way our participants navigated themselves as well as possible interpretations of their languages use will also be attempted.

### **6.6.1. The degree of use of the three languages in code mixes; a more detailed analysis of these sentences and their composition words- wise**

In our corpus we located a great number of code mixed sentences. In fact, there were code mixes in 45 out of the 49 texts produced by our participants. This means that 45 out of 49 children code mixed during their narrations. Our corpus consists of 875 sentences and there are 364 sentences (41,6%) that are code mixed ones. The rest of the sentences are the ones produced in the target language of the narration task (L3, English) as well as code switches (in Greek and in Albanian), (Figure 5.35).

These code mixed sentences consist of 3960 words which make the 44% of the 8993 total words found in our corpus (Figure 5.36). The majority of the words in the code mixed sentences are English (the target language of the task) and make a 58,8% of the total ones produced. This great number of English words within the code mixes indicates that although the children resorted to code mixing they did try to produce as much English as possible, thus abiding to the target language of the narration task. This may also account for the fact that the children had reached a certain level of English that enabled them to keep on narrating, even if they had to code mix at some points. In such a case they kept using English in their code mixes as much as possible. This is also apparent in view of the degree of use of Greek words in the code mixes; they were 38,7% of the total words located in them. Greek kept having a substantial role in code mixes too, thus maintaining its influence on our participants. As we have already discussed, Greek had a major influence in terms of the whole corpus and its degree of presence was found to be rather high. More specifically, the degree of presence of Greek in the whole corpus was found to be 23,1%, that is, 2080 words out of the 8993 (see also Table 5.2). Therefore, this Greek lexis prevalence is found to be the same as far as code mixes too. Later on, we will see into the matter of Greek as an L1 and its influence in code mixes (see 6.7.3.).

Moreover, the degree of presence of Albanian within the code mixed sentences is relatively low since only 2,6% of the words located in mixes were Albanian. This

lower degree of participation of Albanian is actually in the same line with its participation in the whole corpus; there were 120 words out of the 8993 found in the whole corpus which is 1,3%. Therefore, Albanian is still a less used language in code mixes too, even though the children would use it in order to escape from some hardships they encountered with the English language. The fact that Albanian was a less used language for these children, as we have previously discussed, seems to have played a role in the ratio of word usage in the code mixed sentences too, while Greek which was an everyday communication medium for these children took up more space both in the whole corpus and in the code mixed sentences too. In other words, our participants mainly transferred items from Greek and not from Albanian every time they needed, and this was also found within the code mixed sentences. This Greek prevalence is consistent with our so far findings and may be even linked with the language shift that we have already suggested. The fact that our participants showed a clear preference for Greek instead of Albanian, which is a heritage language for them, means that they might be more confident and eloquent in Greek, which is the language they use every day.

### **6.6.2. A closer look into the code mixed sentences; the dynamics of the three languages in question**

In our corpus we found four different kinds of code mixed sentences (Table 5.5):

1. English – Greek code mixes (in 45 texts, 332 sentences, 3663 words),
2. English-Albanian code mixes (in 3 texts, 12 sentences, 131 words),
3. Greek-Albanian code mixes (in 2 texts, 4 sentences, 35 words),
4. English-Greek-Albanian code mixes (in 5 texts, 16 sentences, 131 words).

It is evident that English-Greek code mixes are the majority of the code mixed utterances of our corpus. This is quite natural if we take into consideration what we have so far seen and discussed; most of the times a transfer was needed Greek was drawn from the speakers' mental lexicon. Besides, the English-Greek code mixes are 91,2% of the total of the ones found in our corpus (see Figure 5.38). The prevalence of Greek as the main supplier of transfer is seen in code mixes as well. Therefore, our participants perceived Greek as the linguistic system that could mostly provide

them with the equivalents every time they could not come up with the English words. Another interpretation is that these children could access their Greek lexis “bank” more easily compared to their Albanian one. Also, the fact that our participants had stated in their questionnaires that for those ones that Greek is their L1 it is also the main language that they use every day (97%, see Figure 5.20) could possibly explain the frequency of its use as far as transfers are concerned too. Since Greek is the most frequently used language for these children it is possible that there is a connection between the frequency of its use and the degree of the transfers. However, a more thorough discussion on the factors that might have influenced the degree of the Greek transfers will be attempted later on (section 6.7).

In the following section we will discuss the way our speakers’ narrations could be analyzed in terms of the existing Models on Code Mixing utterances. The four sets of code mixes found in our data (i.e. English- Greek ones, English- Albanian ones, Greek-Albanian ones and English-Albanian-Greek ones) will be discussed according to existing Models for code mixes as well as the dynamics of the three languages in them.

### 6.6.3. The code mixed utterances; Discussing existing Models

The structural domination of one language over the other one within a code mix is a question that has been considered extensively in so far research. Current literature includes two different and conflicting standpoints on this issue. Myers-Scotton (1993, 2002) and Jake et al (2005) introduced a model called the Matrix Language Frame, which refers to the idea of a matrix language and an embedded language. According to this model, one of the two participating languages is the matrix language (ML) and the other one is embedded in it (EL – the embedded language), placing them both in a state of asymmetrical relationship. It has to be pointed out that the Matrix Language Frame model deals only with code mixing (intrasentential), due to the fact that code switching (intersentential) involves exclusively full sentences in a single language.

Taking this into account, we will look into the code mixed utterances with regard to such models in order to interpret our participants’ code mixing paths. Therefore, if such a model could apply to our data we could come up with a reasoning regarding their code mixing techniques. To begin with, it seems that the

aforementioned model of the Matrix Language Frame one is applicable to our participants' code mixed utterances. This is because the children's task was to narrate in their L3 (English) and try to keep on this target by using their other languages if they felt that they needed to.

It is evident from our findings that our participants used Greek as a basis for their transfers since the majority of them came from Greek. Since the majority of the code mixes were English-Greek it is deduced that Greek was used as the main language that these speakers relied on in order to complete their narrations successfully. With regard to this specific code mixing, English took over 60% of the utterance and Greek took over 40% of it (see Figure 5.39). The majority of the words in these utterances were English ones, i.e. the target language of the task. In this case then the children produced utterances which used English as the Matrix Language and Greek was the Embedded one. The children would elicit Greek words from their lexicon every time they needed to fill in the lexical "gap". In such a case they were found to follow the English grammatical constraints and they would fill in the equivalent Greek word in the place of the English one that they could not come up with.

For example:

*"The boy and his dog goes to the river.*

*He continues to go the river and then he sees a frog on the river.*

*Then he try to catch the frog and then he fall down.*

*So he's in the river.*

*Then he βγήκε with a bucket in his head and the frog το κορόιδευε.*

*Then the frog του ξέφυγε.*

*The boy shouts to his dog to catch the frog."*

In this excerpt we see that the speaker initiated the narration in English but he/she had to embed some Greek words in order to continue without interrupting the task. Therefore, when the English word "came out" could not be retrieved from his lexicon, the speaker used the Greek equivalent "βγήκε" to make sure that the message would get across. The same happened with the English "made fun of him" which became "το κορόιδευε"; the speaker had to transfer a Greek word during his/her English narration, so he/she embedded the Greek words and followed the English structure although the Greek syntax was also applied as far as the genitive



“του” is concerned. It seems as though the speaker swiftly adapted him/herself to the Greek “side” of the utterance with a remarkable comfort.

Likewise, in the next example the speaker employed the same communicative strategy. Every time he/she could not complete the utterance in English he/she would embed the equivalents by transferring them from Greek.

*“The picture saw a little boy να περπατάει with a dog and a κουβαδάκι.*

*I saw a little boy να ανεβαίνει a tree.*

*The dog looked sky.*

*The little boy looked βάτραχος.*

*The boy προσπαθεί catch the frog.*

*But boy fall down.*

*Fall in the λίμνη.”*

In this case too, the speaker followed the English structure and sought for the Greek equivalents for some words that he/she could not come up with during the narration. Therefore, he/she used “κουβαδάκι” instead of “small bucket” and “να ανεβαίνει” for the English “climbing”. Also, the Greek word “βάτραχος” was used for the English “frog”. All of the transfers were placed in the same spot that the English word was needed and there was no obstruction of the English structure or any grammatical problem caused. In this sense then, the Myers-Scotton Matrix Language Model seems to apply to our cases.

In fact, Myers-Scotton described the Matrix Language as the “one language that supplies the main grammatical frame for a clause containing words from two (or more) languages.” (2006: 235). The same rationale was observed with English-Albanian code mixes; in the following example we can see how another speaker embedded the Albanian equivalent “te pema” for “the tree” in order to succeed his narration:

*“Then he says to the dog to catch the frog.*

*The two of them go to the te pema to catch the frog.*

*Then when the boy was catching it he did something bad and catch his dog.”*

The Albanian transfer was placed in the same spot that the English word would appear without causing any kind of grammatical or major syntactical upheaval in the utterance. Although, the Albanian article “te” was used twice since it

was placed next to English article “*the*” (they both have the same meaning) it did not cause any serious confusion. It seemed like the speaker needed to step on the Albanian article in order to produce the Albanian noun he/she needed, as if this would act as a language generator boost device. As seen in Figure 5.39 the code mixed utterances consist of two or more languages and each one of them takes over specific area of the code mixes.

We have seen the English-Greek code mixes and we are now moving forward with the English-Greek-Albanian ones (second bar in the Figure 5.39). As we can see, in this case the children used English in 37% of their code mixes and Greek in 39% of them, while Albanian took over 24% of these utterances. Although, the target language was English, the speakers that produced these trilingual code mixes transferred items from both Greek and Albanian. According to the Matrix Language Frame Model then, the Matrix language in these trilingual code mixes is Greek, since it took over most of the utterances. We will now present and discuss some examples of our trilingual code mixes.

Example 1:

*“Then ai u fut (=he went) va piáσει the frog but ai në fund mundi”. [=in the end he couldn’t].*

Example 2:

*“Μετά το αγόρι μάλωσε the dog because ai nuk kapì qënin”. [=he did not catch the dog].*

This speaker used all of his three languages in order to narrate the picture story. He/she was not feeling confident with English and this is also validated by the A1 assessment in his/her L3 which was in fact rated as A1 medium sublevel for his/her overall narration. Clearly, this speaker needed more help from both L1 and L2 compared to others in order to accomplish the narration task. This speaker is one of the six participants who produced trilingual utterances. In view of the Matrix Language Frame model the speaker retained the English syntax and is suggested that the Matrix Language is English.

However, Muysken pointed to the fact that the Matrix Language Frame model may not be applicable to all multilingual corpora, since it might not always be easy to identify the Matrix Language. Muysken provided six possible approaches available when identifying the Matrix Language. He calls the first approach a “discourse-

oriented way of determining the base language”. Here, the matrix is defined by using a conversion criterion, i.e. the matrix is the language in which the conversation is generally realized (2000: 64). However, this is not as clear to define. If we combine this approach with his third approach (i.e. to count morphemes and the language with the most morphemes is then the Matrix Language) then the Matrix language for this particular speaker is Greek if we look at the total count of the trilingual utterances he/she produced. To be more specific, this speaker produced in a total of 5 such utterances 23 Greek words, 20 English words and 17 Albanian words in his trilingual code mixes found in his narration (the word count in the utterances themselves gives more than one possible answers to the Matrix language issue).

Muysken also called the second approach left-to-right parsing, where “the first word or a set of words in the sentence determines the base language” (2000: 65). It is difficult to stick to this approach too though since this speaker’s trilingual utterances did not begin with the same language every time. In the first example he/she started the utterance with English and in the second example he/she started it with Greek. However, we need to point out that before the speaker’s first example there was a sentence fully uttered in English; therefore he/she might have used that as a basis and tried to do the same with his second one too. However, since he/she could not complete the meaning by using only English, Greek and Albanian words were employed too. With the second example though, the picture is not as clear since the speaker’s previous sentence was an English- Greek code mix, starting with English and ending with English words (i.e. “*But dog, child του λέει, and the boy είχε πιάσει τον dog.*”). Therefore, we could suggest that the child might have felt that he/she was having a greater difficulty in achieving the task and improvised by using all of the three languages available. Therefore, it is rather difficult to locate the Matrix language by applying this particular approach by Muysken too.

The fourth approach is related to psycholinguistics, and “the language most activated for the speaker” (2000: 67) is the Matrix Language. In this case then, the Matrix language would have to be Greek again, according to the degree of use of the Greek words during the speaker’s narration. However, this also applies to the degree of the activation of Greek since it is more employed compared to English and Albanian as far as trilingual code mixes are concerned too (see Figure 5.39, second bar).

Regarding the fifth approach which is a structural one (it lets the main verb of the sentence determine the matrix) and the sixth and final approach which is based

on constituent structure, (“the highest element in the tree would determine the language for the whole tree, this would often be the inflection on the finite verb (...) In subordinate clauses this would be the complementizer”, 2000: 67) it seems that it cannot be considered as a safe method to establish the Matrix language for our speaker since there are a few main verbs from all of the three languages in the trilingual code mixes as well as different structures.

Concluding, it seems that as far as Muysken’s approaches the first, the third and the fourth one could possibly provide us with a safer deduction regarding the Matrix language of our trilingual speakers. To make it more clear, the Matrix language seems to be easier to detect in terms of the mostly activated language, as well as in terms of the one with the higher degree of presence. Also, it could be detected in terms of the one which seems to be the one that the narration mostly occurs in; thus that would be Greek. To top it up, we add another example of another speaker’s narration which includes trilingual code mixes in order to conclude this question.

Example 3:

*“The çuni and the dog έφυγαν of the house. [çuni=boy].*

*Ο βάτραχος παραξενεύτηκε.*

*Είδε τα βήματα από το chupet and the dog και σκέφτηκε να πάει στο σπίτι του”.  
[chupet= little child, non standard Albanian]”.*

As seen, the speaker embeds two Albanian words when needed; however, he/she maintains the structure of the utterance without interrupting it. Syntactically the speaker seems to have the English rules in mind since he/she says: “τα βήματα από το..” thus keeping another syntax map in his/her mind. Normally, the same phrase would be “τα βήματα του”, which seems to lead us to the suggestion that the speaker was influenced by the target language (English) which was in his/her mind and applied it in his/her syntactical and grammatical line. Moreover, according to the aforementioned Muysken’s approaches we would have to suggest that the Matrix language could be Greek, since the above excerpt shows its prevalence both in numbers and in terms of a greater activation of the specific language. Also, the narration seems as though it is “held” in Greek in that there is a predominance of this particular linguistic system. However, in this case we cannot be certain and suggest that the Matrix Model according to Myers-Scotton is the one that applies in this case. That model maintained that the Matrix language is “one language

that supplies the main grammatical frame for a clause containing words from two (or more) languages” (2006: 235). However, there are some doubts whether it was Greek or English the one that supplied the main grammatical frame. Although, there are some hints that Greek could be the one that the speaker was following while navigating him/herself during the narration; the speaker may have used the “*από το chupet*” because he/she was preparing him/herself to “enter” the English mode, however there was an immediate continuation with the Greek syntactical and grammatical sequence and an Albanian lexis was embedded.

As far as the *Greek-Albanian code mixes are concerned* the picture we gained is that Greek has been employed far more compared to Albanian. Specifically, there were some of our participants that at some points of their narrations they did not produce any English at all in their utterances; two children out of the six that were found to have used Albanian during their narrations and produced Greek-Albanian code mixes. The proportion of the Greek usage within these code mixes is a lot greater than the Albanian one; in fact Greek took over 69% of this particular set of code mixed utterances while Albanian was 31% of them. We present some examples of such code mixes below:

Example 1:

*“Diali kapi qënin αντί να πιάσει το βάτραχο. [=The boy caught the dog instead of catching the frog].*

*The boy catch dog.*

*Dhe nuk kapi το βάτραχο”. [=And he didn't catch the frog].”*

This speaker produced during the narration only these two Greek-Albanian code mixes. Between the two Greek-Albanian code mixes an English sentence occurred (the target language of the narration). Although the English verb “catch” was not properly used as far as the grammatical form the communicative purpose was achieved. However, both of the Greek-Albanian code mixed sentences started with Albanian and went on with Greek. This speaker was assessed as A1 low sub-level which further indicates that he/she lacked the sufficient English lexicon and thus resorted to his/her other two languages.

Poplack (1980), in the frame of her research in mixed utterances in English-Spanish bilinguals, was one of the first that claimed that this phenomenon of code mixing is not an indication of language imperfection, but more points to signs of normal development in a bilingual child: “Code switching (sic), then, rather than

representing deviant behaviour, is actually a suggestive indicator of degree of bilingual proficiency” (p. 73). MacSwan (1999) also shared this opinion by stating that “code switchers (sic) have the same grammatical proficiency as monolinguals for the language they use” (p. 22), and thus instances of mixing of elements of two languages can be attributed to an immature system in either language, and they are not caused by interlinguistic misinterpretations (Goodz, 1989). Heritage language speakers constitute a group that tend to code mix a lot; however, researchers have shown proficiency differences between the heritage language and the majority language in this group of speakers (see for example Montrul, 2008; Polinsky, 2007).

What is interesting is the fact that the speaker shows clear knowledge for the same meaning in all of his/her three languages; however, he/she did not choose to use the English word since this is the target language after all. Instead he moves around his/her languages by using the linguistic item in Greek, Albanian and/ or English. For instance, the speaker used “the boy”, “το παιδί” and “diali” for the same meaning, that is, a young child or a young boy. However, we do need to point out that the Greek word “το παιδί” is in fact a really young child and the speaker could have used the word “το αγόρι” which means “the boy”. The same goes with the Albanian word “djalë” which is closer to the word “boy” whereas the word “Çuni” seems to be closer to the word “the young child” or “a young guy”. What made the speaker to use another meaning and not just the equivalent for the English word “boy”? This seems to be a more advanced linguistic technique on behalf of the speaker rather than a linguistic deficiency. Although, the speaker was not assessed as an A1 high or medium sublevel he/she seemed to be able to perceive that he/she owns more than one meanings and lexes for the English “boy” and thus employed them during the narration. Could this be a way to denote that he/she owns more relevant words and that the fact that the “boy” was not as easily uttered in the other two languages could be easily surpassed? This would mean a rather sophisticated speaker, however we cannot prove our suggestion. However, we have already talked about the qualities a multilingual speaker owns and therefore such a suggestion might not be as farfetched as it looks. Furthermore, this might point to the fact that the multilingual speaker who is in the process of his/her synchronic languages’ development is acquiring special awareness of these linguistic systems and their lexes’ attributes and has the ability to exploit them in all of them.

Accordingly, the speaker was found to have used both the word “frog” as well as the Greek word “βάρραχος” for the same meaning. In this case the Albanian

equivalent was not employed; however it seems to be validating previous studies which refer to the linguistic maneuvers on behalf of the multilinguals. Code switches and code mixes being triggered by lexical deficiencies could look like a rational explanation; even if bilingual speakers have a totally developed grammatical system in each language they speak, they may present a lack of specific lexical units that are necessary for the expression of their ideas. Older studies though, (Clyne, 1967; Hasselmo, 1970, in Lipski, 1978; Lance, 1975,) suggest that code mixing cannot be attributed only to the lack of lexical availability alone. Among others, Cruz-Ferreira (2006), Rothman and Niño-Murcia (2008) display data on trilingual siblings which make it clear that the switches between languages were not totally caused by the lack of available synonyms in children's vocabulary; in fact, in Rothman and Niño-Murcia's study, the children often used the correct terms from two languages conversely within the same context.

Also, Dewaele (2000) studied his daughter's progress as she was being raised as trilingual. Although he stated that most of his daughter's utterances were mixes in two of the languages she owned he did observe that there were times that she used all of her three languages. He reported that she was able to use all of the three languages she spoke for the same concept ever since the age of 2 years and 5 months. She first used the English word, then the French and then the Dutch one for the word "feet" as in the example:

L: Grands feet papa! (Big feet daddy!)

D: Grands pieds? (Big feet?)

L: Oui grands pieds! (Yes big feet!)

L: Voetje, non grands feet. (Small foot, not big feet). (\*She points to her feet).

However, as far as the Matrix model it seems that "example 1" indicates a fairly balanced distribution of lexical items of both languages although Greek looks as a bit more activated. The general picture also indicated that Greek was more used in Greek-Albanian code mixes compared to Albanian (69% and 31% respectively). These results apply for the total of the two children who used this particular code mixing set. Therefore, according to Muysken's Matrix model the embedded system

is the Albanian one since the above extract shows Greek language prevalence both in numbers and in terms of a greater activation of the specific language. Also, the narration seems as though it is “held” in Greek in that there is a predominance of this particular linguistic system. However, in this case we cannot be certain and suggest that the Matrix Model according to Myers-Scotton is the one that applies in this case. That model maintained that the Matrix language is “one language that supplies the main grammatical frame for a clause containing words from two (or more) languages” (2006: 235). However, there are some doubts whether it was Greek or Albanian the one that supplied the main grammatical frame. In this sense then, Muysken’s Matrix model seems to provide a clearer answer as to which is the matrix language and which is the embedded one; Greek would have to be the Matrix language and Albanian would be the embedded one. The whole picture of the speaker’s narration also provides a fuller view into this matter since the Albanian words might not be many but still they are used in the right places in the right form. Thus, the speaker seems to be competent in Albanian to the point of using this language more than other participants of this study.

In the following “example 2” we see the same rationale by the second speaker who employed Greek-Albanian code mixes in our corpus:

*“Çuni ra brenda në στο ποτάμι και ο βάτραχος τον κοιτούσε.” [=The boy fell in the river and the frog was looking at him].*

*“Και μετά ο çuni φώναζε το βάτραχο και μετά αυτοί βαρέθηκαν.” [=And then the boy was calling the frog and then they got bored].*

Likewise, the second speaker showed the same kind of code mixing techniques as far as this particular set of code mixing, i.e. the Greek- Albanian one. He/she started one of these utterances with Albanian and continued with Greek in the first utterance that was produced. In the second utterance there was just one lexical item embedded in the Greek utterance and was placed in such a manner that did not interfere with the meaning or the structure in any way. This speaker used 5 out of the 13 Albanian words in Greek-Albanian code mixes. The rest eight Albanian words were found in an Albanian-English code mixed utterance, in which they were actually the majority (i.e. 8 Albanian items and 3 English ones).

At this point we will present and discuss the English-Albanian code mixes in our corpus. The same speaker that we discussed above produced the following utterance that we have just referred to:



*“Dhe pastaj ai çuni shkoi që ta kapi and the dog.”* [=And then this boy went to catch the dog too].

The majority of the utterance was taken over by Albanian items, whereas there were only three items transferred from English. However, the general picture gathered from our corpus is that in English-Albanian code mixes the majority of the utterances were made up from English (i.e. 55% English items and 45% Albanian items, see also Figure 5.39). This makes sense, since this particular speaker for example used a lot of English and only 13 Albanian items. The majority of his narration was in English and there were some Greek transfers.

The general picture showed then that the speakers who produced English-Albanian code mixes used English as the Matrix language and Albanian was the embedded one, according to Muysken’s model.

The following examples (a and b) are from two different speakers and show this prevalence of the English linguistic system within the English-Albanian code mixed utterances:

- a) “The frog is very angry because the boy donte ta kapi” (=they wanted to catch it).
  
- b) “The boy see a frog and he want ta kapte. (=to catch it). The boy is running po diali bie në lumë. (=the boy fell in the river). The boy run ra në lum”. (=went in the river).

As we can see, the speaker started their utterances in English and the Albanian transfers are located in the middle of these utterances and go on until their end. The Albanian items do not tend to intervene in the utterances by sporadic transfers here and there, they rather appear in the middle of them; the speakers “prefer” to start their speech production in English and embed the Albanian linguistic system from a point on rather than drop some Albanian items here and there. This could be interpreted as a speech production by a more advanced user of the Albanian language. Since these speakers were also assessed as A1 low sublevel it seems that they had to ask for help from another language which was well established in their mental lexicon. Their overall Albanian usage was found to be rather limited in our

corpus and we have previously discussed the effect of the language shift that has been influencing our participants' heritage language "survival". However, it needs to be noted that those children that were assessed as less advanced English users produced the most Albanian transfers within our code mixes. The role of our participants' command of the English language seems to have had a certain role in the Albanian transfers. However, as we have already discussed these children had not received any formal instruction in their heritage language (Albanian) and we found a significant effect of formal instruction and its influence in the most successful L3 speakers.

Concluding, the Muysken (2000) Matrix model seems to have provided a more solid ground to solve the question of our participants' code mixed utterances, i.e. the Matrix and Embedded languages. The general picture found was that Greek was more developed in our speakers' mental lexicon and that the language shift regarding their heritage language has been rather high. Our speakers showed a greater influence from the dominant language of their society, i.e. Greek, and a much less influence from their heritage language, i.e. Albanian. The fact that children tended to prefer Greek as the language of communication even within their home premises seemed to have worked as a really significant factor towards their languages relationships and their dynamics within their code mixed utterances. However, this was not only found within the code mixed utterances, it was also found in their overall speech production in our corpus.

However, the fact that our participants might have sensed the lack of their interlocutors' Albanian language is a factor that should be taken into account, although it is not something that can be easily proved or addressed to. As we have mentioned in the methodology chapter there was extreme caution on behalf of the researcher that the children would not be able to understand whether she has any knowledge of their L1 and their L2. Nevertheless, one cannot be certain about the multilingual children's language sensors, as Dewaele (2000) has already pointed out that his daughter was able to identify her interlocutors' language knowledge ever since she was just a toddler. Therefore, we cannot be certain whether our findings would have been a lot different if our participants had been addressed to in Albanian by the researcher (they were only addressed to in English in order to set the target language of the narration and to "conceal" her languages knowledge).

Greek was found to be the most employed linguistic system on behalf of our participants. In view of this finding and the so far discussion we will now proceed to the next section to discuss the factors that might have influenced the degree of

presence of our participants' Greek (L1 or L2) during their narrations.

## **6.7. The degree of L1/L2 transfer and the factors that might have influenced it**

Regarding the first question on the degree of the L1 or L2 transfer we looked into several factors in order to find out whether transfer might have been influenced by them. These factors that we examined were: *the participants' age* (two groups, i.e. 9-11 years old and 12 years old children), their level of L3 proficiency (it is looked into by means of A1 high, medium and low level as so far described in our study), *their L1 (Greek or Albanian) and the frequency of use of their L1* (i.e. every day, often, rarely) as well as their L2 (Greek or Albanian) and the frequency of use of their L2 (i.e. every day, often, rarely). Below we present the discussion of the results obtained for this research question (for a more detailed analysis of the way these data were gone through and the variables created and statistically tested see 5.3.1).

### **6.7.1. The factors of age and proficiency and their effect on transfer of L1/L2**

As previously presented in the Results chapter we first tested whether the transfer of L1/ L2 is affected by age and the level of proficiency of the children. To begin with, it was found that *there was a significant effect of the age factor since the degree of L1 and L2 transfer was greater for those participants who were younger* (9-11 years old) compared to the older ones (12 years old). So far literature has not shown much focus on the age factor. Cenoz (2001) though, whose study we largely followed particularly in the linguistic part of this thesis, had investigated if there were any age-related differences amongst schoolchildren that had different L1s (Basque or Spanish) while they were asked to narrate the same picture story in their L3 (English). Her subjects have had four years of instruction of their L3. However, these children had the same opportunities of L2 instruction within the day school since both of these languages were taught and they are co-official languages in the Basque country in Spain. Her results indicated that the older children transferred more, both in terms of the transferred items and the number of the children who

showed such kind of tendency. This tendency on behalf of her subjects was observed in spite of the preliminary test she had performed on their L3 proficiency according to which older children had higher attainment. Cenoz attributed this finding to the higher metalinguistic awareness that her older subjects had reached, although she did point out that while the older children had a higher proficiency compared to the younger ones, the overall proficiency of all of them was quite low, just like in our study, i.e. an A1 overall level which was later distinguished in three different sublevels according to their individual assessment (see Methodology).

As we have already said we followed her line of methodology on most of the rationale of constructing our thesis, especially for the linguistic part of it. We found the same results regarding the L3 proficiency of our older participants too, that is, the older ones had acquired higher L3 proficiency (most of our participants who were assessed as A1 high sublevel were the older ones). However, our study indicated that the younger participants showed more instances of transfer, either from their L1 or their L2 during their L3 production. This was attributed to the fact that their L3 proficiency might not have been so advanced as to produce their narrations fully in English, at least for the most part of them. Our finding was therefore different to that of Cenoz's.

Overall, the factor of age has frequently been associated with proficiency due to the perception that usually older individuals have acquired higher degrees of proficiency in their second or third language because of their greater expose/teaching in that language. To this end, it is indeed possible or even expected that greater degree of transfer may be seen with older subjects and this can be attested to the fact that older individuals own more elements of all of their languages and thus tend to produce more transfer since they can actually employ more elements of all of their languages.

In this line, younger individuals have not acquired a great deal of their languages so they do not have the ability to use a great degree of them and transfer as extensively as the older ones. They only produce limited linguistic elements of their languages since they cannot yet manipulate them according to their communication needs with the same effectiveness as older children do. This could be the case with studies that have found that their older participants transfer more compared to the younger ones like Cenoz's (2001). However, with our case that the younger participants showed greater degree of transfer the explanation behind this finding could be that the younger ones had less available L3 lexicon (this is consistent with the

finding that the younger ones had relatively lower attainment of the A1 level) and therefore had to resort more to their other two linguistic systems in order to overcome their communication obstacles while narrating in their L3. This means that the younger ones that were also found in our study to have achieved less attainment of their L3 (just like with Cenoz's study) overcame their lexical problems by filling in their gaps with more elements from their L1 and/ or their L2. This makes even more sense in the light of our finding that **there is a significant main effect of the L3 proficiency on the degree of L1/L2 transfer of our participants**. Besides, Genesee & Nicoladis (2006) have explained this in view of the code mixing mechanism and the way it is generated. They argue that code mixing serves as a way to fill the gaps that occur due to the lack of knowledge because of the child's developing lexicon and grammar. Therefore, the children use code mixing in order to overcome their limited linguistic resources while they try to express themselves. Furthermore, it has been found that young bilingual children mix more when they use their less proficient than their more proficient language (Genesee, Nicoladis & Paradis, 1995; Lanvers, 2001). Our participants were not as proficient in their L3 (English) as in their other two languages, as they were still in the process of learning it as a foreign language, and their other two languages seemed as more solid and safe options in their effort to succeed their narrations.

At this point we need to point out that there was a *statistically significant difference of the degree of L1/L2 transfer between the participants who were assessed as A1 high sublevel and the participants who were assessed as A1 medium sublevel. Also, the difference between A1 High level and A1 Low level was found to be statistically significant*. Therefore, the participants who were more proficient transferred fewer items from their L1 and/or their L2 compared to those participants who were assessed as A1 high sublevel (see Table 5.7).

Finally, there was a non-significant interaction effect between age and L3 proficiency on the degree of L1/L2 transfer; this seems a reasonable finding since there is a non linear relationship between age and the speaker's proficiency in a second or third language. The fact that our older participants showed higher attainment in their L3 does not necessarily mean that their degree of attainment is bound to excel as they grow older (see Table 5.8).

Moreover, on this matter of transfer, Genesee, Paradis and Wolf (1995) conducted a test regarding their lexical gap hypothesis and found that two young bilinguals were more likely to code mix when they did not own the translation equivalent

in the target language. Interestingly, this was the case in 100% of the times for one of the subjects and 65% for the second one. However, Genesee & Nicoladis (2006) do comment that although incomplete attainment of the languages may be a justification for child code mixing it can also be found with fully proficient older bilinguals; this is suggested that happens because “lexical knowledge in both languages of the bilingual is seldom equivalent”, as mentioned before (see also 6.3. section, factor of proficiency discussion). In the case of trilingual children this observation becomes even more complicated and the three languages are expected to be less balanced in terms of proficiency. This fact, however, does not mean that trilinguals are somehow less efficient with their languages. It just points to the fact that trilingualism is a more complex phenomenon and that multilingual speakers are actually more intricate language users. Later on, we will discuss more on Greek, the community’s language, and the factors that might have influenced its greater presence during our children’s narration.

### **6.7.2. The factors of age, L3 proficiency, the specific L1 of the speakers and its frequency of use on the degree of L1 transfer**

We aimed to examine the effect of age, L3 proficiency, L1 language and L1 frequency of use in order to find these factors’ influence on the degree of L1 transfer. Our statistic tests revealed a significant effect of the L1 language on the degree of L1 transfer; The children that had Greek as their L1 transferred in a greater extent from their L1 while narrating in their L3, in comparison to the degree of L1 transferred by those having Albanian as their L1.

This means that the participants who had stated that their L1 was Greek resorted more to this linguistic system every time they needed help to succeed their communication. On the contrary, those participants who had stated that their L1 was Albanian had transferred fewer items from their L1 and consequently more from their L2 (Greek). Our participants therefore transferred in a greater degree from Greek and this was found to be related to their L1. With this statistically significant finding we duplicate the effect of Greek, the dominant language, as an L1 too. It therefore seems that the effect of the society’s language was rather influential on our participants and it did formulate a *modus operandi* for them. Besides, as we have already commented on the degree of the usage of Greek, this has become evident from their narration in their L3 and the fact that they have

mainly resorted to Greek to achieve the task whenever it was needed to transfer from another language. In fact, this was also seen in the degree of transfer from Greek in code mixed utterances which was higher than Albanian in the respective code mixes and the sets of code mixes that these two languages participated. What seems to be an influential factor towards Greek usage, either as an L1 or an L2, is the “higher” status that this language bears for our participants and the “lower” status of their heritage language, Albanian, along with the fact that these children use it more frequently in their everyday life. Albanian is limited within their home and even with their relatives its usage seems to be outperformed by Greek. Therefore, this language shift that has been taking place on this second generation of immigrant families has had as a result the effective dominance of the wider society’s language.

Cenoz (2001) in her study has found that her participants used more Spanish transfers than Basque ones during their narrations in their L3 (English) when their L1 was Spanish and that the ones who had Basque as their L1 did not show a higher degree of Basque. In addition, the older children relied more on Spanish as the transfer source language, while the younger children used both Basque and Spanish; this could indicate that younger children might have been in a synchronic transfer period according to Cook (1992) who points out that the influence of L1 changes and becomes less over time. However, Spanish and Basque are both official languages in the Basque country and they were both taught at the schools these participants attended. In our case Greek is the only official language in Greece whereas Albanian is only used for interpersonal communication by its speakers. Therefore, there are substantial differences between these two studies as far as the languages statuses and their usage.

The other factors of age, L3 proficiency, and the L1’s frequency of use did not render statistically significant results on the degree of the speakers’ L1 transfer. Also, the two-way interaction effects tested (see Table 5.10) did not reveal statistically significant results. Therefore, the question on whether the factors of age, L3 proficiency, the speakers’ specific L1 and its frequency of use influence the degree of L1 transfer has shown that there was indeed a rather important role of the speakers’ L1 on the degree of their transfers from their L1 when that was Greek. The influence of Albanian as an L1 was not found to be influential which was in line with our so far findings on the amount of transfers observed in the code mixed utterances of our participants.

### **6.7.3. The factors of age, L3 proficiency, L2 language and L2 frequency of use on the degree of L2 transfer as well as a discussion on the typological proximity of the languages involved.**

We aimed to examine the effect of the factors of age, L3 proficiency, the L2 language itself and its frequency of use on the degree of the L2 transfer. This was deemed necessary as there have been many studies which suggested that the influence of the L2 has been found to be more influential compared to that of the L1, especially in the case of a typologically close L2 and L3. Although, the issue of psychotypology has received great attention and it has been perceived as a predictor of transfer there has been so far only one study conducted by De Angelis (2005) that mentioned the possibility of an L2 transfer although it was typologically distant to the L3 in question. On this matter there has not been enough information yet and it will surely be a matter of research in the next years. In our case, all of the three languages belong to the Indo-European family tree, with Greek and Albanian having their own branch. All of them are SVOs in terms of their syntactic rules; however, Greek and Albanian can be more flexible in their word orders compared to English which has a strict rule and a change in its word order can easily alter or prevent the intended meaning. The relation of Greek and English is close in terms of the latter's historical loans, especially via the Latin language. However, the relation of Albanian either to Greek or to English is not clear. Besides, there old sources of Albanian texts have not been found to enable the scholars to categorize and answer to some of their questions, especially those regarding its influences and relations to the languages spoken in Europe. This could be one of the reasons that linguists have given Albanian a distinct branch within the Indo-European languages family tree (for more discussion on the typology of the languages involved in this study see 3.4.2.1.).

On the statistical tests we performed we found that there is a significant effect of the L2 language on the degree of L2 transfer. The children that have Greek as their L2 were found to transfer from their L2 in a greater extent while narrating in their L3 in comparison to the degree of L2 transferred by those who have Albanian as their L2. This means that Greek is a stronger predictor of transfer than Albanian even when it is an L2 for our participants. Therefore, our results show that what plays a role towards our participants' transfers was the dominant



language of their society, Greek, rather than the order of acquisition of their first two languages. This leads to a more sociolinguistic approach to our findings since the role of Greek is also linked to its status and its occasions of use in our speakers' everyday communication. From a psychotypological perspective Greek and English seem to be more easily associated as far as their typological proximity through their loans in comparison to Albanian which seems to be rather distant in terms of its typological relation with English. In that case then, the transfers from Greek have another factor which can be more easily suggested, now that we have seen our findings from the influence of Greek either as an L1 or as an L2. Therefore, we will discuss and devote a specific section on the influence of Greek as the community language in our participants' transfers further on (see 6.7).

The rest of the factors tested for this third question did not reveal any statistically significant results, i.e. age, L3 proficiency and L2 frequency of use indicated a tendency of influence however they were found as significant factors. Also, the two-way interaction effect of age and L3 proficiency (see Table 5.12) was not found to be statistically significant in terms of these two factors' influence on L2 transfer.

#### **6.7.4. The main supplier of transfer during narrations in L3 and the factors that might have influenced the degree of transfer from the children's L1 or L2**

We aimed to assess the effect of age, L3 proficiency, the relative use of L1/L2, the specific L1 and the language of transfer (L1 vs. L2) on the degree of language transfer. The statistical tests showed that the degree of L1 transfer and L2 transfer significantly differ, if no other factor (except for the specific language of transfer) is taken into account (see Table 5.12).

**However, there was a statistically significant effect of L1 language on the difference between L1 and L2 transfer.** The mean degree of L1 transfer is greater than the mean degree of L2 transfer for the children that have Greek as their L1, while the mean degree of L2 transfer is greater than the mean degree of L1 transfer for children that have Albanian as their L1.

On the other hand, there is no significant effect of age, L3 proficiency, and relative use of L1/L2 on the difference between L1 and L2 transfer (see Table 5.13).

**Therefore, those children that their L1 is Greek transfer more from their L1 than from their L2 (Albanian), whereas the children that their L1 is Albanian transfer more from their L2 (Greek) than from their L1.**

This clearly shows the prevalence of Greek in our participants whether it was their L1 or their L2. The finding that our participants who had Albanian as their L1 transferred more from their L2 adds an important element on our so far discussion that Greek had been more extensively used compared to Albanian. The order of acquisition of these two languages has not affected the degree of transfer from each one of them; the society's language and at the same time the typologically closer language to the participants' L3 seems to have been important factors in terms of the degree of transfers. Thus, in the next section we will focus on the investigation of Greek and the factors that might have influenced its dominance in terms of our participants' narrations.

To sum it up in this section we have found out regarding the questions we had posed that:

1. **As far as age and L3 proficiency is concerned there is not a significant interaction effect of the two factors in terms of L1 and L2 transfer.**
2. **Greek as an L1 is transferred more in comparison to Albanian as an L1.**
3. **Greek as an L2 is transferred more in comparison to Albanian as an L2.**
4. **Those children that their L1 is Greek transfer more from their L1 than from their L2 (Albanian).**

**Also, the children that their L1 is Albanian transfer more from their L2 (Greek) than from their L1.**

While there seems to be a resemblance amongst results of questions 2 and 3 with those of question 4, this is not the case. In question 2 and 3 we examined the transfer of L1 and the transfer of L2 separately. In question 4 we examined the transfer of L1 and L2 comparatively. To make it more clear, *the results to questions 2 and 3 show us that Greek is transferred more than Albanian, either as an L1 or an L2*. However, the results in question 4 show us that children whose L1 is Greek transfer more from their L1, whereas children whose L1 is Albanian transfer more from their L2 (Greek).

Therefore, in view of these findings we will now proceed to the next section and focus on Greek and the factors that may have played an influential role as far as transfers while our participants narrated in their target language, their L3 (English).

## **6.8. Greek (the community's language) as a source of transfer and the factors that might have influenced its degree of presence during narration in L3**

Given the above discussed findings on the high degree of presence of Greek we aimed to further investigate this language as a source of transfer. It was the main supplier of transfer and we thus wanted to see into the factors that might have played a more influential role in its use. As we have already said, Greek has been used by our participants as the main supplier whether it was an L1 or an L2 for them. In the next sections we will discuss these factors, in terms of its degree of presence in our whole corpus, its degree of use in the code switches found in our corpus and its degree of transfer in the set of code mixes found in our participants' narrations.

### **6.8.1. The degree of the use of Greek in our entire corpus; the effect of age, their L1 and their L3 proficiency**

We tested the effect of age, L3 proficiency and L1 language on the degree of Greek words transferred in our entire corpus while narrating in their L3. **The main effects of age, L3 proficiency and L1 language were statistically significant.** To begin with, *the younger children (9-11 years old) transferred more Greek words in our corpus while they narrated in their L3 than the 12-years-old children.* This finding was different than Cenoz's (2001) who found that the older children transferred more into L3 English than the younger ones did. In our case it seems that there might be a sort of connection between age and the children's L3 proficiency, although we have already mentioned that there is not a linear development of these two factors. In such a case younger children may have had to transfer more items from Greek compared to the older ones because of their lower degree of attainment

of their L3. Furthermore, Greek might be a very well established language in the younger children's mental lexicon and thus the Greek words emerge in a greater extent and more freely. They might depend on Greek a lot since they perceive it as their "main" language. Besides, we have previously mentioned (see 6.5.3) that there were many cases that our children would use the same word both in English and in Greek, which means that in most of the cases the use of the Greek word was not always a matter of ignorance of the English equivalent. However, we need to point out that our participants might have been affected by the Greek environment that the interviews and the task took place (i.e. their school premises) and they might have been more triggered to use Greek as their main source of transfers.

Moreover, *the children that had Albanian as their L1 transferred from Greek in a greater degree during their L3 production compared to the children that had Greek as their L1*. This clearly indicates that Greek has been a rather "strong" language for the children whose L1 was not Greek too and that its overall influence has been quite extensive on our participants. This is also in line with previous studies which suggested that L2 becomes a base language for the acquisition of the L3 (Clyne, 1997; Williams & Hammaberg, 1998; Dewaele, 1998). Therefore, Albanian L1 speakers seem to use Greek (L2) as the base language for the acquisition of English (L3). However, Greek (L1) speakers did not apply this technique at all; they transferred Greek while narrating in their L3 and their Albanian transfers were really few. The fact that L2 served as a "bridge language" only for the Albanian (L1) speakers raises an issue regarding its universal application on our participants and points to the direction of the language shift or the language dominance of the society's linguistic system once again.

Also, the main effects of age, L3 proficiency and L1 language are statistically significant as far as their influence on the use of Greek in our entire corpus. We have already talked about the factor of age and the factor Greek as an L1 above. As far as L3 proficiency is concerned the results revealed *statistically significant difference of the degree of Greek transfer between A1 High sublevel and A1 Medium sublevel*. The participants who had attained higher knowledge of English transferred less Greek compared to those who were assessed as A1 Medium sublevel. *Also, there was a statistically significant difference between A1 High level and A1 Low level*. Therefore, the participants who were more proficient transferred fewer items from Greek compared to those participants who were assessed as A1 high sublevel. (see Table 5.16).

Regarding the factor of proficiency Cenoz (2001) has found that her older participants transferred more, which is the exact opposite to our finding. Cenoz suggested that this could be because of the longer productions that the older participants formed, however as she stated “this explanation does not account for the fact that there are more learners in grade 9 (the higher one) than in the other two grades” (2001: 16).

### **6.8.2. The degree of use of Greek in code switches and in code mixes; the effect of age, L1 and L3 proficiency**

We examined the effect of age, L3 proficiency and L1 language on the degree of Greek words in Greek code switches and in code mixes and it was found that the amount of Greek used in code switches was not an effect by any of these factors (see Table 5.11).

However, the assessment of the effect of these factors on the transfer from Greek in the code mixes found in our corpus revealed that the main effects of age, L3 proficiency and L1 are statistically significant. The younger children (9-11 years old) transferred more Greek words in those code mixes that contained Greek while narrating in their L3 than the 12-year-old children (see Table 5.12).

Although the relation of age and proficiency in a language is not linear, this finding could be a result of their less advanced L3 since in our study we found that 11% of the older children (twelve years old) were assessed as low A1 Sublevel, whereas 64% of the younger ones (9-11 years old) were assessed as low A1. The Pearson chi-square test showed that it was a statistically significant finding (see Figure 5.23). According to this then, our children have transferred more items during their narrations in their L3 due to their less advanced English. The fact that the majority of the transfers came from Greek when it was an L1 is according to the test we performed (independent ANOVA) a statistically significant finding and it points out that Greek has been the main linguistic “bank” out of which our participants subconsciously drew items when they needed help from another language other than their L3 (the target one). This is contrary to the “bridge language” hypothesis which claims that multilingual speakers often use their L2 while speaking in their L3. In this case that L1 was Greek the speakers used their L1 as a basis for their linguistic needs. On the contrary, *the children that have Albanian as their L1 transferred a greater number of Greek into code mixed sentences that contained Greek while narrating in their L3, compared to the corresponding number*

transferred by the children with Greek as their L1 language (see Table 5.12). This latter finding is in line with the “bridge language” theory; however there seems to be a one-way justification of this theory and its effect is only found in the children whose L1 is Albanian. In that sense, the influence of the society’s language and its everyday use on behalf of these speakers must have led to its dominance. Besides, as we have already discussed, there has been a heritage language limited use within the second generation Albanian speakers and this must have had a dramatic effect on their overall tendency of not drawing elements from their Albanian lexicon during the task of narration they were required to complete for our study.

We also found a statistically significant difference of the number of Greek transfer between A1 High level and A1 Medium level. Also, there is a statistically significant difference between A1 High level and A1 Low level. Therefore, the more advanced a speaker was the less transfers from Greek he/she made. Thus, the degree of these transfers seems to be related to these speakers’ competence in their L3 too. It should also be noted at this point that our participants had stated that their English language is not used everyday and it is only confined to classroom activities during their foreign language teaching. Therefore, their English was not used as much as Greek was; this is predicted though since the society’s language is Greek and children need it everyday.

### **6.8.3. Comparing Greek in code switches and in code mixes; the effect of the L1, age, and L3 proficiency as well as a discussion on the influence of (psycho) typology**

Greek was found to be the influential language regarding its degree of presence in code switches and in code mixes (see also 6.4.). Furthermore, we proceeded to explore whether there was a difference in terms of the degree of use of Greek words in Greek code switches and in code mixes and whether this difference was actually affected by the factors of age, L3 proficiency as well as our participants’ L1.

To begin with, our findings showed that there is a statistically significant difference in the degree of use of Greek in code switches and in code mixes, (see Table 5.12) if no other factor (except for the specific language of transfer) is taken into account.

Moreover, the factor of age did not have a significant effect on the difference of the amount of Greek used in Greek code switches and in code mixed sentences that contained Greek. The factor of L3 proficiency was also non-significant. Hence,

age and the L3 proficiency of our participants did not influence the difference on the degree of presence of Greek between code switches and code mixes.

However, the factor of the speakers' L1 rendered a statistically significant effect on the degree of use of Greek in code switches and code mixes. That is, Greek usage in code switches and code mixes was found to be closely related to the speakers' first language when that was Greek. There was a difference in the degree of its use between code switches and code mixes which was an effect of the children's first language being Greek.

To be more specific, the children that had Albanian as their L1 transferred more Greek words into code mixes that contained Greek than in Greek code switches. On the other hand, for the children that had Greek as their L1, the amount of Greek transferred into Greek switches did not significantly differ from the amount of Greek transferred in code mixes. The fact that L1 Albanian speakers produced more Greek words in the code mixed utterances than in the Greek code switches might indicate that code mixing could be a more strenuous procedure for them and that the level of their English and their Albanian was relatively lower. Hence, Greek made its appearance more often in order to achieve their task of narration although their target language was their L3. The comparatively lower degree of use of Greek in their code switches (full utterances in just Greek) might be the result of the subconscious feeling of the speakers that Greek was not the target language of the narration and that they had to make it shorter since they had "broken" the rules.

On the other hand, the L1 Greek speakers produced approximately the same degree of Greek in code switches and in code mixes too. This might have to do with the fact that Greek was for these particular speakers a medium of everyday communication as well as their stronger linguistic system; thus, they might have produced the same degree of Greek since they perceived it as a natural mechanism that did not entail a severe breaking of the rules of the narration task. Since they might use this mechanism at home too, that is, the relatively higher employment of Greek during their discussions with their family – even when they communicate in their heritage language and they code mix with Greek – their usage of Greek might have been a norm to them; therefore, they employed Greek in their task of narration too. Besides, the fact that they stated that Greek was their L1 clearly denotes a specific attitude towards this language as well. Even if Greek was synchronically learnt with Albanian, these particular speakers might have chosen to state that Greek was the first language that they had acquired. This way then they had made

a statement regarding their identity and the way they perceive themselves in their broader environment since we have already discussed that this second generation of Albanian immigrants tends to mirror themselves as more “locals” compared to their parents; by stating Greek as their first language they might feel that they succeed their “nativeness” more effectively. However, what the children stated that they perceived their L1 to be was, strictly speaking, a given to this research and was not questionable.

Moreover, we observed that the degree of Greek words which is used in code switches is not affected by age, the level of L3 proficiency and the child’s L1. On the other hand, the degree of transfer of *Greek words in Greek code mixes is affected from all of these three factors (i.e. age, the level of L3 proficiency and the child’s L1)*. Indeed, the younger participants were found to use more Greek in their code mixes than the older ones. Also, the more advanced L3 learners (i.e. A1 high sublevel) who were found to be the younger ones in our study used less Greek during their L3 productions. Researchers seem to agree that language transfer is more possible at lower levels of the target language proficiency (Poullisse & Bongaerts, 1994; Odlin, 1989). That said, bilingual learners often resort to their L1 when they are not able to come up with the lexical item in the L2 (Fuller, 1999; Ringbom, 1986). Also, the factor of proficiency is frequently discussed in L3 acquisition studies and the general agreement is that much L2 transfer to L3 is the result of low L3 proficiency (Dewaele, 2001; Fuller, 1999; Hammarberg, 2001; Williams & Hammarberg, 1998).

Last but certainly not least, the factor of the children’s L1 was proved to be a rather influential one; by comparing the transfer of Greek in code switches and code mixes we observed that the children that their L1 is Albanian transferred more Greek words in code mixes than they used in code switches, while this is not the case with children that their L1 is Greek (the difference that exists is not statistically significant though). Also, if we do not take into consideration any factor at all then we deduct that Greek is generally more present in English- Greek code mixes than in Greek code switches.

What is particularly important from our results is that Greek is the main source of transfer and remains the dominant linguistic system of our corpus, especially when seen in terms of the speakers’ first language. What was clear from our study was that the “*bridge language*” theory only covers those of our participants who had Albanian as their L1; these speakers would indeed use their L2 (Greek) as the main source of transfer in the majority of their code mixes. On the other hand,



the participants whose L1 was Greek relied on their L1 for their transfers, hence their L2 was largely deactivated during their L3 production. Cenoz (2001) had found in her study that her participants would use more Spanish transfers than Basque ones during their narrations in their L3 (English) when their L1 was Spanish and that the ones who had Basque as their L1 did not show a higher degree of Basque. In addition, the older children relied more on Spanish as the transfer source language, while the younger children used both Basque and Spanish; this could indicate that younger children might have been in a synchronic transfer period as Cook (1992) pointed out that the influence of L1 changes and becomes less over time. In the case of the L1 Albanian participants of our study this indeed seems to be the case since their heritage language seemed to be a more dormant linguistic system within their mental lexicons. However, Spanish and Basque are both official languages in the Basque country and they were both taught at the schools Cenoz's participants attended. In our case Greek is the only official language in Greece and Albanian is only used for interpersonal communication by its speakers and only with people coming from the same ethnic background as them. Therefore, there are substantial differences with Cenoz's study and the present research as far as the languages statuses and their usage.

Also, Jarvis (2000) has suggested that we could treat L1 transfer as the influence occurring when a statistically significant correlation is found to exist between features of the speaker's interlanguage performance and their L1 background (p.252). Thus, by looking into the empirical evidence transfer might be the possible cause for a particular finding (in Treffers-Daller, 2009). In this line, the fact that the factors of age, L3 proficiency and above all L1 have yielded statistically significant results with regard to the difference in the Greek transfers in the code mixes of our participants has certainly its own right in this research and is strongly connected with our participants' speech production data.

What is more, we had initially hypothesized that our children will use their L2 in order to overcome communication hardships while narrating in their L3, as previous studies have shown. However, our findings showed that the effect of the L2 as the "bridge language" was only applicable to those participants whose L1 was Albanian; i.e. they would use Greek (their L2) as the transfer supplier. On the contrary, the participants whose L1 was Greek would stick to their L1 as their main supplier of transfer. Therefore, it is apparent from our results that the factors of L2 proficiency and the extent of L2 input in the learner's environment has been rather

influential as Williams and Hammarberg (1998) had already suggested as far as the L1 Albanian speakers are concerned. Since Greek has been more developed and a more constantly fed lexicon compared to Albanian, and in fact more multilayered in terms of semantic and contextual elements through formal instruction, it must have led to its prevalence in our participants' narrations. Also, the fact that Greek has a higher status compared to Albanian must have played its particular role since our participants are now the second generation of these immigrant families in Greece. However, the fact that this second generation uses less Albanian even within their home premises and they have been reported to avoid using their heritage language with their families, points to a language shift that has surely been important and could have played its role in our participants too.

Furthermore, we had hypothesized that younger children will transfer more in their code mixes in relation to the older ones because of the less developed tools they have in achieving full communication in their L3. Our findings confirmed this hypothesis since the older the participants were the less *Greek they actually transferred within their code mixes*. In fact, transfer was generally connected with age and younger participants transferred more than the older ones. Therefore, the connection of age with their L3 proficiency – although this relation is not always linear – has been proven to be a case in our study as far as their transfers from Greek in their code mixes are concerned. This has also given statistically significant results.

The factor of psychotypology, meaning the sense of typological closeness of the languages on behalf of our speakers, is probably difficult to argue on; all of the languages involved in our study are part of the Indo-European language family tree, however Albanian and Greek have their own branches. Also, the factor of typology “has often been investigated in situations where the L1 is typologically distant from both the L2 and the L3” (Sanchez, 2011: 88). Therefore, the effect of typological similarities and differences must be dealt with caution. In that sense, Cenoz (2003: 104) has put the issue in a “balanced” perspective by saying that “languages are relatively distant or relatively close, not distant or close in absolute terms”.

Still the relation of Greek and English seems to be easier to locate in terms of loans and historical associations. Albanian on the other hand seems to be harder to associate with the other two languages of our study since there have not been a lot of recent historical linguistic relations with Greek and English. Any relations existing might be more profound and thus more difficult to locate. Besides, the earliest

loanwords attested in Albanian are from archaic Doric Greek (probably indirect) (Huld, 1986), while the heaviest influence was that of Latin. Moreover, there is much interaction of the Albanian language with Latin and there have been many loan words from it (Mihaescu, 1966; Rosetti, 1986). Furthermore, what has to be noted is that “the history of the (Albanian) language is obscure, and it is impossible to demonstrate a clear relationship with any other Indo-European group” (Crystal, 1997: 302), since there is lack of texts to confirm its linguistic route throughout history, therefore they give it a branch of its own (Nakhleh et al., 2005) and it is categorised as an isolate language.

The contact between Albanian and Latin could be a factor towards some lexical closeness to English since the latter is also strongly influenced by Latin. However, it seems that what Odlin (1989: 142) has stated might be more close to the intricate situation researchers find themselves when they reach the typology factor: “in any learner’s attempt to acquire a new language, language distance is ultimately in the eye of the beholder. Research indicates that when everything is equal, transfer will most likely result from a learner’s judgement (made consciously or unconsciously) that particular structures in a previously learnt language are quite like – if not the same as – structures in the target language”. Having said that, there has been much evidence that the factor of typology should not be seen on its own; instead, research in third language acquisition has pointed to the interrelation of the factors of typology and proficiency in all of the languages of the multilingual individual (Hammarberg, 2009; Jaensch, 2009; Tremblay, 2006). Moreover, Bardel & Lindqvist (2007:138) found in their study that the effects of typology were outperformed by that of proficiency since “the proficiency factor rules out the psychotypology factor in the choice between French and Spanish”.

In our study, then, we have mostly taken into consideration the factor of the L3 proficiency which showed that the more advanced a learner was the less items he/she transferred from the other two languages. This was found with regard to both the L1 and the L2 of our participants. Moreover, our participants’ heritage language (Albanian) whether as an L1 or and L2 was used less when their L3 was more advanced. Likewise, the same findings came up with regard to Greek. At this point we need to mention once again that Albanian was less developed compared to Greek whether these two languages were an L1 or an L2. Greek was found to be a more developed system for our participants and in fact their everyday use and the fact that it was also a taught language and the official language of Greece along

with its higher status must have led to its dominance in our participants (see also Anastassiou & Andreou, 2014). These suggestions are also in line with Tremblay (2006) that the degree of the L2 exposure plays a significant role in the learner's employment of the L2 during speech production in the L3, whereas L2 proficiency plays a major role in the frequency with which the L2 intrudes during L3 production (in Jessner, 2008). Thus, the factor of typology in our case seems to be outperformed by the factor of proficiency as well as by the one of exposure to their wider society's language, Greek. It is easier to argue on the factors of proficiency as well as the information we have on their greater exposure to Greek as a whole, than justify the psychotypological factor of the proximity the speakers perceived about the relation of Greek with English and Albanian with English. However, what can be deduced from the whole picture in the end is that Greek must have been a closer neighbor to English in our participants' eyes apart from the greatest competency, exposure and the higher status it had compared to their immigrant community's heritage language.

To conclude, Greek has been found to be the dominant language in our participants and it has had a major effect on the transfers they made during their narrations in their L3. Also, the fact that our L1 Albanian participants transferred from their L2 in comparison to the L1 Greek participants who transferred from their L1 further supports our hypothesis that Greek will play as such a more significant role during their speech productions. The role of the more developed language competence of our participants in Greek is also an influential factor that has led to its prevalence in our whole corpus. Also, the factor of their proficiency in their L3 has led to Greek being less transferred when their competence was more advanced in their L3 which coincides with Dewaele (1998) that lexical transfer and code switching (sic) decreases as the L3 proficiency is getting higher. Finally, the factor of typology seems to be more difficult to argue on since all of the three languages belong to the Indo-European language family tree, although Greek and Albanian have their own branches. However, when discussed along with the factor of proficiency the latter has been found in our research to be rather influential and rendering statistically significant results. Besides, as Hammarberg (2001) has suggested, transfer from an L2 can be found if the speaker has achieved a certain degree of L2 proficiency too; therefore the L1 Greek participants had not the required level of Albanian in order to transfer from this language during their speech productions.

Typology issues have been considered in terms of the results derived from the

analysis of the produced texts of the participants. However, we took the stance that the “L2 effect” could be of greater importance in terms of our L2 Greek participants in their code mixes, since the languages of this study are all typologically related in that they all belong to the Indo-European family, even though they have some individual differences. This initial hypothesis seems to have been partly right after all according to our findings and their discussion; however the factor of proficiency and the impact of Greek as the official language of the country were proved to be rather important, if not more influential.

## **6.9. The ratio of Content and Function words per language in our corpus; the effect of our participants' L1**

To begin with, we wanted to see what the percentages of the content and function words in each one of the three languages in our entire corpus were (Figure 5.40). We found out that as far as the English language is concerned, Content words were more than the Function ones, which measured to 54% and 46% respectively, however this difference was not that great. The Albanian Content words were again more compared to the Function ones, and in fact the majority of the Albanian words were Content ones (67%). The Greek Content words were again more than the Function ones, which showed a certain tendency (59% to 41% respectively). As far as the total words found in our corpus, our results showed that the total Content words outperformed the total Function words and their difference was relatively high (55% to 45% respectively).

We then proceeded to see the distribution of content and function words within the code mixed sentences. As seen in Figure 5.41, we immediately observed that Content and Function words were approximately the same in all of the texts and at the same time in the code mixed sentences. This finding shows us that the analogy of Content and Function words seems to remain the same in the texts produced. More specifically, the parts of speech of each language retain the same “space” in the children’s narrations even within the code mixed sentences.

When we had code mixed sentences and Albanian language was used in it, Content words were more than Function words. This outperformance of Content words compared to Function words was found in such a greater ratio only with Albanian and Greek (2 and 1,54 respectively) which are highly inflected languages

– although the children borrowed more Content words from Albanian than from Greek. Also, English had a Content/ Function words ratio close to 1, which means that their usage was almost the same. Furthermore, the same ratio, close to 1, was found in the Total of Content and Function words produced in all of the texts as well as in the total of code switches (Figure 5.42). This means that in the texts that the dominant language was English the influence of English gives a ratio close to 1, which means that the number of Content and Function words is approximately the same.

Since Greek was found to be the dominant linguistic system of transfer in our corpus we explored its influence on Content and Function words and whether the children's L1 had a specific impact on their use of the parts of speech. For those children that narrated in their L3 and they only transferred from Greek we calculated their ratio in English-Greek code mixes by distinguishing them in Greek and English words. So, we investigated whether the children's L1 affected the ratio of English Content/ Function words. This question was tested via independent t-test. It was found that the children's L1 does not have a significant effect on the ratio of English C/F words.

Moreover, we went on to see whether the children's L1 affected their ratio of Greek Content/ Function words. This question was tested via independent t-test. **The children's L1 was found to have a significant effect on the ratio of the Greek Content/ Function words.** Therefore, the children whose L1 was Greek transferred more Greek Content and Function words compared to those children that their L1 was Albanian. Also, the ratio of Greek Content/Function words is greater for those children whose L1 is Greek compared to the children whose L1 is Albanian (see Table 5.24).

To sum it up, our hypothesis that Content words will be used more compared to Function words was confirmed; however, there was a higher tendency for the usage of Content words of Albanian and Greek (the participants' L1 and/ or L2). Also, since L3 is more used in the entire corpus (75,5% see Figure 5.30), the English Content and Function words were used almost in the same degree and thus the ratio is close to 1.

This was confirmed in the total of the texts produced as well as in each one of the three languages in question. A higher ratio of Content than Function words was found in Albanian and in Greek, which are both highly inflected languages. Our findings are in line with Hoffmann and Stavans (2007) who investigated trilingual

children from their infancy to their early childhood. They found a prevalence of Content words compared to Function words and their results were in fact duplicated during their second recordings since they conducted a longitudinal study. The only difference they did find was that the proportions of the lexical transfers were different from the first session because the children used fewer nouns or they would be morphosyntactically violated compared to the verbs. However, the strongest source of transfer was the Content words whereas Function words remained a less used part of speech, just like our study.

These results are also in line with Cenoz (2001) who also found that children used more Content than Function words. She also noted that there was a prevalence of Content words from one of the languages of her participants (Spanish) while narrating in their L3, like we found with Albanian Content words. Spanish and Basque are both official languages in the Basque country, although Spanish is the one that is spoken in the entire Spain. In our case, Albanian is a heritage language of this particular immigrant group and does not have an official status.

Also, Faerch and Kasper (1986) distinguished the transfer of Content words as a conscious strategy in the speaker's attempt to fill a lexical gap. They also stated that Content words were usually found after a pause. Function words were usually found to be unintentional transfers of frequently used L1 words. Poullisse and Bongaerts (1994) that studied bilinguals found that their English language learners transferred more function words than content words from their L1 (Dutch) which is a finding opposite to our study, Cenoz (2001) as well as Hoffmann & Stavans (2007).

Ringbom (1986, 2001) has suggested that transfer during L2 acquisition is mainly short, complete and it involves non adapted L1 function words. However, the findings on L2 speech production by Poullisse and Bongaerts (1994) do not seem to coincide with those studies that concern L3 speech production. According to Murphy (2003: 15) "when function words are transferred in an L3 utterance, they are overwhelmingly supplied by the L2 even though the L1 function words must still have higher activation if the L1 is the language of highest proficiency. It appears that during L3 production, particularly in the early stages of acquisition, L2 status overrides the frequency effect associated with high proficiency". Our findings though showed that the children whose L1 was Greek transferred more Greek content and function words compared to the children whose L1 was Albanian and this has also yielded a statistically significant result. Also, the ratio of Greek Content/ Function words was greater for those children whose L1 is Greek (compared to the children

whose L1 is Albanian). Therefore, it seems that our participants' L1 was a *significant influencer as far as the degree of use of Content words is concerned*. Especially, the fact that the L1 Greek speakers produced more Content words from Greek than from Albanian shows that the L2 status or the “foreign language effect” (Hammarberg, 2001) is not a factor that influenced this transfer. The first language of our speakers along with the previous discussion on the greater frequency of use of Greek and their higher competence in Greek too, show that what Murphy (2003) suggested does not seem to be the case with all of our participants.

Moreover, the factor of psychotypology seems to have played its role since more transfers were done from Greek Content words than Albanian Content words. The fact that Greek and English must have been perceived by our participants as closer typologically speaking seems to be in line with Cenoz (2001) who found that her participants had transferred almost seven times more function words from Spanish compared to Basque and she justified this finding by means of their typological proximity to the target language. Basque is not typologically related to English, compared to Spanish; however, the languages involved in our study belong to the Indo-European language family although Greek and Albanian are isolate languages. However, the loans and the historical relations between Greek and English are quite closer compared to those between Albanian and English. It might then be the case that our participants had perceived this proximity and they transferred more Content words from Greek while speaking in English. However, another factor that could be suggested to have played its own role might be that of the higher social status of Greek. Since the immigrant mentality of our participants seems to have influenced them in favour of the official language (Greek) of the country they live in, it might have been the case that they mostly drew items every time they needed to from Greek and not from Albanian. However, this is mostly a more profound explanation that cannot be justified. Further research on the production of trilingual children with the same combination of languages that our study dealt with would provide us with more information regarding the degree of use of Content and Function words from each one of them.



# 7. Conclusions

## 7.1. Implications of the present study

With regard to our research and in view of the current literature we had initially set the following hypotheses:

**A) As far as trilingual children's language learning process:**

- i.** Regarding the age factor we hypothesized that older children would show higher level of proficiency in their L3.
- ii.** Regarding the role that formal instruction in L2 would play we hypothesized that children who had been taught their L2 would show higher level of proficiency in their L3 (an also taught language), due to the same mechanisms employed from their L2 to their L3. We also perceived the matter of literacy as a significant factor; the participants who were already literate in their L2 would show higher attainment of their L3 (a language that they had also been acquiring literacy in).

**B) In terms of the speech production of our participants we hypothesized that:**

- i.** Younger children will transfer more in relation to the older ones, because of the less developed abilities they have in achieving communication fully in their L3.
- ii.** Children will use their L2 in order to overcome communication hardships while narrating in their L3, as previous studies have shown.
- iii.** With regard to the transfer from Greek (the community language) we hypothesized that it would be the main source of transfer within our total corpus.

- iv. Greek would be the main source of transfer within the code mixed utterances.
- v. The number of Content words will be higher than that of Function words, according to Cenoz (2001) and Hoffmann & Stavans (2007).

In the following section we will present the findings regarding our hypotheses and a brief discussion. To begin with, in the first part of this study regarding the investigation of the more influential factors towards the higher proficiency of our participants (A1 level according to CEFR) it was found that the *most statistically significant ones are the age of these children and their formal instruction in their L2*. With regard to age, our study showed that the older the children were the higher their attainment in their L3 was, according to our initial hypothesis. This was also in line with Munoz (2010) who had found that when a foreign language is learnt by means of formal instruction *older children showed higher proficiency compared to the younger ones*.

Furthermore, the second influential factor which also yielded statistically significant results was that the participants who had received formal instruction in their L2 showed higher attainment of their L3, thus confirming our hypothesis on this matter. The initial hypothesis had come up as a result of the researcher's assumption that the participants would actually benefit from their L2 formal instruction while in the process of acquiring their third language along with literacy. The researcher had also gathered that the connection of the mechanisms employed during their teaching of their L2 (Greek in this case which was the only language that they had been taught prior to their L3 teaching) would be replicated during their instruction in their L3. This follow up of the same learning techniques and strategies seemed to make the learners benefit and progress more. Besides, the fact that our participants had only become literate in Greek (for most of them their L1) and none of them in Albanian, may suggest that there is a linkage between literacy in one language and the higher attainment of another second and/ or foreign one which is also being taught and its learners acquire literacy. Therefore, the factor of learning an L2 within formal instruction was found to be an influential one towards L3 proficiency. This factor of literacy seems to be some sort of an "X Factor" regarding our participants' higher attainment of their L3.

Their L3 was introduced to them at around the age of seven to eight years old and they had already an experience in how a language is structured with all of its

basic elements through their formal instruction in their L2. So, when they went on to learning English as their L3 they had already established their literacy skills in their L2. Therefore, their L3 seems to have had a solid ground to grow on as far as literacy and the basic structures of language are concerned. Also, the language strategies used the first time they were requested to learn a language with its grammatical and structural constraints may have been used when they were requested to learn their L3 with a foreign language methodology. According to Odlin (1989) learners who have highly developed language skills (such as reading, writing and richness of vocabulary) in their native language will most likely find that these skills facilitate second language acquisition. By extension, we could consider that the same line of reasoning seems to apply with L2 highly developed language skills when it comes to L3 learning. Odlin, however, mentions that the effects of high L1 literacy may be the result of transfer-of-training which seems to be in accordance with our presumption that these children may have duplicated the strategies already used when they had learnt their L2 in their process of learning their L3 too.

Furthermore, Murphy (2003) has pointed out that most studies have so far been conducted with children attending secondary education or even university. Therefore, our study which focused on primary education pupils may be useful in that it posed a question regarding literacy issues and its effect on the L3 proficiency and it also proved to give statistically significant results. So, this finding could be found to be influential if tested with different participants of another research on the subject of trilingualism. Murphy (2003) also suggests that since much of the research on multilingualism comparing speakers of different social and educational backgrounds is done from a sociolinguistic rather than a psycholinguistic perspective, future L3 acquisition research needs to take educational background into account since it relates directly to metalinguistic awareness (p.12).

In that sense, we may assume that our participants had higher metalinguistic awareness since they had been learning their L2 through formal instruction thus pointing to the parameter of the educational background. We may also assume that it may be the case that the children who had acquired their L2 (Albanian) only by contact with a naturalistic environment (their families, their friends and the general community they live in) may have lacked the development of their metalinguistic awareness skills (at least in the same degree as the rest of the participants who had learnt it through formal instruction), since we have mentioned earlier before that all of our participants had not been attending any classes in the Albanian language

and therefore have not developed any literacy skills in it.

Walqui (2000) explained the several advantages of higher literacy and enhanced metalinguistic development with respect to a language learner's proficiency: "The student's level of proficiency in the native language - including not only oral language and literacy, but also metalinguistic development, training in formal and academic features of language use, and knowledge of rhetorical patterns and variations in genre and style - affects acquisition of a second language. The more academically sophisticated the student's native language knowledge and abilities, the easier it will be for that student to learn a second language. This helps explain why foreign exchange students tend to be successful in American high school classes: They already have high school level proficiency in their native language".

Besides, on the matter of transfer-of-training suggested by Odlin (1989), according to Sollars (2002) "for any transfer of skills and knowledge to occur, it is assumed that when children are developing their literacy in a second language, they have some foundation of literacy in their first language" (p. 8), which we extend it in terms of literacy in a foreign language since their L3 (English) is not only taught with a foreign language methodology but also is not a medium of every day communication and is only confined within class – although it is a highly occurred language in terms of media, advertisements and films in Greece. Consequently, since these children lacked the training in acquiring their second language in its formal structured way as well as the literacy in it, the effect of these two factors may have influenced their general attainment of their third language which happens to be a foreign one.

Sollars also (2002) points out that there are cases of children who are acquiring their **first literacy** in a second language or in a foreign language. In such cases "there may be little information or meta-linguistic knowledge related to reading skills to transfer from the knowledge of a previous language" (p. 8). To that end, we need to stress out that in our case the children who had lower degree of attainment of their L3 were not formally introduced to their L2, and therefore they lacked their L2 training-of-transfer during the acquisition of their L3. Since, they had not received any formal instruction in their L2 it looks like there does seem to exist some sort of "literacy gap" which was created between their L1 and their L3.

*In this line of reasoning, it seems that L2 instruction may have served as a kind of "bridge" for those children who showed higher proficiency in their L3. Therefore, more research on this matter could reveal interesting facts and probably*

verify our own presumption on the **sequence of literacies**; *if there is L1 literacy and then directly L3 literacy, and if the pivotal role of L2 literacy is absent from the literacy sequence then L3 proficiency might be affected or at least more hindered.* This could be explained by the so far literature that in order for a second language literacy to be achieved L1 literacy must be established as firmly as possible. In that respect, if L2 literacy is not established at all this might mean that L3 competencies might be delayed in some degree depending, of course, on the personal characteristics of each learner too.

So far research (see Sollars, 2002) has indicated that children, who already have solid literacy skills in a language, seem to be more “qualified” to acquire a new language efficiently. Our finding is therefore showing that literacy obtained through formal instruction may also enhance L3 proficiency when this is also acquired within a school context. The steps followed by a learner from his first and especially from his second language in a formal context seem to pave the way for a more firm establishment of the third language. Therefore, it should be rather interesting to see if this finding could be also proved to be the case in similar studies on L3 acquisition through formal instruction, as this could provide pedagogical insight for language learning methodologists and teachers.

The two aforementioned factors of age and formal instruction were found as statistically significant ones within our study. However, other factors that have not been found statistically significant did seem to indicate a certain trend of impact on L3 proficiency. Therefore, the factors of exposure to the L3, frequency of use of L1 and L2, the languages that they speak at home (L1 and/or L2) as well as the time they have been speaking their L2 have indicated interesting trends of influence, although they did not yield statistically significant results. As previously discussed, these correlations may not have given statistically significant results due to the number of our participants. It is worth noting though, that most studies had fewer participants but they had concentrated on longitudinal observation and analysis (e.g. Davidiak, 2010 who studied two siblings throughout a whole year but she did made a point that the number of her participants was too small to draw safe conclusions). However, our study tried to reach some conclusions by focusing on qualitative criteria and therefore the number of forty nine participants was deemed as a rather sufficient one concerning our focus. Besides, the main aim of our study was the language interaction amongst the three languages of our participants and the analysis of their speech production. The first part of our study showed the trends

regarding our participants' languages use according to their language biographies and the factors that might have influenced their L3 attainment.

In the second part of our study we presented the analysis of the children's speech production which was our main research focus, i.e. the linguistic analysis of our data. However, the information obtained through the first part of the study, i.e. the language biographies of the children along with their assessments, were of great help towards the further understanding of our participants' speech production data.

We first tested whether the transfer of L1/ L2 is affected by age and the level of proficiency of the children. It was found that *there was a significant effect of the age factor since the degree of L1 and L2 transfer was greater for those participants who were younger (9-11 years old) compared to the older ones (12 years old)*. Thus, the hypothesis (B- i) *that younger children would transfer more in relation to the older ones, because of the less developed abilities they had in achieving communication fully in their L3 was actually confirmed*. Of course, this was because the younger participants of this study had had less teaching and therefore less exposure to their L3.

Overall, the factor of age with regard to transfer has frequently been associated with proficiency due to the perception that usually older individuals have acquired higher degrees of proficiency in their second or third language due to their greater exposure or teaching to that language. To this end, Cenoz (2001) had found a greater degree of transfer in her older subjects and this was attested to the fact that older individuals owned more elements of all of their languages and thus tended to produce more transfers since they could actually employ more items of all of their languages. In this line, the younger individuals had not acquired a great deal of their languages so they did not have the ability to use a great degree of them and transfer as extensively as the older ones. However, with our case that the younger participants showed greater degree of transfer the explanation behind this finding could be that the younger ones had less available L3 lexicon (this is consistent with the finding that the younger ones had relatively lower attainment of the A1 level too) and therefore had to resort more extensively to their other two linguistic systems in order to overcome their communication obstacles while narrating in their L3. This means that the younger ones that were also found in our study to have achieved less attainment of their L3 (just like with Cenoz's study) overcame their lexical problems by filling in their lexical gaps with more elements from their L1 and/ or their L2. This makes even more sense in the light of our finding that *there*

*is a significant main effect of the L3 proficiency on the degree of L1/L2 transfer of our participants.*

Besides, Genesee & Nicoladis (2006) have explained this in view of the code mixing mechanism and the way it is generated. They argued that code mixing serves as a way to fill the gaps that occur due to the lack of knowledge because of the child's developing lexicon and grammar. Therefore, the children use code mixing in order to overcome their limited linguistic resources while they try to express themselves. Furthermore, it has been found that young bilingual children mix more when they use their less proficient than their more proficient language (Genesee, Nicoladis & Paradis, 1995; Lanvers, 2001); our participants were not as proficient in their L3 (English) as in their other two languages, since they were still in the process of learning it as a foreign language, and their other two languages seemed as more solid and safe options in their effort to succeed their narrations. Also, Greek which was their most well established language in their lexicon was their linguistic system that made its appearance through transfers in the majority of both our entire corpus and the code mixed utterances.

*Also, regarding hypothesis (B-i) that the children of this study would use their L2 in order to overcome communication hardships while narrating in their L3, as previous studies have shown, was only partially confirmed.* Our findings showed that the children that had Albanian as their L1 transferred from Greek (L2) in a greater degree during their L3 production compared to the children that had Greek as their L1. The L1 Albanian speakers seemed to use Greek (L2) as the base language for the acquisition of English (L3). On the contrary, Greek L1 speakers did not apply this technique; they transferred Greek while narrating in their L3 and their transfers from Albanian (L2) were really few. The fact that L2 served as a “bridge language” only for the Albanian (L1) speakers raises an issue regarding its universal application on our participants and points to the direction of the language shift or the language dominance of the community's official linguistic system once again. Besides, Albanian as a heritage language has been found to be used only within their home premises and even then children have been reported to resist to its use with their families in order to achieve their greater sense of nativeness. This seems reasonable since any child growing up with the knowledge that his/her parents came from another country some years ago and especially if they want to achieve their full integration against their own sense of foreignness might negotiate his/her heritage language usage. Therefore, the language shift that has been happening for this

second generation of immigrants of the specific community seems to be quite rapid and extensive.

Also, the present research findings showed that *the children that had Greek as their L1 transferred in a greater extent from their L1 while narrating in their L3, in comparison to the degree of L1 transferred by those having Albanian as their L1*. This means that the L1 Greek children would rely on their L1 in a greater degree than on their L2. With this statistically significant finding we duplicated the effect of Greek, Greece's dominant language, as an L1 too. It therefore seems that the effect of the wider community's language was rather influential on our participants and it did formulate a *modus operandi* for them. Moreover, the children that had Greek as their L2 transferred from their L2 in a greater extent while narrating in their L3 in comparison to the degree of L2 transferred by those who had Albanian as their L2. **Consequently, Greek is a stronger predictor of transfer than Albanian, whether as an L1 or an L2.** According to these then, hypothesis B-ii was indeed confirmed, however the extra element of our findings is that this was also found to be true whether Greek was an L1 or an L2. Our results show that what played an influential role towards our participants' transfers while narrating in their L3 was the dominant language, Greek, rather than the order of acquisition of their first two languages. Therefore, our hypothesis (B-iii) that Greek, the dominant language, would be the main source of transfer for our participants **in the entire corpus** was indeed confirmed and this had led us to further explore if there were specific factors that might have influenced this tendency.

With regard to the dominance of Greek in our corpus as far as transfers are concerned, age proved to be the significant factor. It was found that *the younger children (9-11 years old) transferred more Greek words in our corpus while they narrated in their L3 than the 12-years-old children*. This was suggested to be because of the less advanced third language level (since they also had had less exposure through teaching) and their need to turn to another language in order to complete the narration task.

We had also hypothesized that *Greek would be the main source of transfer within the code mixed utterances too (hypothesis B-iv)*. What is particularly important from our results is that *Greek is the main source of transfer within the code mixes and remains the dominant linguistic system, especially when seen in terms of the speakers' first language*. What was clear from our study was that the "bridge language" effect as far as code mixes only covers those of our participants who had



*Albanian as their L1; these speakers would indeed use their L2 (Greek) as the main source of transfer in their code mixes.* On the other hand, the participants whose L1 was Greek relied on their L1 for their transfers, hence their L2 was largely deactivated during their L3 production. Therefore, it is apparent from our results that the factors of L2 proficiency and the extent of L2 input in the learner's environment have been rather influential as Williams and Hammarberg (1998) had already suggested, as far as the L1 Albanian speakers are concerned. Since Greek has been more developed and a more constantly fed lexicon compared to Albanian, and in fact more multilayered in terms of semantic and contextual elements through formal instruction, it must have led to its prevalence in our participants' narrations. Also, the fact that Greek has a higher status compared to Albanian must have played a particular role since our participants are now the second generation of these immigrant families in Greece. However, the fact that this second generation uses less Albanian even within their home premises and they have been reported to avoid using their heritage language with their families, points to a language shift that has surely been important and must have played its role in our participants too.

Moreover, it is generally acknowledged that one of the three languages will outperform the other two, as a natural result of the education being occurred in the most socially accepted language. According to Fisherman et al (1971), the possibility of balanced bilingual speakers is considered to be rare: "Bilinguals who are equally fluent in both languages (as measured by their facility and general correctness) are rarely equally fluent in both languages about all possible topics; this phenomenon is a reflection of the fact that societal allocation of functions is normally imbalanced and in complementary distribution rather than redundant" (Fishman et al, 1971, in MacSwan, 1999: 30). What is more, according to Esser (2006) "Competent bilingualism, i.e. the command of both the language of origin and the national language at a high (oral and written) level, will remain exceptional. The reason for this is that the conditions that promote second language acquisition are usually detrimental to the retention and competent command of the native language and vice versa. Thus, the more advanced the age at which immigrants enter a country and the greater their integration into the ethnic context, the more likely it is that they will retain their mother tongue and the less likely it is that they will successfully acquire the national language". Our participants who were born and raised in Greece and came from immigrant backgrounds have assimilated in their family's host country and their heritage language seems to have lost ground.

Also, according to our findings the older the participants were the less Greek they actually transferred within their code mixes. In fact, transfer was generally connected with age and younger participants transferred more than the older ones in their code mixes. Therefore, the connection of age and their L3 proficiency – although this relation is not always linear – with cross linguistic influence has been proven to be the case as far as code mixes are concerned in our study; this has also given statistically significant results.

To sum it up, in our study the factor of the L3 proficiency showed that the more advanced a learner was in his/her L3, the less items he/she transferred from the other two languages. This was found with regard to both the L1 and the L2 of our participants. Moreover, our participants' heritage language (Albanian) whether as an L1 or and L2 was used less when their L3 was more advanced. Likewise, the same findings came up with regard to Greek. At this point we need to mention once again that Albanian was less developed compared to Greek whether these two languages were an L1 or an L2. Greek was found to be a more developed system for our participants and in fact their everyday use and the fact that it was also a taught language and the official language of Greece along with its higher status must have led to its dominance in our participants (see also Anastassiou & Andreou, 2014). These suggestions are also in line with Tremblay (2006) that the degree of the L2 exposure plays a significant role in the learner's employment of the L2 during speech production in the L3, whereas L2 proficiency plays a major role in the frequency with which the L2 intrudes during L3 production (in Jessner, 2008).

Regarding the factor of psychotopology, meaning the sense of typological closeness of the languages on behalf of our speakers, all of the languages involved in our study are part of the Indo-European language family tree, however Albanian and Greek have their own branches. Also, the factor of typology “has often been investigated in situations where the L1 is typologically distant from both the L2 and the L3” (Sanchez, 2011: 88). In the present study all of the three languages involved are typologically close since they belong to the same language tree, i.e. the Indo-European. Therefore, the effect of typological similarities and differences must be dealt with caution. In that sense, Cenoz (2003: 104) has put the issue in a “balanced” perspective by saying that “languages are relatively distant or relatively close, not distant or close in absolute terms”. Furthermore, the factor of typology in our case seems to be outperformed by the factor of proficiency and by the one of exposure to their wider community's language, Greek. Besides, as Hammarberg

(2001) has suggested, transfer from an L2 can be found if the speaker has achieved a certain degree of L2 proficiency too; therefore the L1 Greek participants had not the required level of Albanian in order to transfer from this language during their speech productions.

It is easier to argue on the factors of proficiency as well as the information we have on their greater exposure to Greek as a whole, than justify the psychotypical factor of the proximity the speakers perceived about the relation of Greek with English compared to that of Albanian with English. However, what can be deducted from the whole picture in the end is that Greek must have been a closer neighbor to English in our participants' mind compared to Albanian, their heritage language.

To conclude, Greek has been found to be the dominant language in our participants and it has had a major effect on the transfers they made during their narrations in their L3 both in the entire corpus and in the code mixed utterances they produced. Also, the fact that our L1 Albanian participants transferred from their L2 in comparison to the L1 Greek participants who transferred from their L1, further supports our hypothesis that Greek which is the dominant language in Greece will play as such a more significant role during their speech productions whether as an L1 or an L2. This finding is in line with Andreou & Anastassiou (2011) who had also found that Greek was the main source of transfer for children with the same combination of languages. However, the number of their participants was smaller and they needed further confirmation of their finding.

The role of the more developed language competence of our participants in Greek is also an influential factor that has led to its prevalence in our whole corpus. Also, the factor of their proficiency in their L3 has led to Greek being less transferred when their competence was more advanced in their L3 which coincides with Dewaele (1998) who found that lexical transfer and code switching (sic) decreases as the L3 proficiency is getting higher.

As far as our last *hypothesis (B-v) is concerned, that Content words will be used more compared to Function words, it was confirmed*; however, there was a higher tendency for the usage of Content words of Albanian and Greek (the participants' L1 and/ or L2). Also, since L3 is more used in the entire corpus, the English Content and Function words were used almost in the same degree and thus the ratio is close to 1.

This was confirmed in the total of the texts produced as well as in each one

of the three languages in question. A higher ratio of Content than Function words was found in Albanian and in Greek, which are both highly inflected languages. Our findings are in line with Hoffmann and Stavans (2007) who investigated trilingual children from their infancy to their early childhood. They found a prevalence of Content words compared to Function words and their results were in fact duplicated during their second recordings since they conducted a longitudinal study. The only difference they did find was that the proportions of the lexical transfers were different from the first session because the children used fewer nouns or they would be morphosyntactically violated compared to the verbs. However, the strongest source of transfer was the Content words whereas Function words remained a less used part of speech, just like our study.

These results are also in line with Cenoz (2001) who also found that children used more Content than Function words. She also noted that there was a prevalence of Content words from one of the languages of her participants (Spanish) while narrating in their L3, like we found with Albanian Content words. Spanish and Basque are both official languages in the Basque country, although Spanish is the one that is spoken in the entire Spain. In our case, Albanian is a heritage language of this particular immigrant group and does not have an official status.

According to Murphy (2003: 15) “when function words are transferred in an L3 utterance, they are overwhelmingly supplied by the L2 even though the L1 function words must still have higher activation if the L1 is the language of highest proficiency. It appears that during L3 production, particularly in the early stages of acquisition, L2 status overrides the frequency effect associated with high proficiency”. Our findings though showed that the children whose L1 was Greek transferred more Greek content and function words compared to the children whose L1 was Albanian and this has also yielded a statistically significant result. Also, the ratio of Greek Content/ Function words was greater for those children whose L1 is Greek (compared to the children whose L1 is Albanian). Therefore, it seems that our participants’ L1 was a significant influencer as far as the degree of use of Content words is concerned. Especially, the fact that the L1 Greek speakers produced more Content words from Greek than from Albanian shows that the L2 status or the “foreign language effect” (Hammarberg, 2001) is not a factor that influenced this transfer. The first language of our speakers along with the previous discussion on the greater frequency of use of Greek and their higher competence in Greek too, show that what Murphy (2003) suggested does not seem to be the case with all of

our participants.

An important contribution of this study is the language combination it investigated: Albanian, Greek and L3 English. All of the three languages belong to the Indo-European language family and share many lexical similarities, a fact that makes this study different from that of Cenoz (2001) in that Basque was typologically distant to the other two languages. Although all of the three languages of this study share typological similarities they differed in their closeness; Greek seemed to be closer to English compared to Albanian and this could be accounted to psychotypology. The factor of psychotypology seems to have played its role since more transfers were done from Greek Content words than Albanian Content words. Also, the fact that Greek and English must have been perceived by our participants as closer typologically speaking seems to be in line in that point with Cenoz (2001) who found that her participants had transferred almost seven times more function words from Spanish compared to Basque and she justified this finding by means of their typological proximity to the target language. Basque is not typologically related to English, compared to Spanish; however, the languages involved in our study all belong to the Indo-European language family, although Greek and Albanian are isolate languages. However, the loans and the historical relations between Greek and English are quite closer compared to those between Albanian and English. It might then be the case that our participants had perceived this proximity and they transferred more Content words from Greek than from Albanian while speaking in English.

Moreover, another factor that could be suggested to have played its own role might be that of the higher social status of Greek. Since the immigrant mentality of our participants seems to have influenced them in favour of the official language (Greek) of the country they live in, it might have been the case that they mostly drew elements every time they needed to from Greek and not from Albanian. However, this is mostly a more profound explanation that cannot be easily proven. This is based on the so far bibliography (e.g. Gogonas, 2009; Gkaintartzi & Tsokalidou, 2011; Tsokalidou, 2005) on research regarding the attitudes Albanian immigrants in Greece have towards the status of their heritage language and the way these are perceived as lower in their wider social environment.

## 7.2. Limitations of the study

The children of our study were not a representative sample of bilingual children with this specific combination of languages. They were participants that accepted to take part in the study and were randomly located. Therefore, we cannot claim any sort of generalization on the findings of this particular research. Our aim was to investigate those factors that may have influenced our own participants and to discuss these children's characteristics for similar future research. We did not intend to suggest neither a general profile of the more successful L3 learners nor a rule for the way the trilingual speakers with this particular combination of languages use them; This would have to be a different kind of research and it should probably be conducted on a national level.

The fact that the majority of the interviews of our participants took place in their school premises which are clearly Greek orientated might have influenced the children's speech production to some extent. However, it was the only available way in order to conduct the interviews and collect the necessary data.

However, the Greek environment that the majority of the interviews took place might have influenced the narrations of the participants that were finally chosen to be part of this study, although the vast majority of the Greek transfers found in our corpus cannot be claimed to be a result of this situation. Our findings show that, even if there was some influence, the Greek transfers were far too many anyway; thus we do not believe that if this research would be achieved to be conducted in a more neutral environment the conclusions reached would not have been a lot different than those discussed in the present study.

## 7.3. Suggestions for future research

To our knowledge this is the first research of this scale on trilingual children with this particular combination of languages, i.e. Greek, Albanian (either L1 or L2) and English (as an L3). A future research investigating the same combination of languages could probably give more insight into the way these interact and the way they cooperate within the speaker's mental lexicon if it were to be conducted on a larger scale and with a longitudinal perspective. Such a research could help us to verify whether this language shift that was found in our study has indeed been so extensive and as rapid as our findings seem to point to.

Furthermore, the factor of the L2 formal instruction and its positive influence

on L3 learning could be more thoroughly investigated by observations in class with a longitudinal study and perhaps verify our own finding. However, such a study could investigate participants who would have received formal instruction in their heritage language (Albanian) too in order to see whether the findings would then be different. This could perhaps present a different picture in the ratio of Content and Function words as well.

Also, the fact that our participants relied so extensively on Greek, the dominant language of Greece, could also be investigated in children who would have received formal instruction in their heritage language too, since in that case the exposure to Albanian would be richer and the children would have had a broader knowledge with its grammatical and syntactical rules and constraints through teaching. This could probably have an effect on the confidence of the children to draw elements from their heritage language in a greater degree since they could perceive it as a more official language too. A higher status language is usually associated with teaching and acknowledgment of its value. Teaching could create a different sense for their heritage language since it shows that it has a future use and a need for thorough knowledge of its individual characteristics and history.





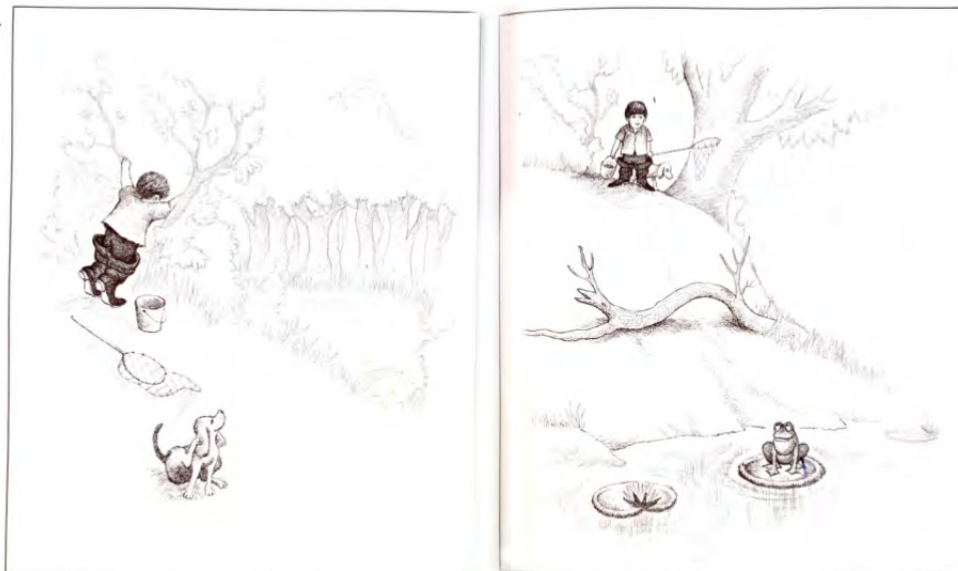
# A. Appendix A

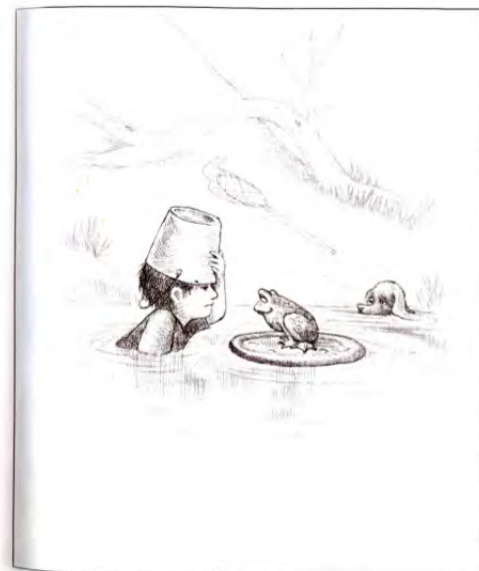
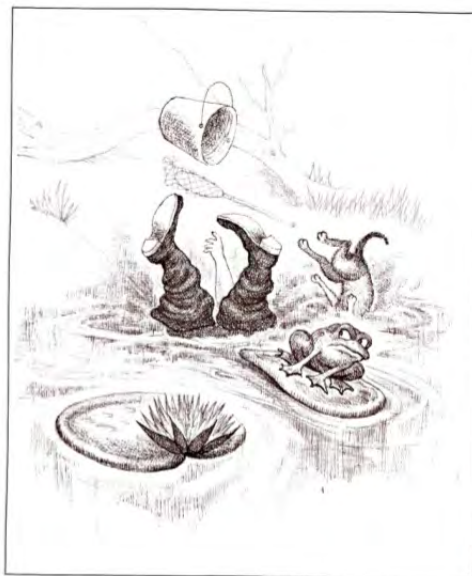
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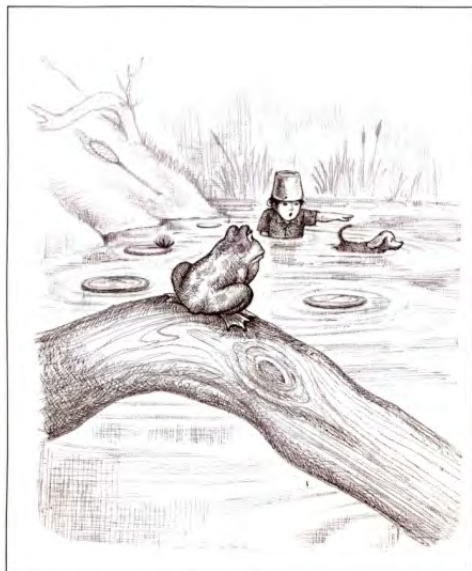
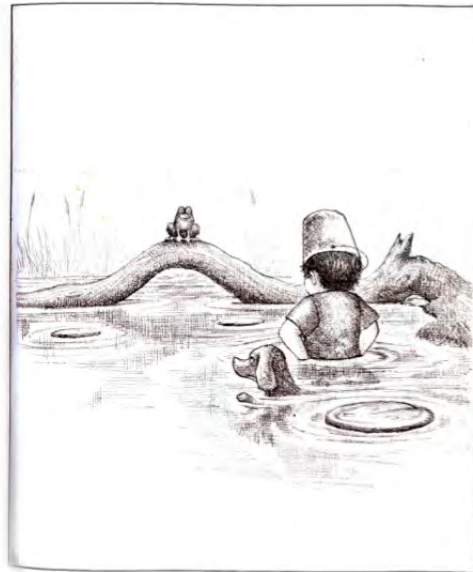
To my family,  
Marianna and Samantha

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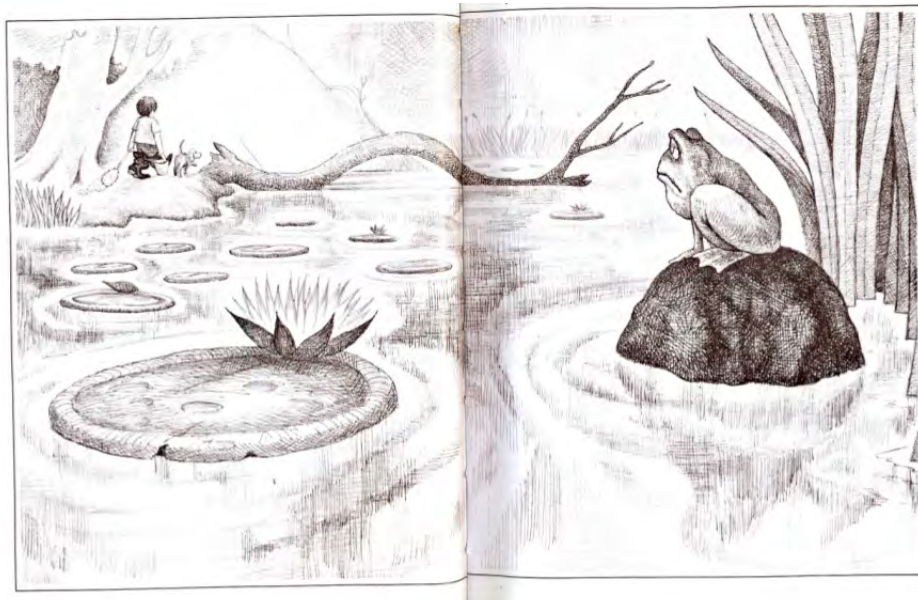
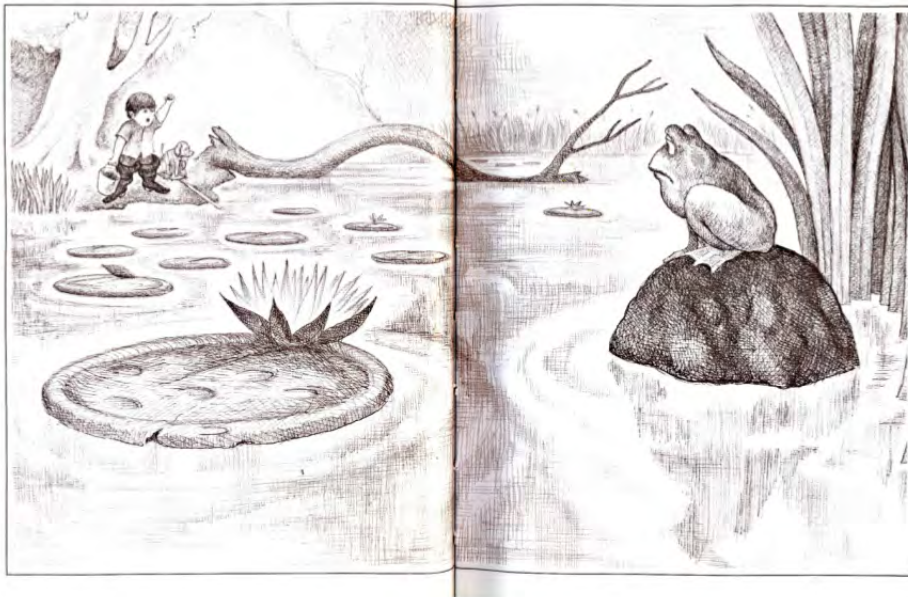


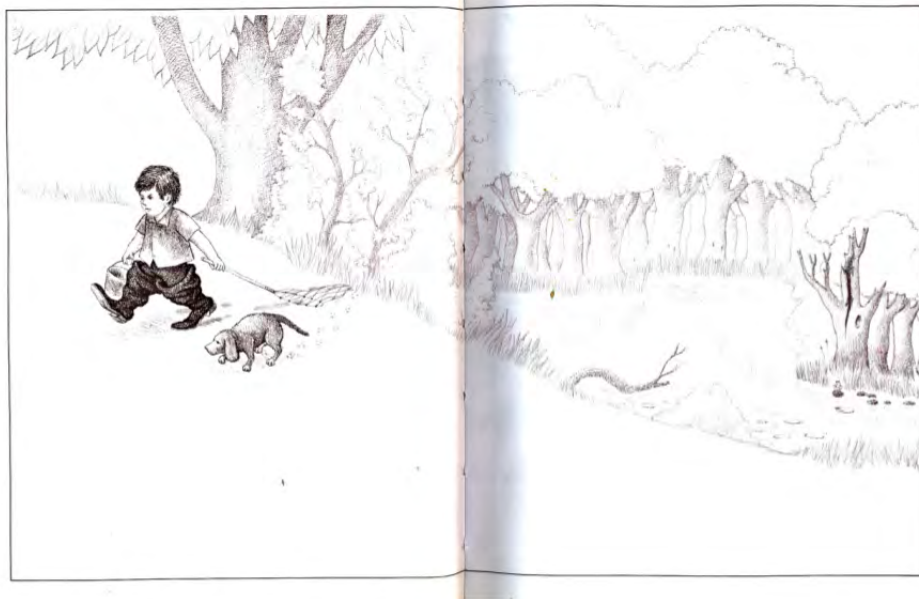


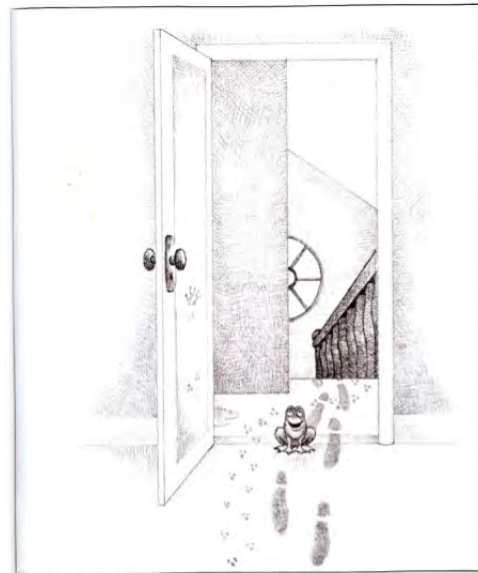
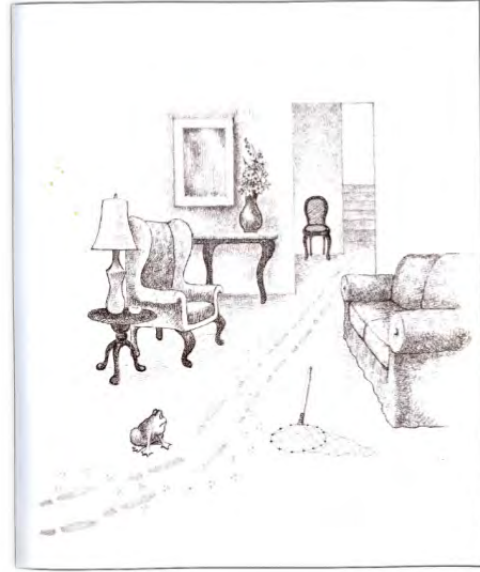


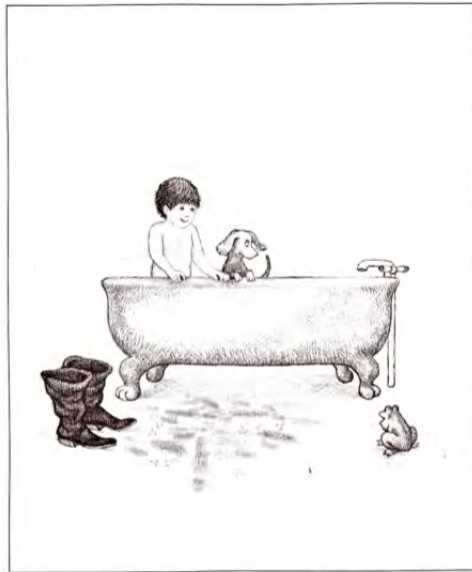














## B. Appendix B

### Ερωτηματολόγιο

Πόσο χρονών είσαι .....

Αγόρι

Κορίτσι

Τί τάξη πας στο σχολείο .....

Ποια είναι η πρώτη σου (μητρική) γλώσσα;

Ελληνικά

Αλβανικά

Ποιά είναι η δεύτερη γλώσσα που έμαθες;

Ελληνικά

Αλβανικά

Ποιά είναι η τρίτη γλώσσα που έμαθες;

Ελληνικά

Αλβανικά

Αγγλικά

Που έμαθες την δεύτερη γλώσσα;

Στο σπίτι

Από φίλους

Στο σχολείο

Που έμαθες την τρίτη γλώσσα;

Στο σπίτι

Από φίλους

Στο σχολείο

Πόσα χρόνια μιλάς την δεύτερη γλώσσα;

1 - 3

3 - 5

Πόσα χρόνια μιλάς την τρίτη γλώσσα;

1 - 3

3 - 5

Που μιλάς την πρώτη σου γλώσσα;

Στο σπίτι

Στο σχολείο

Με φίλους

Που μιλάς την δεύτερη σου γλώσσα;

Στο σπίτι

Στο σχολείο

Με φίλους

Που μιλάς την τρίτη σου γλώσσα;

Στο σπίτι

Στο σχολείο

Με φίλους

Πόσο συχνά χρησιμοποιείς την πρώτη σου γλώσσα;

Κάθε μέρα

Συχνά

Σπάνια

Πόσο συχνά χρησιμοποιείς την δεύτερη γλώσσα;

Κάθε μέρα

Συχνά

Σπάνια

Πόσο συχνά χρησιμοποιείς την τρίτη γλώσσα;

Κάθε μέρα

Συχνά

Σπάνια

## C. Appendix C

### Narrations of the children who produced trilingual utterances

#### 02 - Έλσα

The boy is walking with his dog to go the forest.

He is περνάει between the trees για να περάσει the forest.

Καθώς looking είδε ένα frog in the lake and go και προσπάθησε να το πιάσει.

He run να πιάσει το the frog.

But ai ra posht dhe u vra.

The frog is very angry because αυτός παραλίγο θα έπεφτε μέσα στη λίμνη.

Then the boy he saw the frog.

Then ai u fut να πιάσει the frog but ai në fund mundi.

The frog is and boy is very angry.

The boy είπε στο σκυλί να πάει από την άλλη πλευρά and he bsikon the dog να πιάσουν το βάτραχο.

Μετά το σκυλί και το αγόρι προσπάθησαν να το πιάσουνε.

Shkoj ta kapi dhe ai u trëmb.

But dog, child του λέει, and the boy είχε πιάσει τον dog.

Μετά το αγόρι μάλωσε the dog because ai nuk kapi qënin.

The frog is very angry because the boy donte ta kapi. Μετά the boy φώναζε στο βάτραχο because ai iku.

The boy and the dog φύγανε the forest and the frog is very sad.

Ata skojshin (shkuan) për në shtëpi and the frog is very sad because the boy και ο σκύλος έφυγαν the forest.

The frog is very sad.

Αυτοί πήγαν σπίτι τους.

Όταν έφτασαν in the house he saw the (...) and washed στη ντουζιέρα.

The boy and the dog are in the bath.

Όταν ο βάτραχος saw the boy and dog was very happy.

When the boy and his dog saw the frog they feel happy and the frog jumped in the bath.

And boy, dog and the frog ήτανε από τότε good friends.

**33 - Κώστας**

The boy is walk with his dog dhe mban një bashkë και ένα καλάμι.

The boy is trying to climb in në pemë dhe shikon το ποτάμι.

The boy see a frog and he want ta kapte.

The boy is running po diali bie në lumë.

The boy run ra në lum.

Το παιδί κοιτάει το the frog angry.

The boy is trying to catch a frog but he run away.

The boy shikon το βάτραχο θυμωμένος.

The boy thotë qenit ta kapin të dy.

Diali ipi në pemë.

Και το σκυλί ανέβηκε επίσης.

The dog is trying to catch the frog edhe diali.

Diali kapi qënin αντι να πιάσει το βάτραχο.

The boy catch dog. Dhe nuk kapi το βάτραχο.

The boy e thëret atë επειδή είναι θυμωμένος.

Diali ikën. Diali tami poven (shkon) në shtëpi with his dog.

The frog ish ulur në një gur.

The frog go to his house.

Diali bene banin me qënin.

The frog is in the ata.

Diali shikon the frog.

The frog is jump in the boy.

The boy and his dog and frog is ulur në një banjë.

### 37 - Έρρικα

I see in the picture one boy with his dog to go for fishing.

The boy ra posht.

Pastaj pa një a frog.

He's running to catch the frog but they πέφτουν κάτω απο ένα κλαδί.

Ο βάτραχος ξεφεύγει και το αγόρι έπεσε μέσα στο ποτάμι.

The frog is laughing.

They try then to catch the frog but he couldn't catch it.

Μετά το βλέπει και ο βάτραχος χαμογελάει.

Μετά προσπαθούνε κολυμπώντας να πάνε να το πιάσουν.

The dog run away to catch the frog.

Απο τη μία μεριά πήγε ο σκύλος και απο την άλλη το παιδί.

Αλλά ο βάτραχος ξέφυγε και το αγόρι έπιασε το σκύλο.

The frog is angry.

Μετά του φώναζε του βατράχου και ο βάτραχος ήταν λυπημένος.

Μετά αυτοί έφυγαν και πήγαν προς το σπίτι τους.

Στο δρόμο the boy is angry.

The frog is sad.

The frog then go to his house.

Το παιδί έκανε μπάνιο και ο βάτραχος πήγε να μπει εκεί μέσα για να τους κάνει φίλους.

Το αγόρι είδε το βάτραχο και χάρηκε πολύ.

Then the frog jump on them.

The boy the dog and the frog becomes friends.

## 40 - Χρύσα

The boy and dog πάνε βόλτα στη λίμνη.

The boy ανέβηκε σε ένα δέντρο και κοιτούσε.

Το αγόρι είδε ένα βάτραχο και σκέφτηκε να πάει να τον πιάσει.

The boy running at the frog.

Το αγόρι όμως παραπάτησε σε ένα κλαδί απο ένα δέντρο.

Έτσι έπεσε μέσα στο νερό.

The frog τους κοιτούσε περίεργα.

The frog πήδηξε ψηλά και το αγόρι προσπάθησε να το πιάσει.

Όμως δεν τα κατάφερε.

The boy and the dog ανέβηκαν πάνω στο κλαδί που ήταν ο βάτραχος και είπε στο σκυλί να πάει απο τη μία μεριά αυτό και απο την άλλη το αγόρι.

The boy προσπάθησε να πιάσει το βάτραχο αλλά τελικά έπιασε το σκύλο γιατί ο βάτραχος ξέφυγε.

The frog κοιτούσε νευρικά.

The boy φώναζε το βάτραχο.

The frog είχε λυπηθεί πολύ που ο αγόρι με το σκύλο έφυγαν.

The cuni and the dog έφυγαν of the house.

Ο βάτραχος παραξενεύτηκε.

Είδε τα βήματα απο το chupet and the dog και σκέφτηκε να πάει στο σπίτι του.

The cuni ήθελε να κάνει μπάνιο.

Ο βάτραχος πήγε μέσα στο μπάνιο και το αγόρι and the dog το είδε.

The frog πήδηξε μέσα στη μπανιέρα και έγιναν friends dog, boy and the frog.

#### 41 - Γκρασιέλα

Εγώ βλέπω ένα αγόρι και ένα σκύλο και πάνε στο ποτάμι.

The boy and the dog είναι στο ποτάμι.

The boy and the dog see the frog and boy and the frog πάνε να τον πιάσουν το βάτραχο.

The boy and the dog πέφτουν πάνω σε ένα κλαδί, σκοντάφτουν, και ο βάτραχος τρόμαξε και το αγόρι και ο σκύλος έπεσαν μέσα στο ποτάμι.

Çuni ra brenda në στο ποτάμι και ο βάτραχος τον κοιτούσε.

Και μετά ο βάτραχος πηδάει και ο σκύλος κοιτάζει το βάτραχο και το αγόρι προσπαθεί να το πιάσει.

Το αγόρι ήταν νευριασμένο και μετά κολυμπάνε και λένε να το πιάσουν.

The boy λέει στο σκύλο να βγεί έξω από το ποτάμι και να πιάσει το βάτραχο.

The boy and the dog πηγαίνουν να πιάσουν το βάτραχο.

Dhe pastaj ai çuni shkoi që ta kapë and the dog.

Αντι για να πιάσει το αγόρι το βάτραχο έπιασε το σκύλο.

Το αγόρι ήταν θυμωμένο και ο βάτραχος έφυγε.

Και μετά ο çuni φώναζε το βάτραχο και μετά αυτοί βαρέθηκαν.

The frog ήταν λυπημένο και μετά το αγόρι ήταν πολύ νευριασμένο και έφυγε.

The frog ήταν sad.

The frog ακολούθησε τα ίχνη των παπουτσιών του boy and the dog και μπήκε μέσα στο σπίτι.

Το αγόρι είδε το βάτραχο και ήταν χαρούμενος.

Ο βάτραχος πήδηξε με χαρά και μπήκε μέσα στη μανιέρα.

Και έζησαν αυτοί καλά και εμείς καλύτερα.

**56 - Κέσι**

One day one boy with the dog were going to the forest to catch some frogs.

Then he tried to catch one frog but he can't και πέφτει στη λίμνη.

Then he sees the frog behind him.

When he want to catch him the frog go away.

And then the boy was not happy because the frog was joking with him.

Then he says to the dog to catch the frog.

The two of them go to the te pema to catch the frog.

Then when the boy was catching it he did something bad and catch his dog.

Then he was angry because he catch his dog and the frog goes away.

Then the boy goes away and he was angry.

The frog was sad.

Then the boy goes and the frog was really-really sad.

The boy was going to home and the frog was staying by his own.

Then the frog was having none.

He was alone.

Then she goes after the boy and she goes into his house.

He sees that boy was having a bath and he goes in there.

Then he goes into the bathroom and go in there.

Then the boy and the frog and the dog were really friends.

One robot at a morning when he wake he do he bedroom and then he go to piu and then he was his bedroom and then he go to school.

After do he do his homework and then he go to play the guitar.

One morning the mom says to Billy to wake up but he didn't want.

Μετάφραση:

piu = πιω te pema = στο δέντρο



## D. Appendix D

### Narrations of the children who produced bilingual utterances

#### 03 - 'Ιγκλι

Dog and boys.

My favourite in the dog boys in the tree.

My favourite frog lies boys and dog to tree.

My favourite boys dog it's running.

A frog it's lies.

My favourite dog it's a tree.

Frog in the lake.

My favourite boys and dog and frog is lake.

My boy's and the frog in the eyes.

My boys the dog.

Dog lake and frog jump.

My dog the frog it's tree dog it's boys.

My boy and dog in water swim I can swim.

In boy frog dog is jump.

My boy and dog lake.

Boy and dog is tree.

My boy the dog is goodbye a frog.

Boy and dog arrive.

My boy and dog in a house.

Frog is running house.

Frog is running a bathroom.

Frog is a bathroom on Billy and dog.

Billy, frog and dog in water.

**04 - Μαριγκλέν**

My family buy a dog.  
My boy a book and tree.  
My boy a dog and frog.  
My boy at pond in a frog.  
My dog in a frog.  
My dog and frog it's a boy.  
My boy it's the frog and boy swim.  
My frog jump at boy.  
My boy and dog in the tree.  
My frog in the tree a boy and dog.  
My boy it's they dog in the tree and frog.  
My boy and the dog in the frog a tree.  
A boy and dog in the tree and frog πεφτει στο νερό.  
My dog the boy. In the frog στο βράχο.  
Boy it's the dog and frog στο βάτο.  
The boy goodbye and frog.  
Boy and dog περπατάνε.  
My frog in the βράχο.  
My frog ακολουθεί τα πατώματα.  
My frog in the living room.  
My dog in the bathroom.  
My frog, boy and dog in bathroom.  
My frog jump in the boy and bathroom.  
My dog my frog in the boy in the bye.

## 05 - Ισμίρ

The dog and boy.

The boy is on the tree, and the dog.

The boy and the dog look one frog.

The frog is on the leaf.

The boy θέλει να πιάσει το βάτραχο.

The boy and the dog πέφτουν in the water.

The boy look the frog and dog.

The boy and the dog είναι on the water.

The frog πηδάει πάνω τους.

The frog is on the tree.

The boy and the dog is on the water.

The boy and the dog βγαίνουν απ'τη λίμνη and the frog is on the tree.

The boy and the dog is on the tree and the frog is on the tree.

The boy and dog θέλουν να πιάσουν το βάτραχο.

The boy πιάνει the dog.

The frog is on the water.

The boy and the frog δεν έχουν πιάσει το βάτραχο.

The boy and the dog φεύγουν.

The frog is on the leaf.

The frog look the πατήματα των ποδιών του αγοριού.

The frog is on the home to the boy.

The frog is on the bathroom.

The frog is on the road.

The dog and the boy look the frog.

The boy and the dog look the frog is on the bed.

The boy and the frog talk with the frog.

**06 - Ιλιάν**

The dog και boy πάνε να ψαρεύουν.

The boy κοιτάει και dog είναι ξαπλωμένος και κοιτάει πάνω.

The boy κοιτάει ένα βάτραχο.

The boy τρέχει για να πιάσει το βάτραχο.

The boy πέφτει μέσα στη λίμνη.

The boy το βάτραχο κοιτάει το boy.

The boy κοιτάει το βάτραχο.

The boy δεν κοιτάει γιατί έχει το κουβά.

Ο βάτραχος κοιτάει the boy.

The boy φωνάζει γιατί έχει φύγει ο βάτραχος.

The boy πάει να πιάσει το βάτραχο.

The boy θέλει να πιάσει το βάτραχο αλλά του ξεφεύγει και πιάνει το σκύλο – the dog.

The boy κοιτάει τον dog που δεν έχει πιάσει το βάτραχο και έχει πιάσει το σκύλο και ο βάτραχος ξεφεύγει πάλι.

The boy φωνάζει έχει πιάσει το σκύλο και όχι το βάτραχο.

The boy φεύγει.

Εδώ φεύγει και αφήνει τα πατήματά του.

Ο βάτραχος μένει μόνος του.

Ο βάτραχος ακολουθεί τα πατήματα του boy και του dog.

Εδώ ο βάτραχος έχει μπει μέσα στο σπίτι και θέλει να βρεί τον boy και τον dog.

The dog έχει πάει στο μπάνιο και ο βάτραχος κοιτάει the boy.

Και μετά the boy κοιτάει το βάτραχο, μετά ο βάτραχος πηδάει μέσα στο νερό και είναι the dog και the boy.

Ο βάτραχος έχει πηδήξει πάνω στο κεφάλι του the dog.

## 08 - Άρης

The boy and the dog is going to a hunting.

The boy and the dog is look the sea.

The boy and the dog is go to catch the frog.

The boy and the dog is run to catch the frog.

The boy and the dog is έπεσαν στο νερό – in the water.

The boy is look the frog.

The frog is go away.

The boy and the dog is looking the frog.

The boy and dog is hunting the frog.

The boy and the dog is going catch the frog and the boy catch the dog.

The boy που έπιασε το σκυλί, the frog is going away – έφυγε.

The boy του λέει να γυρίσει πίσω.

The boy and the dog φεύγουν.

The boy and the dog is going to the home.

The frog is σε πέτρα.

The frog is hunting τις πατημασιές and is going to the home.

The boy and the dog is κάνουν μπάνιο and the dog is looking the boy and the dog.

The boy and the dog is looking frog and the frog is jumping to the wash.

The boy and the dog έζησαν καλά.

**09 - Κλωντιάνα**

This is one dog, one boy Billy.

One day Billy με το δικό του the dog πήγαν the water.

Εκεί βρήκαν ένα βάτραχο.

The Billy look the frog and έπεσε στο νερό μαζί με το σκύλο – the dog.

The frog is very good and Billy is in the water.

The boy ήθελε να πιάσει το frog και the frog is on the tree.

Μετά the boy ανέβηκε στο tree.

The boy and the dog ήθελαν να πιάσουν το frog αλλά το frog έπεσε in the water and the boy έπιασε the dog.

Μετά έφυγαν από το δέντρο και ήταν πολύ θυμωμένοι.

Τώρα πάνε the home.

The frog είναι λυπημένος.

Φεύγουν από το δάσος και the frog is very λυπημένος.

The frog πήγε in the home and είδε –look the boy and the dog and jump the bath.

And έγιναν friends for ever.

## 12 - Ελγέτα

I can see one boy and a little dog and boy κρατάει δίχτυ.

Then I can see a boy and a little in the forest.

Μετά βλέπω πάλι το αγοράκι σε μία λίμνη με ένα βάτραχο.

And boy with dog run to the river.

Τώρα το αγοράκι σκοντάφτει και πέφτει.

The boy with the dog σκοντάφτει.

The boy with the dog πέφτουν into the river.

And boy see the frog.

The frog πηδάει and dog laughing.

A boy and dog are angry with frog.

The boy διώχνει the dog.

Then the boy want to catch the frog.

The boy and dog προσπαθούν catch the frog and boy πιάνει the dog.

The frog is angry with boy and dog.

Then the boy is shouting because the frog leave it.

The boy and dog go the house.

Boy and dog is angry and they walk to go home.

The frog is μόνος because the boy and dog has is leaved.

The frog is following τα βήματα and the frog got to the home.

Then the frog go to the bathroom because there are the dog and boy.

Then the frog μπαίνει in the bathroom with the boy and dog and then they are happy.

**13 - Μάριος**

There is a young boy and his dog.

The young boy is climbing on the tree and the dog ξύνεται.

The young boy and the dog are going to catch a frog.

The young boy is running with his dog to catch the frog.

The young boy tripped on a tree with his dog.

The frog τρόμαξε.

The boy and his dog έπεσαν στο νερό.

The boy and his dog see the frog.

The boy is going to catch the frog but the frog πήδηξε.

The boy is now angry because he didn't catch the frog.

The frog is seeing what the boy is doing.

The boy and the dog are going to catch the frog.

The boy went to catch the frog and the dog has get the frog.

The boy catch the dog.

Here in the first picture the boy catched his dog.



## 15 - Λεονάρντο

Here is a boy with her dog ο οποίος έχει ένα κουβαδάκι και περπατάει.

Here is the boy again who want to climb up the tree and her dog watch him.

The boy saw a frog which he want to catch it.

He run fast with her dog to να το πιάσει and he fell down with her dog και αυτός έπεσε μέσα στη λίμνη.

Του μπήκε ο κουβάς στο κεφάλι and the frog saw him to the eyes.

When the boy want to catch it the frog jump and he run away.

The boy feels angry and the frog is laughing.

The boy διατάζει το σκύλο να πάει απο τη μία μεριά του κορμού για να πιάσουν το βάτραχο.

Εδώ ανεβαίνουν και οι δύο και τον πλησιάζουν.

Here is the boy again with the dog, he's fighting with the dog and the boy want to catch it.

The frog jump away and the boy catch her dog. The frog runs away and the boy έχει στο καλάμι του το σκύλο.

The boy looks so angry and the frog is feeling sad.

The boy έφυγε.

And here the boy is so angry because he don't catch the frog.

Here's the frog again which is so sad.

The frog ακολούθησε τις πατημασιές του παιδιού και έφτασε στο σπίτι του.

Από κει the boy takes shower and the frog is laughing.

The boy when she saw the frog she feels happy and the frog έπεσε και αυτό μέσα στη μπανιέρα για να κάνουν όλοι παρέα μπάνιο.

Here is a boy with her mom goes to wake up him.

The boy is dreaming that he want to have robot to do all the work he want.

To eat him a glass of water, to clean her room, to goes to school to, write all the homework and to play music when the boy feels sad.

**16 - Άννα**

The picture saw a little boy να περπατάει with a dog and a κουβαδάκι.

I saw a little boy να ανεβαίνει a tree.

The dog looked sky.

The little boy looked βάτραχος.

The boy προσπαθεί catch the frog.

But boy fall down.

Fall in the λίμνη.

The boy is very dissapoint with dog.

Boy προσπαθεί πάλι να το πιάσει but frog έφυγε.

The boy is very dissapoint and φώναζε a dog.

The boy up to tree προσπαθούσε catch frog.

In the end catch a dog.

The boy is very unlucky and a frog is περίεργος.

A boy έφυγε, φωνάζει.

The boy and the dog go.

The frog is dissapoint.

The boy is very angry – θυμωμένος and frog dissapoint.

A frog went the house a little boy's a little boys doing shower.

The frog is looking.

The boy is very happy and frog πήδηξε μέσα στη μπανιέρα.

In the end a frog έγιναν φίλοι.

**26 - Άννα**

The boy with his dog πήγανε μια βόλτα.

Boy is climb and he's going the lake.

Ο σκύλος και το αγόρι είδαν έναν βάτραχο and they are going to the frog.

Αυτοί γλίστρησαν μέσα στη λίμνη και είδαν το βάτραχο με τα μάτια τους.

The frog jump quickly.

The boy and the dog πήγανε να πιάσουν το βάτραχο and the boy said the dog  
“go απ’τα αριστερά”.

The boy and the dog προσπάθησαν να πιάσουν το βάτραχο.

The dog απασχολούσε the frog and the boy πήγε να πιάσει το βάτραχο.

After the boy έπιασε the dog and frog έπεσε κάτω.

After the frog είχε φύγει σε έναν βράχο and the boy and dog they are at wood.

The boy φώναζε the frog επειδή είχε φύγει.

Then the boy and dog έφυγαν.

The frog is sad.

The boy and dog έφυγαν θυμωμένοι and the frog έμεινε μόνος του.

After the frog είδε τις πατημασιές που είχαν φύγει και τις ακολούθησε.

The dog and the boy μπήκαν μέσα στη μπανιέρα and frog είχε πάει στο σπίτι  
τους.

After the boy and dog they see the frog.

The frog μπήκε μέσα στη μπανιέρα.

At the end the boy, frog and dog they are happy.

**27 - Κατερίνα**

Is the one boy with dog.

Boy climbed the tree.

Boy see the frog.

The boy is very angry.

Το αγόρι έτρεξε για να πάει να πιάσει το βάτραχο και σε μία στιγμή έπεσε πάνω σε ένα δέντρο.

The boy έπεσε the river και μετά όταν ανέβηκε στην επιφάνεια στο κεφάλι του είχε ένα κουβά.

Ο κουβάς κάλυψε τα μάτια του και όπως πήγε το αγόρι να πιάσει the frog, the frog climbed.

Το αγόρι διέταξε στο σκύλο να βγεί για να πάνε να πιάσουνε το βάτραχο.

The boy and dog ήταν στην άλλη μεριά του δέντρου και the frog ήταν στη μέση.

Όπως πήγαν να πιάσουν the frog δεν πρόλαβαν και the frog έπεσε μέσα στο ποτάμι.

The boy αντί να πιάσει το frog, έπιασε the dog.

Το αγόρι ήταν θυμωμένο και φύγανε – go the home.

The boy and dog άφησαν τα ίχνη τους και the frog τους ακολούθησε.

Όταν τους ακολούθησε, τους ακολούθησε the home.

And is wash the bathroom.

The boy and dog see the frog and is happy.

The frog climbed the bathroom and is very happy.

## 28 - Παναγιώτης

The boy and dog πάνε river and boy in the tree, look frog dog and boy.

Boy run and dog για να πιάσουν το frog, ενώ ήταν ένα ξύλο – sticks και πέφτει μέσα στο ποταμάκι.

Και μετά βλέπουν ο κουβάς είναι πάνω στο κεφάλι του βλέπει είναι πρόσωπο με πρόσωπο με το βάτραχο.

Jump a frog and on frog a sticks.

Θέλουν το τον πιάσουν και έχουν περικλώσει το βάτραχο.

Αλλά τους βλέπει και αντί να πιάσουν το βάτραχο έπιασε το σκύλο.

Το αγόρι βλέπει το σκύλο και ο βάτραχος λέει «γιατί το κάνουν αυτό; Θα μου το πληρώσετε!» Και μετά φεύγουν και έζησαν αυτοί καλά και εμείς καλύτερα.

**29 - Ελισσάβετ**

Boy and dog river and tree.

Το αγόρι με το σκύλο προσπαθούν να πιάσουν το βάτραχο.

Boy and dog in front of frog.

Boy and dog get up προς λίμνη.

Boy and dog and river and frog.

Boy το πιάνουν frog and ξεφεύγει.

Boy and dog πολύ θυμωμένοι.

Το αγόρι λέει στο σκύλο «πάμε έξω».

Εκείνη την ώρα τον περικυκλώνουν και οι δύο.

Boy and dog προσπαθούν να πιάσουν το frog.

Ο frog πέφτει στη λίμνη.

Το αγόρι πιάνει το σκυλί.

Dog and boy λένε ότι θα τον εκδικηθούνε.

Dog and boy φεύγουνε.

### 30 - Ορνέλλα

There is a child with his dog.

One day the child go to the tree and find the frog.

But he σκόνταψε and he έπεσε in the lake with his dog.

And then σηκώθηκε με τον κουβά and find the frog.

The frog πήδηξε and the child can't να πιάσει the frog.

The frog go on a tree.

The child go with the frog and he προσπαθούσε να το πιάσει.

Then he έπιασε the frog but έπιασε the dog and the frog έφυγε.

Then the frog κρύφτηκε and the child θύμωσε.

Then the child go to home with his dog.

And the frog έμεινε μόνος.

And then the frog ακολούθησε the child and the child was in the bathroom.

The frog go the bathroom with the child and the frog and they έγιναν φίλοι  
– friends.

**31 - Γιάννης**

A boy and a dog are going να φαρέψουν σε ένα ποτάμι – to a lake.

The boy is seeing a frog in the lake.

Is going to catch the frog but αυτός έπεσε in the lake.

Όταν βγήκε he seeing τον κουβά στο κεφάλι του.

The frog is πήδηξε in a tree.

The dog is in the lake.

The boy ανέβηκε in the tree to catch the frog.

But he is catching his dog.

The frog είναι σε μια πέτρα.

The boy is seeing the frog who is in rock.

The boy φεύγει.

The boy πάλι φεύγει.

The frog είναι μόνο του. The frog is seeing τις πατημασιές and it is going to boy's house.

The boy is doing a bath in the bathroom.

The frog is going to the bath. The boy is seeing the frog.

The boy and the dog are seeing the frog.

The bathroom has got a pair of boots.

The frog πήδηξε in the bath with the boy and the dog.

The frog is on dog's head and the boy is seeing.



### 32 - Τζέσση

I see a dog and boy.

Boy has got ένα δίχτυ.

The boy is going to a river and the boy see the river.

Boy and dog see one frog on the river πάνω στο νούφαρο.

Boy and dog are run to catch a frog.

Boy έπεσε and dog πήγε να πέσει μέσα στο ποτάμι.

Το αγόρι είναι με το κεφάλι κάτω στο ποτάμι and dog είναι και αυτός με το κεφάλι κάτω.

The boy has got on his head ένα κουβα and see the frog.

The boy want to catch the frog και ο βάτραχος έφυγε.

The boy βλέπει το βάτραχο που είναι πάνω σε ένα δέντρο.

Boy says the dog να φύγει.

Μετά α σκύλος και το αγόρι πήγαν να πιάσουν το βάτραχο που ήταν πάνω στο δέντρο.

Boy go to catch the frog but the dog he's έριξε το βάτραχο και το αγόρι έπιασε το σκύλο αντί για το βάτραχο.

Boy is catch the dog and frog is πάνω απο το βράχο.

Boy's angry because he isn't catch the frog.

Boy and dog is going and frog see them.

Boy and dog going to the river.

Frog is πάνω απο the rock and is λυπημένος.

Frog following τα βήματα του παιδιού και του σκυλιού and frog go the house of the dog and boy.

Boy and dog κάνουν μπάνιο και ο βάτραχος τους βλέπει να κάνουν μπάνιο.

Boy and dog see the frog and smile it.

Frog jump πάνω στο αγόρι and dog is smiling.

Boy see the frog όπου είναι πάνω από το κεφάλι του σκύλου.

**36 - Ελίζα**

I see one boy with his dog to walk in a park.

The boy βλέπει κάτι go to see the frog and περπατάει στο βουνό, σκοντάφτει σε ένα ξύλο and throw down in a river.

The boy throw down in the river and see the frog.

The frog πηδάει ψηλά, το παιδί διώχνει το σκυλί, το παιδί πάει να πιάσει το βάτραχο.

Το παιδί πιάνει το σκυλί, ο βάτραχος πέφτει κάτω, το βατράχι νευρίασε.

The boy go to his house, the frog κάθεται μόνο του and the frog go to the boy's house.

The boy and his dog κάνουν μπάνιο.

The frog μπαίνει μέσα στη μπανιέρα and the boy, dog and the frog are friends.

### 38 - Μιρέλα

I see a boy στο δέντρο and his dog is downhill.

The boy είδε ένα βάτραχο and then he goes to catch it.

The frog run out him and he stopped on στον κορμό ενός δέντρου.

I see a boy with his dog to go for a walk.

The boy fell out the lake and he saw him.

The boy is sit with the dog and the frog and he tried to catch the frog but he doesn't catch it and he caught the dog and the frog left.

The boy is shouted to the frog to come back and he returned to home.

He was very angry because he won't come back.

The frog was sad too.

And he saw his footprints and he come to his home.

Then the boy and the dog was doing shower the dog saw him and he go to them.

Then they were be friends.

## 43 - Γιάννης

A boy go to να κυνηγήσει and he saw an βάτραχος.

He like it.

He wants to catch it.

He runs to the βάτραχος and έπεσε and he jump in the water with his dog.

And όταν σηκώθηκε ο βάτραχος κοίταξε και του είχε πέσει ο κουβάς πάνω του.

The βάτραχος jump πάνω στον κουβά του and the boy is looking κάπως νευρισμένος.

The boy φώναξε στο σκύλο – The dog.

And βάτραχος is λυπημένος.

The boy προσπάθησε να catch the βάτραχος and the dog.

The boy caught the βάτραχος but he didn't catch the βάτραχος but his dog.

And είναι πολύ νευριασμένος που απέτυχε και ο βάτραχος φεύγει πονηρά.

The boy is nervous and the βάτραχος is λυπημένος.

The boy is going to the home and the βάτραχος alone.

The boy is nervous with his dog.

The βάτραχος is lonely.

The βάτραχος is following his steps and he's in his home.

The kid is κάνει μπάνιο with his dog.

He's cleaning.

And the βάτραχος is following his steps.

And the kid and the dog watching the βάτραχος are happy and playing together.

#### 44 - Πέλι

And the boy looked the frog.

The frog look the boy and the boy λέει to the dog to go out.

The boy jump into the tree and catch the frog and dog.

The boy παίρνει την απόχη για να το πιάσει και το σκυλί το ίδιο and the boy catch the dog no catch the frog. The boy catch the dog and put in the water.

The frog go to the rock.

The boy φωνάζει and frog look the boy.

The boy go and the frog is sad.

Boy and dog go a front and the frog is back to the river.

The frog look the footsteps of the boy and dog and go to the house of the boy.

Boy go to the toilet and πλένεται and frog look.

The boy happy because look the frog and the frog go to στη μπανιέρα.

Boy dog and frog is friends.

**49 - Sergio**

Here is a kid with a dog.

Here the kid is on the tree and the dog is looking him.

Here the both of them are looking a frog who is in the water.

The dog with kid are running to catch him.

The frog is very sad.

The kid κάποια στιγμή πέφτει and the frog is looking them.

The kid and the dog are in the water and the frog is very sad.

The frog is laughing with them and the frog jumps away.

The kid is very sad and the dog που δεν μπορούσαν να το πιάσουν.

And then the kid goes up and catch the dog out of water.

The frog is very sad and angry.

The kid is φωνάζει to the frog and the frog is sad.

The kid with the dog are going away and the frog is very sad.

They are going away to the house.

The frog is very-very sad and is staying out of the water.

The frog is following the kid with the dog and he goes to the toilet.

He looks them and he's very-very happy.

The kid tell to him to play with them.

The frog jumps in the water and they feel very good.

**52 - Teo**

Είναι ένα παιδάκι and his dog.

Ανεβαίνει στο δέντρο and dog look the boy.

And the boy and the frog βγαίνουμε απο τη μπανιέρα και ο βάτραχος μπαίνει μέσα.

Boy look the frog and the dog and the boy θέλουν να πιάσουν το βάτραχο.

Γλυστράει το αγόρι και πέφτει στο νερό.

And boy and the dog in the water swimming.

And boy see frog.

The frog is jumping and the boy θέλει να το πιάσει.

Boy and the dog look the frog.

Το αγόρι λέει να πάει κάπου ο σκύλος και boy and the dog θέλουν να πιάσουν το βάτραχο.

Ο σκύλος παίζει ξύλο με το βάτραχο και το αγόρι έπιασε το σκύλο αντί για το βάτραχο.

Και κάπου ο βάτραχος φοβήθηκε.

And boy φωνάζει το βάτραχο.

Boy and the dog φεύγουν και ο frog cry.

Το αγόρι με το σκύλο φεύγουν.

The frog είναι λυπημένος.

The frog in the house the boy.

Boy and the dog κάνουν μπάνιο.

And the frog is happy.

And the boy, dog and frog is friends.

**53 -Μαρία**

I see a dog and boy.

I see boy σκαρφαλώνει and a dog κοιτάει.

The boy and dog see the frog.

Boy and dog προσπαθούν να πιάσουν το frog.

Dog and the boy πέφτουν στη λίμνη.

Boy and dog έπεσαν στη λίμνη και frog απομακρύνεται.

Dog είναι sad and boy sad.

Dog happy and boy έριξε το frog τη θηλειά.

Frog happy and dog είναι θυμωμένο and boy είναι το ίδιο.

Frog κοιτάει το boy and dog φεύγει.

Boy λέει στο dog "ταμάμ".

O dog and frog μαλώνουν και ο boy προσπαθεί να τους πιάσει.

O boy έπιασε τον dog και ο frog έπεσε.

Μετά ο boy έπιασε τον dog στο δίχτυ.

And ο frog θύμωσε.

O boy θύμωσε and dog.

And frog sad.

Boy and dog φεύγουν and frog sad.

Dog and boy είναι θυμωμένοι και φεύγουν.

The frog sad.

O frog αποφασίζει να φύγει.

O frog έχει δει πατημασιές και τις ακολούθησε και βρέθηκε σε ένα living room.

Boy and dog in the bathroom.

And frog πήγε στο ίδιο σπίτι με το boy and dog.

A boy and dog in the bathroom and frog.

And boy and dog in the bathroom και ο frog μπαίνει μεσα στη μπανιέρα.

A boy and dog in the bathroom and μέσα στη μπανιέρα μαζί και ο frog.



#### 54 - Άγγελος

One boy and one dog.

The boy climb a tree.

Μετά βλέπει μια lake.

The boy σκοντάφτει and πέφτει in the lake.

The frog πήδηξε πάνω απο το κεφάλι του και μετά το the boy γύρισε πίσω του και είδε κάτι – το βάτραχο.

The boy είπε στο σκύλο να πάει εκεί.

Και τότε πήγε να πιάσει το βάτραχο.

Όμως ο βάτραχος πήδηξε και έπιασε το σκύλο.

The boy έπεσε κάτω και έψαχνε να βρεί το βάτραχο.

Τότε έφυγε νευριασμένος.

Εδώ βλέπουμε one lake and one frog.

The frog ακολουούθησε τα βήματα και μπήκε in the house.

Μετά πήγε στο δωμάτιο του και μετά in the bathroom.

Πήδηξε και γίναν friends.

**55 - Μάριος**

One boy and one dog.

A boy climb tree and one frog.

Boy and dog τρέχουν για να πιάσουν το βάτραχο και σκοντάφτουν και πέφτουν κάτω στη λίμνη.

A boy λέει στο σκύλο να πάει εκεί και ανεβαίνουν πάνω στο δέντρο.

Το boy πάει να πιάσει το βάτραχο, ο βάτραχος πηδάει και πιάνει το σκύλο.

Και ο frog δεν ήταν μέσα στη λίμνη.

Μετά το boy φωνάζει νευριασμένος και φεύγει μαζί με το σκύλο.

And το frog ακολουθάει τις πατημασιές του παιδιού και πάνε στο σπίτι.

Το παιδί και ο σκύλος κάνουν μπάνιο και ο frog μπαίνει μέσα στο room και μετά μπαίνει μέσα στο bathroom.

A boy τον κοιτάει και μετά το frog πηδάει πάνω στο κεφάλι του σκύλου.

### 57 - Ρενάτο

One morning a kid with his dog went to a forest.

In forest they saw a frog who they want to catch.

They went quickly to frog but he fell.

After this the boy was angry with the frog because the frog was joking with them.

After this the boy goes angry with his dog and he says him to go away.

Then the boy went to the tree to catch the frog.

But he caught his dog no the frog.

The frog went away and the boy was very-very angry.

After all these the boy with his dog έφυγαν from the lake and the frog was very-very sad.

The frog ακολούθησε τα αποτυπώματά του and he went to his house.

The frog saw the boy with the dog να πλενόντουσαν.

The boy looked the frog and he was very happy.

The frog went to his bath and they played games.

**58 - Ουρανία**

Here is a guy that is going with his dog out and they are playing.  
The boy go to the trees and find a frog.  
They were running to catch it but the boy and dog fall down to the river.  
Then they see the frog and the frog go away.  
The frog was laughing with them and they started to want to catch him.  
Then boy and the dog catch the frog but something wrong happened.  
The boy catch the dog and the frog fall.  
Then the frog jump and go away.  
Then they start to shout and the frog was very sad.  
The boy and the dog go away and frog was very sad.  
Then the boy and dog were very angry and go away.  
The frog stay alone and was very-very sad.  
Then they want to go.  
The frog want to see where is the boy and the dog.  
Then he followed them and he see where they live.  
The boy and the dog were doing a shower.  
The frog see them and jump with them to the bath.  
And then they be friends.

## 60 - Ειρήνη

I can see a boy with his dog.

The boy is climbing a tree, his dog ξύνεται, the boy is seeing a frog.

The boy is trying to catch the frog.

The boy σκοντάφτει.

The boy fell into the lake with his dog.

The boy is dissapointed with himself.

The boy is trying again to catch the frog.

The frog escapes.

The boy says to his dog to try to catch the frog.

His dog ορμάει and the frog is afraid and the boy catches him, the boy caught the dog.

The boy realizes that he caught the dog.

The boy is going away.

The frog is frightened then the frog follows the footsteps and goes to the boy's house.

The boy is doing bath with his dog.

The frog sees them.

The boy and dog see the frog.

The frog goes into the μπανιέρα.

The boy, the frog and the dog are happy that they are together.

**61 - Άντι**

I see a boy with a dog.

They are going to fish.

The boy is doing something in the tree and the dog is ξύνει το αυτί του.

Then they go to fish some frogs.

The boy run to catch the frog but they σκοντάφτουν σε ένα ξύλο.

And they πέφτουν in the λίμνη.

Then the boy see the frog and he was sad.

Then the boy ήθελε to catch the frog but the frog jump.

Then the frog is smile in the boy and the dog.

But the dog and the boy come to catch the frog again.

They το περικύκλωσαν but they don't catch the frog.

The boy catch his dog.

Then the frog έφυγε μακριά and the boy was very angry.

Then the boy and the dog leaved the frog.

They were sad and angry.

But the frog was sad.

The frog ακολουθήσε the boy and the dog in our house.

The frog go in the στο μπάνιο and see the dog and the boy to wash.

When the boy see the frog they έγιναν friends.

**62**

Is a dog and a boy and they're going to fishing.

The boy is climbing on the trees and the dog is waiting.

The boy is looking a frog.

The boy and the dog running on the frog but πέφτουν μέσα στο νερό.

The boy and the dog is on the water and is looking the frog the boy.

The boy is catching the frog.

But the frog is jumping on the tree.

The boy is talking to dog and climb the tree.

The boy and the dog is on the tree with the frog.

The boy is catching the frog but the frog is jumping on the water and boy catching the dog.

The boy is θυμωμένος and the dog is goes to the rock.

The boy is talk to the frog and boy and the dog he's going to their home.

The frog is lonely on the rock.

But the frog is going to home of the boy and dog.

Boy and dog is on the bathroom and the dog is going to their.

The boy and the dog are happy to look in the dog.

The frog is jumping on the bathroom.

The boy and dog and frog are friends.

## 67 - Έρι

The boy and the dog go μια βόλτα.

Το παιδιά ανεβαίνει σε ένα δέντρο and the dog looking he.

The dog and the boy looking one frog.

Το παιδί και ο σκύλος πάνε να πιάσουνε το βάτραχο και το παιδί και ο σκύλος τρέχουν.

Πέφτουν στο νερό.

Αναποδογυρίζουν και οι δύο.

Και ο βάτραχος φεύγει.

The frog the boy looking.

The boy says the dog να βγεί έξω.

The boy and the dog πάνε να πιάσουν το βάτραχο.

The frog πέφτει απο το δέντρο.

The boy πιάνει the dog and the frog go.

The boy looking the frog and go.

The boy and the dog go to the house.

The frog is alone.

The frog go to house boy and dog.

The boy and the dog κάνουν μπάνιο and the frog looking they.

The frog κάνει μπάνιο.

The boy, frog and dog κάνουν μπάνιο.



## 71 - Αλέξανδρος

I saw children who is captured the tree.

Near him I saw a basket.

I saw a dog and a big forest.

In the next picture I saw the boy to hold a basket.

Near him is a dog.

Down in the picture is a frog up in a plant in the river.

The boy go to capture the frog but he fell down.

He fell in the water and get walk.

The frog saw him and the boy saw him.

The boy want to capture the frog again but he jumped and he go away.

The boy was angry and he saw the dog.

The boy and the dog into the tree and after they went to capture the frog.

The dog went up, frog go away and boy capture the dog and the frog fell down.

The boy capture the dog and the frog go away.

The boy was angry and the frog saw the boy.

Boy was going away and the frog was seeing him.

The boy go away in his house.

I saw a forest with the frog.

Frog saw feets boys and went to the house.

Boy was dishing and frog went there.

The boy saw the frog and the frog jumped into the bath.

And the boy saw the frog who is up in head dog.

**72 - Ντανιέλα**

Is a boy with his dog με το καλάθι and is walking.

He's in the tree and he climbing and his dog is far with his and the boy with his dog και με το δίχτυ του saw το βάτραχο in the river.

Μετά the boy with his dog is running and he want to put τον βάτραχο in the river and he fell down with the dog in the river.

After he fell down in the river και βράχηρε.

After ο βάτραχος left it and the boy he stayed to saw the βάτραχο.

Μετά the boy said his dog to put out at river.

After he climbing the tree and the boy with his dog put βάτραχο.

The βάτραχος το σκασε and the boy put his dog.

And boy stayed to said the frog.

And after the boy is leaving.

After the frog is alone and in the house and saw the boy that shower.

Boy and dog in the shower and saw the frog.

After frog is in head of the dog.

### 73 - Ειρήνης

The child open the tree and he sees a λίμνη.

He wants to catch the frog but he fall down.

Once the child fall down πέφτει in the water and after the frog is look it.

He wants to catch the frog but the frog φεύγει.

The child wants to go in the tree where is the frog and he goes there and he wants to catch the frog.

Dog goes to catch the frog but the frog fells down and the child catches the dog.

The child looks that he didn't catch the frog and catches the dog.

The frog φεύγει.

After the child wants to go there is a frog but he didn't go because it's not near.

After, the child looks that he didn't catch the frog and he goes in his home.

He is angry and the frog μένει alone.

The frog goes to look where the child goes, and he goes in his home.

The frog looks that the child is doing a bath and goes and the frog.

The child looks the frog and after the frog goes in the child and they are playing in the bath.

**74 - Τζέσικα**

There is a forest and there is a dog and the cup and in the lake there is one frog.

The boy can't catch the dog.

Next the boy trip into lake.

The boy trip in the lake and the boy see the frog.

Ο βάτραχος ξεφεύγει και το αγόρι προσπαθεί να το πιάσει.

The frog see the boy and the dog when the boy said the dog to catch the frog.

The boy again can't catch the frog.

The boy catches the dog.

The boy catching the dog και προσπαθεί να φύγει.

The boy say in the frog ότι θα το πιάσει κάποια μέρα.

The boy leave with dog.

The boy is again in the forest.

There is nothing here.

There is a frog on the stone in the lake.

Ο βάτραχος βλέπει τις πατημασιές του αγοριού και οι πατημασιές καταλήγουν σε ένα σαλόνι.

The boy is in the bathroom and have a shower.

The frog in the door and see the boy που κάνει μπάνιο.

Στο μπάνιο μπαίνει και ο βάτραχος.

In the bathroom there is a dog and the boy and on the dog there is a frog.

### 75 - Κωνσταντίνος

I can see a boy near a lake.

I can also see some trees, a dog μια απόχη and a bucket.

Here I can see a boy who has την απόχη και τον κουβά in his hands.

Near him is the dog and he's looking at the frog.

Then I see the boy trying to catch the frog into the bucket.

Suddenly the boy trip in at a branch and fall into the lake.

Then when the boy gets up he see the frog in front of him.

Then when he's going to catch the frog, the frog with a big jump run away.

Then the boy is disappointed.

He ordered the dog to surround the frog so they can catch him.

When the boy is going to catch the frog, the frog falls into the lake and dog μπαίνει στην απόχη.

Then we see the boy with the dog στην απόχη and the frog is looking them.

Then he's angry with the frog.

Then he leaves away.

He leaves away disappointed and angry.

Then I can see some trees near the lake and the frog.

Then the frog find some πατημασιές and he follows the πατημασιές and reaches to the boy's house.

It sees the boy with the dog having a bath.

Then it gets in the bathroom and the boy is looking at it.

Then the frog jumps into the bathroom.

I can see the frog at the head of the dog.

**76 - Venia**

In the first picture I can see a boy with a dog.

Then I can see a boy που βλέπει one frog.

Then the boy run to catch the frog but he falls in a κλαδί and the boy fall into the lake.

And the boy was sad.

When he tried to catch the frog the frog run away and the boy was θυμωμένο.

Then the boy say the dog to go out of the lake and go on a κλαδί to catch the frog.

But when he try to catch the frog the frog go away and he catch the dog and the frog was very angry.

Then the boy shout to the dog and then he left.

The frog was disappointed.

Then the frog went to the house of the boy.

And saw the boy που έκανε μπάνιο with his dog.

Then the boy saw the frog and the frog and the frog jumped into the bath.

Then the boy had a bath with the frog and his dog.

**77 - Αναστασία**

Here I can see a little boy in a forest and his dog to saw a little frog in a little lake.

Then he run with his dog and his net to catch the frog from the lake.

But while he run the boy fell down in the lake with his dog and then he could see the frog into the eye.

He try to catch the frog but the frog jump away from the little lake and he sat on a branch.

Then the little boy tell his dog to go from the other side from the branch and they try to catch the frog.

The dog jumping to the frog and the little boy σπρώνει his net.

But when he try to catch the frog the fog jump into the lake and he catch his dog.

The little boy are very angry and frog went and sat on a rock.

The little boy begin to shout and and the frog saw him.

Then the little boy and his dog left the forest.

**78 - Γιάννης**

In the picture I can see a child who try to find out a frog.

When he found out the frog was very happy.

In the first one try she try to catch the frog.

But she miss the try and he feel down in the water and he was very dissapointed.

He try to catch again the frog but he miss again and the frog catching out to the branch.

The boy said to dog to go to the other πλευρά of the branch to catch the frog.

The dog go to catch the frog and the boy too but the frog fell down the water and the boy catch the dog.

The boy was very dissapointed and the frog too.

He cried because he didn't catch the dog.

Then the boy and the dog started at the direction of their home.

The frog was very dissapointed.

The frog then, because it was very dissapointed he follow the πατημασιές and he go in the boy's house.

The boy and the dog έκαναν μπάνιο and the frog with a jump πήγε και αυτός στο μπάνιο.

Then the boy, the dog and the frog έκαναν μαζί μπάνιο.



### 79 - Μαρία

In the first picture we can see a little boy holding a small bucket and a dog near it.

Then we can see the little boy staring at the lake and the dog near it.

Then the boy realizes that there a little frog inside the lake then tries to catch him.

But he's not careful because he fall down by accident and went inside the lake.

Then he sees the frog and makes again an effort to catch him but he runs away.

He seems to be angry then although the dog is always by his side.

He tells his dog to go away and tries to catch him in a piece of wood which has fallen down in the lake.

Then when the frog tries to escape from their effort to catch him he accidentally falls into the lake and the boy catches the dog instead of the frog.

After the frog has hidden in a rock and the boy is trying to get the dog out of his nest the boy shouts to the frog.

While they are leaving the dog stares at them.

They walk away and the frog seems to be unhappy and worried of the leaving of the boy.

Then the boy went home and the frog follows him he reaches into his house.

While the boy is having a shower he gets in into his bath and the boy seems to be very happy about it and they probably become very good friends.

## 80 - Βιργινία

Once upon a time I see there was a child that he climbs a tree near a river.

I can see a dog ένα δίκτυ and frog up to a flower.

Then suddenly the boy takes in his hands το δίκτυ πεδικλώνεται απο ένα δέντρο.

Προσπαθεί να πιάσει το βάτραχο and suddenly he πεδικλώνεται και πέφτει στο ποτάμι.

The child is in the water he can't get away from it.

Then he saw the frog but it so miserable.

He tries to catch the frog but the frog jumps and he loses again.

The boy is very angry with the frog.

The frog stands in a branch and the boy says to his dog to go away from the river.

He wants to catch it alone.

The dog barks to the frog and frog seems to be frightened.

So the boy can catch it με το δίκτυ.

The boy catches his dog instead of the frog.

The frog jumps and φτάνει on a stone.

Then the boy τα παρατάει και ο βάτραχος τώρα πια είναι ελεύθερος.

The little child goes to his home but the frog is very sad.

The child is angry and his dog is very χτυπημένο.

Now the frog is alone.

But the frog follows the trails of the boy and the dog and reaches to their house.

While the child is having a bath the frog saw him and wants to να πάει.

The little child and the dog when they saw the frog are very happy.

They invite it to play with them in the bathroom.

The boy is very happy and the little dog seems to be good friends with the frog.

### 81 - Γκέρτα

I can see little boy with his dog.

And the boy and the dog is going to the little lake to catch up the frog.

Then the little boy and the dog they are running to catch the frog.

Then the boy and the dog fell down to the little lake.

Then the little boy was looked to the frog and the frog jump out of the little lake.

Then the boy was very angry because the frog jumped out of the lake.

Then the boy started shouting to the dog to catch up the frog.

The boy was very near to catch the frog and the frog jumped into the little lake and the boy caught the dog.

The frog was very angry with the boy and was jumped to the rock.

The boy started to shout to the frog because he left.

Then the boy and the dog from the lake and the frog was έκπληκτος.

The frog was following τα αποτυπώματα and the frog went to the house who was in the house which ήταν του αγοριού.

The frog went to the bathroom with the boy and the dog and jumped to the bath and then the boy was very happy with the dog and frog.



## **E. Appendix E**



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