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An analysis of the condition of bilingualism: false myths, advantages and a case study in kindergarten

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Vorrei dedicare questa tesi…

Alla mia famiglia (allargata) che mi ha sempre sostenuta e incoraggiata a dare il meglio.

Al mio fidanzato che è stato grande fonte di ispirazione per questa tesi e che è sempre con me.

A tutti i miei amici e compagni che hanno reso l'Università e la vita finora più divertente.

Alla scuola, all'Insegnante e ai bambini che hanno permesso la realizzazione del progetto portato a termine nella tesi.

A me stessa, che con fatica e costanza sono arrivata fin qui, e al mio futuro.

Un grazie di cuore va infine al mio Relatore che con la sua conoscenza, i suoi consigli e il suo supporto, mi ha accompagnata in questo viaggio di chiusura di un capitolo importante della vita.

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INTRODUCTION

This dissertation stems from a personal interest and curiosity about bilingualism. It conveys general ideas about this complex phenomenon and its many manifestations, focusing primarily on the importance of raising bilingual children because of the advantages of bilingualism. Using questionnaires proposed to bilingual grownups and a kindergarten case study, this dissertation provides some concrete evidence of the many benefits of bilingualism for both children and adults.

At the end of my bachelor's degree, I decided that bilingualism would be the focus of my master's thesis. Not only because my dream is to be a language teacher, but also because the topic touches me personally and sentimentally and it will be part of my future as a person. Therefore, I decided to write my master's thesis on this topic to learn more about it and to be prepared for a possible future with my Dutch boyfriend. Raising a bilingual child offers endless opportunities, it is a privilege that should not be underestimated.

The following dissertation is based on the hypothesis that bilingualism brings remarkable advantages in many aspects of life. Starting from some general ideas about this phenomenon, it also seemed important to me to collect some concrete data to support my hypothesis and provide some practical evidence. The aim of this work is also to debunk all the false myths surrounding bilingualism, which unfortunately are still very present in Italy and in the world. I offer not only a detailed description of the radicated false myths on the topic, but also a description of the main benefits of this phenomenon, hoping to convince people and new parents of the benefits of knowing and speak more than one language.

In preparing this dissertation I have used many sources of information such as books, articles, the internet and of course real people and children. This work was also made possible by the opportunity to stay for a month at the Scuola dell'Infanzia Pierina Boranga (Padua), where I went four times a week to carry out a personal adaptation of *The Adventures of Hocus and Lotus* project by Professor Taeschner. There I was able to observe bilingual and monolingual children to collect some data on their language behaviour before, during and after the project, in order to compare their language learning.

This dissertation is divided into two parts: the first, composed of five chapters, is dedicated to the theoretical conceptions related to bilingualism, and the second, composed of one final chapter, is exclusively dedicated to the explanation of the project and the analysis of the data that I collected during my observation at the Pierina Boranga school.

The first chapter deals with the definition of bilingualism and the different types of this multidimensional phenomenon according to some parameters such as the age of acquisition, the organisation of languages in the brain, the linguistic competence and fluency, the prestige of languages, the cultural identity, the context in which the languages are acquired, the use of languages in social and individual contexts and more. The important point to draw from this first chapter is that it is essential to blur the boundaries of bilingualism and adapt its different types to different situations.

The second chapter deals with language acquisition, more precisely with the linguistic development of monolingual and bilingual children. All human beings are born with a language acquisition disposition, and in order to learn to communicate we must be placed in contact with someone whose way of speaking initiates the language acquisition process. Monolingualism or bilingualism mainly depends on how many languages children will hear in the context in which they grow up.

The third chapter is about the prejudices and false myths about bilingualism. It analyses past studies compared to current ones. In fact, much research conducted at the beginning of the 19th century seemed to affirm the problematic nature of bilingualism in language development, cognitive development, and even education. Nowadays, ideas about bilingualism are no longer as unambiguous as in the past: either entirely positive or entirely negative. In fact, differences between bilinguals and monolinguals, if any, often seem to be reduced to circumscribed and very specific activities. The aim of this chapter is therefore to point out the most common misunderstandings in order not to mislead the parents of possible bilingual children.

The fourth chapter looks specifically at the individual, social, cultural, economic, metalinguistic, and cognitive benefits of being bilingual. Given the extensive scholarly research on the metalinguistic and cognitive benefits of bilingualism and the lack of opinions on individual, social, cultural, and economic benefits, the chapter also includes a selection of questionnaires, reported in the Appendix, compiled by people raised

bilingually. The questionnaires' aim is to look at bilingual's thoughts and opinions on individual, social, cultural, and economic advantages in detail and to confirm previous literature on the advantages of bilingualism.

The fifth chapter has the task of analysing the role of the school and of the family in the education of a bilingual child, looking at the strategies that could be used with bilingual children. Both family and school play a key role in the child's language education, sometimes possibly using the same strategies such as the presence of a routine and of an input. As a final recommendation, it is good to remember that family and school should work together to maximise the potential of both.

In the sixth and final chapter, I first explain Professor Taeschner's original project: *The Adventures of Hocus and Lotus*. I then emphasise that I did not use the original project, but I adapted it to the needs of the children (monolingual and bilingual) I was working with. Finally, all the steps and tests at the beginning, during and at the end of the project are listed to analyse if the children liked the project and if they actually learned English. Most importantly, the project always distinguishes between monolingual and bilingual children and highlights the various advantages found between the latter.

The work concludes with appendices describing all the work for the questionnaires in chapter four and for the project carried out in the school with the children in chapter six, with accompanying photos of the project.

The goal of this dissertation is to show the positive sides of the phenomenon of bilingualism, to promote it instead of fearing it.

CHAPTER 1

BILINGUALISM

Wer fremde Sprachen
nicht kennt, weiß nichts von seiner eigenen
(Johann Wolfgang von Goethe)

1.1. An analysis of the phenomenon's definitions

Nowadays, at least half of the population is bilingual or multilingual. Essentially, every nation in the world and the majority of people of all socioeconomic classes and ages speak more than one language. Monolingualism can be perceived as nearly an anomaly in today's world of rising migratory flows and early foreign language acquisition (McLaughlin 1984). In particular, Garaffa, Sorace and Vender (2020) report some data from the European Commission: 54% of Europeans can hold a conversation in two languages, around 25% describe themselves as trilingual (including their mother tongue) and 10% know three languages (in addition to their mother tongue).

The term bilingualism may seem a homogeneous and well-identified term. In fact, it is often adopted generically for daily communication and to most people it simply denotes the knowledge of two languages. However, as Skutnabb-Kangas (1981) explains, there are as many definitions of bilingualism as the researchers investigating its meaning. Researchers tend to identify the definition which best suits their research and their aims, therefore, in this sense all definitions of bilingualism appear to be arbitrary.

Skutnabb-Kangas (1981:81) affirms that we may distinguish between four different types of definitions, depending on which aspect of bilingualism we use as criterion. Bilingualism's definitions can be based on:

1. the *origin* of bilinguals;

2. the linguistic *competence* of a bilingual, i.e., the way the bilingual person masters the two languages;

3. the *function* language fulfils for the individual or in a community, i.e., the way bilinguals use language;

4. *attitudes*, i.e., the way the bilingual and the people among who the bilingual lives react to the two languages.

The following sections will focus on different definitions of bilingualism based on competence, function and attitudes.

1.1.1. Definitions based on competence

Definitions based on competence are many and various. One of the most renowned definitions of bilingualism belongs to Leonard Bloomfield, he argues that a bilingual owns "a native-like control of two or more languages" (1974: 64). Nevertheless, this definition would exclude all those who speak two languages but do not have the linguistic competence of native speakers.

Another equally accurate definition is given by Maximilian Braun (1937:115), who defines bilingualism as the "active, completely equal mastery of two or more languages".

These two precise definitions may find a more recent reflection on the Online Collins Dictionary, which describes bilingualism as "the ability to speak two languages equally well"[1]. In fact, even this last definition expresses the common thinking, which considers bilinguals to be those who possess and speak two languages perfectly.

In contrast to Bloomfield and the other two strict definitions of bilingualism, John Macnamara (1967) lists the four areas of linguistic ability: understand, speak, read and write, and divides each area into four levels, phonemes/graphemes, lexicon, syntax and semantics. According to Macnamara people are bilingual if they possess at least one of the language skills listed above in their second language. In this regard, we could also mention John V. Edwards, who argues that "everyone is bilingual", as any person in the world would know a few words in a language other than their mother tongue (cited in Bathia, Ritchie, 2004: 7).

It seems difficult to create a definition with such different and various ideas. It looks clear from the examples above that definitions by competence are either too broad (Bloomfield, 1974; Braun, 1937, Online Collins Dictionary) so that people can hardly be defined bilinguals, or too narrow (Macmanara, 1967; Edwards cited in Bathia,

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[1] https://www.collinsdictionary.com/dictionary/english/bilingualism

Ritchie, 2004) so that everyone appears to be bilingual. All these definitions swing between native language competence and minimal competence in the second language. Moreover, most of the authors cited above do not present a term of comparison for the linguistic abilities of bilinguals.

1.1.2. Definitions based on function

> Early research into bilingualism was often based on definitions by competence, tried to provide a *purely grammatical-qualitative description* of the bilingual individual's two codes. Skutnabb-Kangas (1981: 85)

Later on, also the importance of *quantification* started to be considered. Before the 1960s scholars were mainly interested in the "purity" of bilingualism. Subsequently, by the early 1950s, the first definitions of bilingualism based on function started to appear. In fact, scholars began to turn their attention to the function of the two languages in and for the bilingual speaker and in a bilingual society. We can further make a differentiation between internal function and external function. Internal function means a function towards oneself (the means for reflection and consciousness), whereas external function means a function towards others.

One of the best-known definitions of bilingualism and the first to use this type of approach to bilingualism is Weinreich's definition. In fact, his definition is based on the use made of language by bilinguals or plurilinguals. The Polish American linguist Uriel Weinreich (1979: 1) in his work *Languages in contact* affirms that "the practice of alternately using two languages will be called *bilingualism,* and the person involved, *bilingual*".

It is also interesting to analyse the definition of bilingualism given by Renzo Titone:

> consiste nella capacità da parte di un individuo di esprimersi in una seconda lingua aderendo fedelmente ai concetti e alle strutture che a tale lingua sono propri, anziché parafrasando la lingua nativa (Titone 1972: 13).

According to Renzo Titone bilinguals have the ability to express themselves in their second language using the appropriate structures of this language, not just adapting the structures and the concepts of the first one to the second one. With this in mind, the

bilingual person should be able to express himself/herself in both languages without any difficulty, i.e., to switch from one language code to another, not translating one into the other, but rather controlling two language systems simultaneously. This idea resembles the one of Els Oksaar (1971, cited in Skutnabb-Kangas, 1981: 86), according to her view a bilingual is someone "who in most situations can freely use two languages as means of communication and switch from one language to the other if necessary". Both the definitions of Titone (1972) and Oksaar (1971) start from the individual rather than the social situation in which they use their languages, and it appears an attempt to combine *competence* and *function* for a more complete definition.

Another definition that takes into consideration the regular use of the two languages and not the degree of mastery is the one given by Grosjean (2015:27):

> I bilingui sono coloro che usano due o più lingue (o dialetti) nella loro vita quotidiana.

Of note in this definition is the inclusion of dialects. If we were to take one of our grandparents from the Veneto region as an example, according to Grosjean's definition, we could affirm their being bilingual given their mastery of both Italian and dialect.

Definitions by function were partly needed to counterbalance the too broad or too narrow definitions of bilinguals' linguistic competence seen in the paragraph above. In fact, this function-oriented view of bilingualism does not concentrate on language itself but on language users and communities.

1.1.3.   Definitions based on attitudes

Bilingualism can also be examined using an attitude-based approach. Skutnabb-Kangas (1981: 88) asserts that attitude has to do with identification. More precisely an internal and an external identification. Internal identification means that the speaker identifies him/herself as bilingual and/or belonging to two cultures (or parts of them). External identification means that the speaker is identified by others as bilingual.

Malmberg (1977, cited in Skutnabb-Kangas, 1981: 88) states that a true bilingual/plurilingual must be accepted as a native speaker. Later he slightly modifies his idea, declaring that a bilingual person should be able to act in both language groups without evident problems.

Again, as in the definitions of bilingualism by competence, a definition given by attitude does not specify what kind of native speaker is to be satisfied; a comparison term is missing.

1.1.4.   Summary

After looking at the different approaches to bilingualism and the various definitions, bilingualism can be understood as simply the possession of two languages. Applying the definitions of different scholars, we can have a bilingual with native competence, a bilingual who identifies with his or her language but not with the country in which it is spoken, a bilingual who only controls one grammatical structure of the language (such as phonology), a bilingual who speaks one language better than the other, or a bilingual who can read in the second language but not write.

Therefore, it is important to understand that each of the definitions seen above should be applied to individual cases and for individual purposes, it is impossible to give a standard definition to the term bilingualism as all of them appear to be right when applied correctly.

1.2. Types of bilingualism: a boundless phenomenon

Given the extent of the concept of bilingualism, scholars have identified different types of bilingualism in order to consider the individuals in question according to different possible characteristics.

When talking about bilingualism, therefore, we must consider various factors, both individual and social: the cognitive organisation of languages, the age of acquisition, language competence, the prestige of the language in society, the use of the language by bilinguals, the social status of languages, and the possible changing status of bilingualism during life. Another interesting factor to consider is the motivation that leads an individual to learn a language.

1.2.1. Individual and social bilingualism

Hamers and Blanc (1989) proposed a first broad distinction of bilingualism:

- *individual bilingualism* refers to the alternative use of two or more languages by a single speaker;

- *social bilingualism* occurs every time the use of two or more languages is a phenomenon involving an entire community. In this case, the speaker is considered a social individual.

1.2.2. Coordinate, compound, and subordinate bilingualism

Bilingualism must certainly be considered on the basis of the cognitive organisation of known languages. An initial distinction made on the basis of both the cognitive organisation and on the context of acquisition led Weinreich in his book *Languages in contact* (1979) to speak of *coordinate*, *compound*, and *subordinate* bilingualism.

Coordinate bilingualism involves two independent sets of linguistic systems that allow the speaker to control them distinctively (see Fig. 1). In other words, the coordinate bilingual has access to two sets of linguistic systems, each of them connected to a different set of meaning. In each language, the speaker is able to construct an autonomous set of correspondences between signifier and signified, so the speaker is able to control the two languages separately. Furthermore, as the subject is able to control the two language structures independently, then he or she is able to evaluate and perform communicative strategies that appear to be the most appropriate (Contento, 2016). In this case, both languages are learnt before puberty but not simultaneously and the contexts of L1 and L2 are kept distinct. Therefore, the speaker learns the languages in separate environments and each word of each language has their specific meaning. This type of bilingualism is the case for the bilinguals born into monolingual families, living now in countries where another language is spoken, a language they now are learning.

Compound bilingualism involves two sets of linguistic systems associated with a single set of meaning. Therefore, from a cognitive point of view, the subject, although possessing two sets of linguistic systems, tends to trace them back to the same meaning function (see Fig. 1). As far as compound bilingualism is concerned, we can state that this type of language organisation is typical of simultaneous bilinguals (Contento, 2016), i.e., those who learn two languages in the same context and use them together, and who therefore possesses fused representations of the two languages.

The main difference between coordinate and compound bilingualism seems to be that in the case of coordinate bilingualism, the bilingual has two independent linguistic systems, whereas a compound bilingual presents a unified cognitive structure. According to Silvana Contento (2016), current studies affirm that there is no clear distinction between coordinate and compound bilingualism. Rather, it appears that the different forms of bilingualism are distributed along a *continuum* from the coordinated pole (independence of the two language systems) to the compound pole (dependency and mixing of the two languages in contact). For example, a child may develop a compound language system for certain concepts and a coordinated one for others. It is therefore possible that the child proceeds through different stages in which these two systems interchange.

The third and last type is *subordinate bilingualism*, i.e., when a subject accesses the L2 through the language system of his or her L1 (see Fig. 1). In this case, the speaker possesses two linguistic signs but only one unit of meaning, which usually belongs to the dominant language. The sign referents of the language that is subsequently learned may be seen as equivalent signs of the already known language (L1).

In order to make things clearer:

- the *coordinate bilingual* possesses two meanings and two ways of expressing them, the two languages appear to be independent from each other;

- the *compound bilingual* possesses a single meaning and two ways of expressing it, there is more dependency between one language and another;

- the *subordinate bilingual* possesses the meaning of the term belonging to his/her L1 and two ways of expressing him/herself: the one belonging to the mother tongue and the one of the L2 learned through the L1.

The following scheme (Fig. 1) resumes the three different types of bilingual minds according to their cognitive organisation of languages:
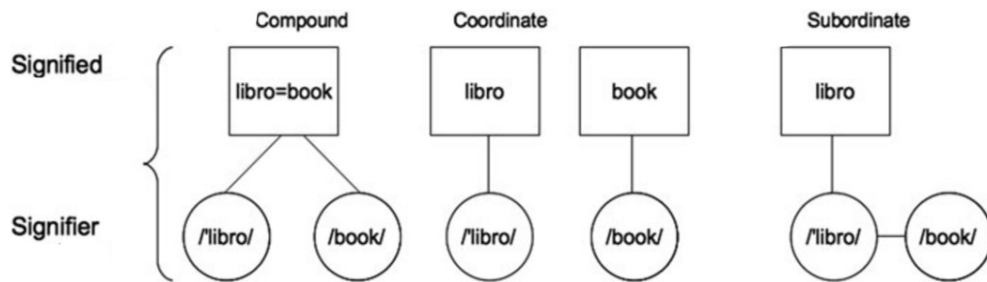
Figure 1: Three bilingual cognitive representations (Adapted from Woutersen et al., 1994)

1.2.3. Early bilingualism (simultaneous or consecutive) and late bilingualism

As far as the age of acquisition is concerned, it is possible to speak of *early or infantile bilingualism*, which includes all children from 0 to 3 years old, exposed to two or more languages, and *late bilingualism*, which includes all individuals exposed to an L2 after puberty (Bonifacci, 2018).

Early bilingualism can also be classified into two types:

1. exposure to two or more languages may be *simultaneous* if the child acquires the languages simultaneously from birth and also in a natural manner; this assumes that bilingualism is used in the child's family where, for example, the parents speak respectively two different languages. As Bonifacci (2018) points out, in early bilingualism, unlike simultaneous bilingualism, it is not assumed that the child is exposed to a similar degree to both language codes from birth, but rather that the age of first exposure is before the age of 3. In fact, before this age, basic language skills are still being acquired and consolidated;

2. exposure to the second language may also be *consecutive or successive* if the child acquires L1 during childhood and L2 after the age of 3. The 3-year threshold was proposed by Barry McLaughlin who, in fact, considers simultaneous bilinguals those who acquire a language before the age of 3 and consecutive those who learn it after the age of 3 (in Grosjean 1982:179).

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Finally, *late bilinguals* are those who are introduced to the second language after consolidating initial language skills in L1, after the critical period[2]. Late bilingualism can be seen as a consecutive bilingualism which occurs after the acquisition of L1. In these cases, the child is usually raised monolingual for a few years and then exposed to a second language at school, which is studied in a formal context. A second option is when families emigrate to another country where a different language is spoken. Therefore, late bilinguals use their previous experience of L1 to learn their second language.

Bonifacci (2018) also states that the question of the age demarcation between early and late bilinguals is still debated and changes over time. Even today, authors do not agree on their research, using a variable range between 3-5 and 13-15 years as a dividing line. Anyhow, most authors refer to late bilingualism when the second language is learned after the age of 6 or 7.

1.2.4. Balanced or dominant bilingualism

Depending on the linguistic competence and fluency in the two languages, it is possible to speak of balanced bilingualism or dominant bilingualism.

As the words themselves make clear, the *balanced bilingual* has equivalent competence in both languages, whereas a *dominant bilingual* has greater competence in one of the two languages, usually the mother tongue. If we think of a concrete example, a child who has two parents who speak two different languages during the daily routine is more likely to develop balanced bilingualism.

However, it must be emphasised that the concept of balanced bilingualism can be misleading. As Grosjean (1997, in Bonifacci, 2018:21) states

> in base al Principio di complementarità, nessun bilingue potrà mai avere pari competenze nelle due lingue, questo perché è necessario tenere conto di come le quattro competenze di base (leggere, scrivere, parlare, comprendere) si intrecciano con i contesti d'uso e le esperienze.

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[2] A limited developmental period during which it is possible to acquire a language at a native speaker level. This period would seem to begin at the age of two and last until puberty, but different scholars offer different interpretations (Nozionario di Glottodidattica).

Thus, there is a general imbalance between the two languages because the bilingual uses each of them in different spheres or in different activities, e.g. one at home, one at school or in the future one at home and one at work. Following Grosjean, it can be said that dominance of one language over another varies depending on the contexts in which it is used: a language that is spoken in various contexts tends to dominate over the other language that is used more rarely and perhaps in less significant situations.

1.2.5. Additive bilingualism and subtractive bilingualism

If we consider languages in social and personal contexts, we can encounter two different types of bilingualism: additive bilingualism and subtractive bilingualism (Bonifacci, 2018; Contenti, 2016). These two differentiations of bilingualism are thus not related to cognitive development or age of acquisition, but to the affective and social field (Contento, 2016).

One can speak of *additive bilingualism* when the speaker derives additional social, relational, professional, and scholastic benefits from speaking two languages. Moreover, the relationship between the two languages and cultures is seen as complementary and one does not predominate over the other. The language choice is also influenced by individual factors such as the competence or the credences the individual has in the two spoken languages. For example, an individual may have similar skills in both languages but decide to use predominantly one for social-relational reasons (Bonifacci, 2018). It can therefore be said that additive bilingualism offers possibilities for social development.

On the other hand, *subtractive bilingualism* does not offer possibilities for social development. Often, one of the two languages spoken by a bilingual is a minoritarian language. As a result, the two spoken languages are in competition and not complementary (Contento, 2016). The more prestigious language (out of a social point of view) will replace the mother tongue, which will be used more in circumstantial settings such as in the family. Bonifacci (2018:22) calls this phenomenon of progressive loss of other language (L1) competences "attrition" or "language erosion".

Contento (2016) and Bonifacci (2018) underline that the distinction between additive and subtractive bilingualism has nothing to do with the structural characteristics of languages but is determined by four factors:

- the ethnolinguistic vitality of the group, i.e., concerning the power granted to the language group by the community;

- the individual networks of language contacts;

- the skills and beliefs;

- linguistic behaviour.

Moreover, it can be said that this distinction is relative and dynamic and that the social value of a language changes over time. To give a concrete example, nowadays English is considered a lingua franca[3] and the condition of an Italian speaking both Italian and English can be called additive bilingualism because this knowledge offers social advantages.

1.2.6. Passive or receptive bilingualism and active or productive bilingualism

Based on the bilingual's use of language, a distinction can be made between *active or productive* and *passive or receptive bilingualism*. In other words, another criterion that can be used to distinguish bilingualism is the functional criterion (Moretti and Antonini, 1999).

How the terms productive and receptive help us understand:

1. an *active or productive bilingual* can speak and also write in the second language;

2. a *passive or receptive bilingual* understands a language but has never learnt to speak it.

This distinction is useful when children acquire the second language in a familiar context. Indeed, children often understand the language well before they are able to articulate it, to speak it. It can therefore be said that children frequently go through a

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[3] Definition of lingua franca according to the Cambridge Dictionary: a language used for communication between groups of people who speak different languages

receptive phase, but that this is then replaced by an active use of the language (Moretti and Antonini, 1999). According to Moretti and Antonini (1999), it is important to insist on the minority language, the one the child refuses to use, so as to at least allow him passive knowledge.

1.2.7. Elite and folk bilingualism

As we have seen above, bilinguals can also be classified according to different social variables, as in this case with the social status of languages. Skutnabb-Kangas (1981) makes a distinction between *elite bilingualism* and *folk bilingualism.*

Elite bilinguals are usually high educated. A large part of their education focused on foreign languages and often these bilinguals were able to use the language naturally. Skutnabb-Kangas (1981) affirms that the method by which the new language is learnt will be the "natural method", this means that the children find themselves in situations in which they have to communicate with other people in a foreign language. This type of bilingualism often belongs to children from the middle or upper class who travel abroad, children of academics, businesswomen and so on. This type of bilingualism could also include children who have had governesses who spoke a different language. It should therefore be emphasised that bilingualism in this case is voluntary, without internal or external pressure.

On the contrary, folk bilinguals have been "forced" to learn the language by always being in contact with people who speak it. Folk bilinguals often come from a linguistic minority but sometimes, if we think of the Third World, these people are oppressed by a linguistic majority.

Skutnabb-Kangas (1981) affirms that an almost parallel distinction can be made between *natural bilingualism* and *school/cultural bilingualism*.

As seen before, the term *natural bilingual* refers to an individual who has learnt the language willingly and as a natural means of communication, without formal teaching, usually at a young age.

School bilingualism is, instead, the result of learning a language at school by formal teaching. Moreover, the learner does not have the possibility to use the language as a natural means of communication. "The language has remained within the four walls of the schools" (Skutnabb-Kangas, 1981:95).

Cultural bilingualism seems to coincide with school bilingualism, but this term is mainly used to indicate adults learning a foreign language for travelling and working reasons.

Other scholars such as Moretti and Antonini (1999:37) have agreed that natural bilingualism and school bilingualism can coincide respectively with the definitions of *primary* and *secondary bilingualism*. A *primary bilingual* therefore acquires languages in an unstructured way, i.e., from the use of the language of the people around him. A *secondary bilingual*, on the other hand, learns language through guided learning at school.

In this regard, Krashen (in McLaughlin 1984: 11-12) suggested a distinction between *acquisition* and *learning*. Language acquisition is an unconscious and spontaneous process that occurs in a natural context (natural bilinguals). Learning a language is a conscious process that takes place in a formal situation such as, for example, in a classroom where the teacher teaches the language by providing precise grammar rules, corrects pupils and dispenses positive or negative feedback to students (school/cultural bilinguals).

1.2.8. Incipient, ascending, and recessive bilingualism

In the course of life, a person may go through various stages of bilingualism in which the phenomena of language acquisition and loss change their linguistic repertoire. It is possible to make a distinction between *incipient bilingualism, ascending bilingualism and recessive bilingualism*. Bilingualism therefore changes throughout life according to usage and needs. (Moretti and Antonini, 1999).

Incipient bilingualism is the pre-bilingual stage. The incipient bilingual is therefore neither monolingual nor fully bilingual. As bilingual competence grows, a phase of *ascending bilingualism* develops. Nevertheless, it is possible for various reasons that there can be declines in bilingual competence, thus constituting *recessive bilingualism*.

This distinction can run parallel with the previously seen distinction of *additive and subtractive bilingualism*. *Additive bilingualism* indicates that knowing the second language leads to social and individual enrichment. *Subtractive bilingualism*, on the other hand, indicates that the subject learns the second language at the expense of

his/her mother tongue. In this case, Moretti and Antonini (1999:23) state that the non-use of a language over time leads to the loss of processing capacity of that language, creating a kind of "dormant bilingualism".

1.2.9. What about motivation and bilingualism? Integrative and instrumental motivation

> Nel modello socio-educativo la motivazione è percepita come un costrutto composto dallo sforzo, dal desiderio e dall'affetto: lo *sforzo* si riferisce al tempo impiegato dall'alunno per studiare la lingua, il *desiderio* è rapportabile al grado di abilità che l'alunno desidera raggiungere nell'uso della lingua, mentre *l'affetto* denota le reazioni emotive rispetto allo studio della lingua (Gardner, 1982 in Ambrosi-Randić, 2015:2).

Motivation is what helps an individual to achieve goals in the second language acquisition. According to Gardner (1982, in Ambrosi-Randić, 2015) two different kinds of motivation can be identified: *integrative motivation* and *instrumental motivation*.

The students who are most successful in learning a language are those who like the people who speak the language in question, admire their culture and wish to be integrated into the society in which that language is used (Falk, 1978 in Ambrosi-Randić, 2015). This form of motivation is called *integrative motivation*. *Integrative motivation* therefore comes from the individual's desire to become both bilingual and bicultural, i.e. to feel part of two different cultures. In fact, by adding another language and culture to the individual's already existing cultural identity, one becomes bilingual and bicultural (Benson, 1991 in Ambrosi-Randić, 2015).

In contrast, *instrumental motivation* is generally characterised by the desire to obtain something practical or concrete from the study of a second language. For example, one can study a second language because one needs access to university, to get a job, to get a higher salary or for translation work.

Gardner (in Ambrosi-Randić, 2015) states that both motivations are important and efficient, but *integrative motivation* definitely helps to become passionate and leads more frequently to success in second language acquisition.

It is also good to remember that *integrative* and *instrumental motivation* are not mutually exclusive (Brown, 2000 in Ambrosi-Randić, 2015). In fact, students are rarely motivated by only one form of motivation when studying a second language.

Motivation is an important factor in L2 learning, which is why it is essential to identify and consider both types of motivation and their combinations.

Having spoken previously of the different types of bilingualism, we could include motivation as one of the individual factors influencing the study of a language. We could therefore speak of *integrative bilingualism* and *instrumental bilingualism*, i.e., the way in which individuals motivate themselves to achieve their language goals.

1.2.10. Final considerations on the types of bilingualism

Depending on the various dimensions and facets, bilinguals can be categorised at both individual and social levels. As a result, they can be divided into various types of bilinguals based on the dimensions of their bilingual characteristics. It is essential to emphasise that none of these distinct types of bilingualism can be separated clearly within a given dimension. Therefore, it will be important to blur the boundaries of bilingualism and adapt its different types to different situations.

CHAPTER 2
LANGUAGE ACQUISITION AND BILINGUAL MINDS

2.1. Introduction to speech and language

All human beings are born with a predisposition to acquire language. Spini (1982) affirms that already from early infancy, the child possesses the faculty of language that gradually becomes a capacity for linguistic execution only thanks to the inputs offered by familiar, social, and school environment. In front of these inputs, the child reacts partially unconsciously as it perceives and receives them, and partially consciously, since the predisposition to language acquisition allows him/her to choose and coordinate the verbal elements of his environment and to create his own linguistic code that will be developed during growth. Moreover, Spini (1982) underlines how important language is: words allow men to reveal their reality to others and to himself/herself. In this sense, human beings are effectively integrated into social life in a mutual exchange of experiences, ideas, and intentions. The use of speech is as integral to human life as eating, breathing, walking, and thinking.

The acquisition of human language for a child is a challenge. Imagine being a young child who is required to determine the internal structure of a system with thousands of units, generated from sets of materials. There are an infinite number of combinations possible with these units. Even though only a small number of those combinations are correct, the subset as a whole is practically infinite. To communicate with this system, the child must somehow converge on its structure. This huge system with thousands of units is human language. Units are words, the materials are the sounds from which words are constructed and the combinations are the sentences that can be formed with words (Saffran, Senghas and Trueswell, 2001).

During the first year of life, the child acquires various communicative skills and learns to communicate with the outside world through gestural and vocal behaviours (smiles, grimaces, different types of crying, vocalisations, and gestures) through which he/she signals needs and emotions to the adult. Initially, these behaviours are not intentional but, over time, the interpretation, reinforcement, and responses that adults

give to these signals mean that they gradually acquire a precise communicative meaning for the child. Therefore, the child learns first to communicate and then to speak.

2.2. From pre-verbal to language, the learning path for monolinguals

Verbal language consists of three coessential elements: the phonetic, the lexical and the syntactic. Human kind possesses the phonetic capacity, i.e. humans recognise and produce sounds typical of a certain language; lexical capacity, i.e. humans understand the meaning of words; and syntactic capacity, i.e. humans apply more or less consciously the rules according to which the various words make up the structures of sentences and periods (Spini 1982:20).

The analysis of early childhood confirms that thought and speech do not coincide. There is in fact a pre-linguistic phase in mental maturation and also a pre-intellectual phase in language development (e.g. a child's enjoyment of producing simple meaningless sounds: babbling) (Spini, 1982:43).

> Il termine infanzia etimologicamente designa la condizione di chi ancora non sa fruire della parola; perciò, a prima vista può sembrare strano asserire che lo sviluppo linguistico comincia dalla nascita; ma l'affermazione, com'è agevole dimostrare, è pienamente fondata (Spini, 1982:48).

Spini (1982) affirms that this phase in which the child is unable to relate speech to thought is called the *preverbal phase*. However, this phase in which signs do not take on a real meaning is very important, because it is crucial for language learning. The encounter with the world of sounds and noises is essential for the subsequent use of speech. The first thing the child does is, therefore, to encounter the world of sounds: we can speak of *phonological development*. Several scholars agree that a child is born with the ability to learn any language in the world, but the ability to hear like a native soon fades (King and Mackey, 2008; Spini, 1982)

An infant emits sounds of various kinds but the very first sound emitted by a child is *crying*. Crying, however, during the first month of a child's life, is a primitive form of sound communication, as it is directed at an undefined group and probably means that the child is encountering a difficulty. Thus, crying is not an intentional way of communication (King and Mackey, 2008). The stage following the cry is defined by Spini (1982:49) as "*appeal or signal*", because in this case the infant turns to a specific

person for help. Francescato (1975) gives the example of a child crying to call his mother, who immediately rushes over. The child in this case realises the communicative effectiveness of the produced sound. Obviously, this type of communication has nothing to do with actual language. The sounds that the child emits are not signs of an articulate language but are signals. In fact, we could compare the verbal signals of a child to the signals used in animal communication.

From the second to the fifth month of life, babies are engaged in the process of *vocalisation*, which as the name suggests is the use of vowels as a sign of pleasure or joy (King and Mackey, 2008).

After the first vocal phenomena of babies, the *babbling phase* begins around the sixth month and usually continues until the first year of age. This phenomenon demonstrates the predisposition to language learning, but also how each child is able to learn language in the environment in which he/she lives. Babbling is characterised by both the production of vowel and vowel-consonant sounds such as *au-au* or *ma-ma* (King and Mackey, 2008). As the months go by, the child will become more attentive to the use of the verbal language of those around him and will make more use of the sounds used by others. Between six and ten months of age, the babbling begins to conform to adult sound patterns. The child is learning how to discriminate between sounds. The child begins to take an interest in the *quality* of sounds. Therefore, the child can distinguish sounds and tries to replace babbling with the articulation of that sound, trying to link an auditory perception with a sound production (Spini, 1982). During this phase, therefore, the production of indiscriminate sounds ceases. Furthermore, Spini (1982) points out that the child will still use sounds as simple "signals", but in the meantime begins to understand the correlation between certain phonic sequences and certain events. Babbling can be defined as both an "innate, unconscious phase and a social, interactive phase" (King and Mackey, 2008:28). Usually, the babbling lasts until the *pre-linguistic phase*. The pre-linguistic phase is marked by the identification and learning of phonic units with which a certain meaning is to be associated. The child thus builds its first, very simple language system. Nevertheless, some sound productions still appear in this period, including crying, babbling, and laughing, as signals instead of words. Some scholars claim that at this stage the child uses *pre-phonemes*, i.e., words that lie somewhere between phonic signals and linguistic signs (Spini, 1982: 54).

Between 10 and 12 months the child begins to use certain *gestures* such as pointing, showing, offering, and giving to draw the adult's attention to a certain event. These are *deictic gestures* that express a communicative intention and imply visual contact with the interlocutor, as they refer to an object or event that can be identified by observing the surroundings. Later on, from 12 months onwards, *referential, or representative gestures* appear. These express a communicative intention and represent a specific referent, i.e., their meaning does not vary with changes in context. These are gestures used in a variety of situations to refer to objects, events, and situations such as, for example, opening and closing the hand to say *hello* or shake the head to say *no*. These gestures act as a bridge to language learning because they are conventional in nature. Many specialists believe that referential gestures activate a social and verbal exchange between the adult and the child, as the adult often responds to the child's gesture with a comment or, for example, with the name of the object in question: in this way the child has more opportunities to create an association between objects and words (Daloiso 2009a).

Around their first birthday, children also begin to assign specific meanings to the sounds they produce. This marks the beginning of the *lexical development* phase and subsequently of the *morphosyntactic development*. The constructivist approach assumes a continuity between lexical development and the acquisition of morphosyntax. Lexical development would in fact be a prerequisite for subsequent semantic development: it is therefore necessary to possess a minimum number of words, otherwise the child would not be able to combine several elements together and acquire morphology. For these reasons, the next steps will comprehend both the lexical and the morphosyntax developments following the age criteria.

The beginning of this phase is referred to as the *holophrastic phase* or *first words phase*. Holophrastic means "characterised by sentences consisting of a single word" (King and Mackey, 2008:29). In fact, children use single words to communicate various things, so single words have the function of a whole sentence (Spini, 1982). The word *mother*, in this sense, can be seen as a request for attention addressed to the mother or a request for something that the mother normally provides (e.g., *food*). Normally, during the beginning of the lexical development phase, children tend to refer to *concrete objects* of their everyday experiences and interactions (e.g., *light, water, tree*), not to

abstract objects (e.g., *happiness, peace, love*). Moreover, these concrete words are tendentially *lexical words* (e.g., *bed*) and not *functional words* (e.g., *the*) (King and Mackey, 2008). It may be interesting to underline the differences between languages: an Italian child's first words are usually nouns because in Italian sentences end with a noun; whereas a Korean child's first words are normally verbs because these tend to be at the end of sentences. Acquiring new vocabulary, children often operate *semantic overextensions* and *sub-extensions*. For example, the child extends the meaning of a word: *water* can also be understood by the child as something to drink, like juice. Sub-extension, on the other hand, is the reverse phenomenon: a child may use the word *baby* to refer only to its sibling instead of to children in general (King and Mackey, 2008:30).

Around the age of two, children enter the *two-word stage*: they begin to use two-word sentences. As in other stages of language development, it must be recalled that children's comprehension capacity exceeds their production capacity. King and Mackey (2008) provide us with more precise data: at around one year of age, children understand around 70 different words but are only able to produce 6. The phenomenon of *echolalia* is also observed during this period because the child literally repeats what it hears from others (Fabbro and Cargnelutti, 2018).

Around the end of their second year, children's productive vocabulary begins to develop more rapidly. This phase is known as the *vocabulary explosion*. After the appearance of the first words used with confidence in known situations, progress is rapid, and an abrupt growth of new words takes place. Kind and Mackey (2008) speak of around 200 new words per month.

Most scholars believe that the vocabulary explosion is not an ever-present stage, as it can occur at different times in each individual. Some children continue to learn new words gradually, others name everything they know and show more interest in learning new words. There are also children who show a late acceleration phase, i.e., after their productive vocabulary has reached 100 words. What is clear, is that children move from the first words phase to the vocabulary explosion phase when they are able to attribute a symbolic value to words and to understand that everything has a name. Symbolic autonomy means that the child learns new terms very quickly and learns to use flexibly the words already known in different communicative contexts (Camaioni 2001:91).

Around the age of two and a half, children start to produce sentences of three or more words. They thus enter *the multi-word combination stage* (e.g., *daddy cooks dinner*) after the two-word sentences stage. At this stage, children's language is called *telegraphic language* because it is essential and makes limited use of morphology and syntax (King and Mackey, 2008; Moretti, Antonini, 1999). The omitted elements belong to the functional category, i.e., the so-called functors (inflections, auxiliary verbs, copulative verbs, articles, pronouns, prepositions, conjunctions, adverbs); the words used belong instead to the lexical category: nouns, verbs, adjectives. These links between two or more words could be read as transitions to more complex syntactic structures. In fact, the combination of words can be considered more accurately a sentence, because the child clearly thinks of the logical link between subject and complement or between subject and predicate, and because it actually respects or at least attempts to respect concordances. Furthermore, Daloiso (2009a) states that alongside the production of telegraphic utterances, between 2 and 3 years of age, we often see the use of *prefabricated language*, which consists of children's ability to memorise even quite long linguistic expressions and reuse them appropriately.

Between the age of 3 and 4, we can identify an *expansive phase*. There is an even more rapid extension of vocabulary and an organisation of language learning. While increasing vocabulary, as seen above, during this phase the child is able to construct the first sentences according to the rules of his own language. In this period, verbless utterances decrease and simple and complete sentences (with all obligatory and some optional complements) increase, functional words start to be used, and the first attempts to generate complex sentences, such as coordinates and subordinates, explicit and implicit sentences appear (Daloiso, 2009a).

The stage of morphosyntactic development between the ages of 4 and 6 years is called the *inflectional stage* (Daloiso, 2009a). The child appropriately uses other verb tenses besides the present simple, and up to around this age some gestures with different communicative functions are used. They can be simple reinforcement of the message to its completion in place of verbal language. Usually those with a very rich active vocabulary tend to decrease the frequency of use of gestures, while those with a limited vocabulary compensate for this deficiency with abundant use of gestures.

At 6 years of age, the child's language is very similar to that of an adult: the child is able to tell stories and to participate actively in conversations. From the grammatical point of view, he/she may not yet be able to understand some complex structures such as passive sentences. Obviously, the child will continue during school age to enrich vocabulary, to better learn grammatical and syntactic rules, to develop pragmatic function and to enhance language as a tool for thinking. By the age of 8, the child has reached a grammatical competence similar to that of the adult. Around the age of 10 the child is able to understand numerous pragmatic aspects of verbal communication, humorous jokes, and the non-literal meanings of verbal expressions (Fabbro e Cargnelutti, 2018).

After looking at various stages of a child's pre-language and language development, it can be stated that each child learns to speak with different strategies and at a totally personal pace of acquisition. Therefore, it is important to remember that each individual has his or her own pace and that the data and ages reported so far have no absolute value.

2.3. From pre-verbal to language, the learning path for bilinguals

The various types of bilingualism were discussed in the previous chapter. Early simultaneous bilingualism involves the simultaneous acquisition at an early age of two or more languages, thus it can be regarded as the acquisition of multiple first languages.

> The claim is that the development of each of the bilingual's languages proceeds in the same way and leads to the same kind of grammatical competence as in the respective monolingual children. In order to corroborate this claim, it is necessary to demonstrate that bilingual development is not qualitatively different from what is known about monolingual acquisition (Bathia and Ritchie, 2006:95)

Therefore, the starting point is that the linguistic development and competence of bilingual children is in line with that of monolingual children.

2.3.1. Phonetics and phonology

We have seen above how children do not learn to speak immediately. In fact, they first begin to communicate. Therefore, the development of phonetics and phonology in

the bilingual child is the initial step for the development of language itself. According to Hoffman (1991), the process employed by bilingual children for the production of phonemes is the same as for monolingual children and many other studies support Hoffman's idea.

Imagine a child who hears two languages from birth. Surely the first challenge will be to be able to correctly discriminate the two language systems, distinguishing the sounds of one language from those of the other. This task may seem simple for a compound bilingual, where the vocabulary of one language is already sufficiently developed to identify the words of one language from those of the other. For an infant, on the other hand, who is still in the pre-lexical stage, where the vocabulary has not yet developed, it is a far from trivial challenge. Hence, the child has to take advantage of *prosodic factors* such as intonation, accent, and rhythmic structure of the two languages. In addition, the child has to learn the phonetic repertoires because he/she still cannot rely on lexical information. It has been shown that as early as a few days after birth, children demonstrate a sensitivity to their mother tongue and can distinguish it from languages with different prosodic properties. The ability of children to distinguish languages with different prosodic properties had already been found in monolingual children around 1990, but more recently it has been shown that bilingual children are no different. Bilingual children, consequently, exhibit developmental stages that are quite similar to those of monolingual peers. They show sensitivity to both known languages and are able to distinguish them correctly from unfamiliar ones early on (Garaffa, Sorace, Vender, 2020). A study conducted by Byers-Heinlein, Burns and Werker (2010) confirms this hypothesis. Comparisons were made between infants of a few days old, born from English mothers and from English Tagalog (a language spoken in the Philippines) bilingual mothers, who had used the languages during pregnancy. While listening to spoken sentences in both languages, English monolingual infants showed a preference only for their mother tongue (English), thus demonstrating that they were able to distinguish between the two language systems. Bilinguals, on the other hand, showed interest in both languages and were able to differentiate between them, suggesting a sensitivity to both languages developed in the prenatal period.

In the previous chapter, we saw how from birth children can *distinguish* the phonetic contrasts of all human languages. This ability, however, declines during the

first year of life to make way for a greater sensitivity to the sounds of the native language. Here, too, bilinguals follow the same path as monolinguals, achieving native mastery of the sounds of both languages to which they are exposed.

The first *linguistic productions*, both in bilinguals and monolinguals, have similar stages of development and timing. In fact, babbling, i.e., the production of syllables composed of well-defined consonants and vowels, appears at the same time in monolinguals and bilinguals at around six months. An interesting study carried out by Maneva and Genesee (2002) analysed the case of a bilingual child, the son of an English mother and a French father. Each of the two parents addressed their child speaking their own mother tongue. This research showed that the child's babbling, monitored at around 10 to 15 months, had different characteristics: a different number of syllables and a different syllable structure depending on the interlocutor's language. Consequently, the babbling took on characteristics typical of French when the child addressed the father and characteristics typical of English when addressing the mother. This study confirms the existence of linguistic differentiation in bilinguals that precedes the appearance of first words.

Although we have seen how the developmental stages of monolinguals are also respected by bilinguals, a slight difference or transitional lag in bilinguals, both at the level of perception and production, should nevertheless be emphasised. As far as production is concerned, a study carried out in 2010 by Fabiano-Smith and Barlow (in Garaffa, Sorace, Vender, 2020), highlighted how English-Spanish bilinguals can have slightly less accurate pronunciation than monolinguals at the age of 3. In any case, these differences are negligible and can be attributed to the fact that bilinguals, in the same time frame as monolinguals, are acquiring proficiency in two language systems.

To summarise, the results of various research studies show that bilinguals use the same prosodic and phonetic learning and discrimination mechanisms as monolinguals, suggesting that the differentiation of the two language systems emerges very early in bilinguals.

2.3.2. Vocabulary

One of the most entrenched false myths about bilingualism is that simultaneous bilinguals may show delays in vocabulary development. In reality, it has been found

that monolinguals and bilinguals start producing their first words at around the same age. Around 12-13 months, they also have similar vocabulary development.

One of the first studies conducted in this area compared both the receptive and the productive vocabulary of English monolinguals and English-Spanish bilinguals aged between 8 and 30 months. The results of the study conducted by Pearson, Fernández and Oller (1993) disproved the presence of vocabulary delays in bilinguals. With regard to production, the authors found that considering each language separately, the productive vocabulary of bilinguals was lower than that of monolinguals. In contrast, the productive vocabulary was equivalent when considering the total vocabulary of the bilinguals. To give a concrete example, the vocabulary of a monolingual at 3 years of age should be around 800/900 words. The vocabulary of a bilingual peer has the same breadth considering the words known in the two languages. Moreover, the bilingual's vocabulary is normally richer in the dominant language.

There are many studies that have shown significant differences in the *range of bilingual children's vocabulary*, as well as that of adults. A study conducted by Bialystok et al. (2010) tested the receptive vocabulary of 1700 bilinguals aged between 3 and 10 years with English as the vehicular language (language of instruction). The children were administered a receptive vocabulary test in which they were shown four pictures and asked to point to the one corresponding to a word spoken by the experimenter (e.g., if the word *hand* was spoken, they had to point to its picture). The results showed that bilinguals had a lower vocabulary in English than monolinguals. However, these differences were only found in the areas related to the vocabulary of the home domain, whereas the performance of bilinguals and monolinguals was similar with the vocabulary of the school domain. In other words, the bilinguals tested in the language they use at school had the same knowledge as their monolingual peers in the school vocabulary. If we take the case of an adult, a native Italian speaker who uses English for work purposes, surely the vocabulary related to the professional sphere is likely to be richer in English. On the contrary, it may be that the native Italian speaker does not know the English translation of terms related to family life, because he does not use them on a daily basis. Therefore, when assessing the bilingual's vocabulary, one must consider these aspects.

Considering *lexical development*, it has been shown that the two language systems differ early on. Bilingual children, therefore, have the translation of certain terms into the two languages at an early stage. Garaffa, Sorace and Vender (2020) report data from research that has shown that bilinguals possess translations of the same term in the two languages as early as 8 months. Furthermore, it appears that the words they know in both languages, at the age of one and a half years, correspond to approximately 20%-25% of their vocabulary. The bilingual child is therefore aware at an early age that a concept can have several meanings, i.e., represented by different words. The bilingual therefore knows that to refer to the same object he can use both the term corresponding to one language and that of the other language. This leads him/her to develop greater cognitive flexibility and more effective vocabulary learning strategies than those implemented by monolinguals.

Markman and Wachtel (1988) (in Garaffa, Sorace and Vender, 2020:33) state that these linguistic strategies of bilinguals are based on the application of the *Principle of Mutual Exclusivity*. According to this principle, vocabulary learning is based on the creation of an arbitrary association between a word and an object, between an auditory stimulus and a visual one. Therefore, every object has to be associated with a single name. The observance of this principle was demonstrated by an experiment (in Garaffa, Sorace and Vender, 2020). A group of 3–4-years-old children are presented with two objects, one familiar (a *cup*) and one unfamiliar (a *fuse*). The experimenter loudly asked them to bring one of the two objects, but inventing its name, e.g., "give me the *pentiro*". The results of the experiment indicated how the children associated this invented name with the object whose name they did not know (the *fuse*).

Although this principle, as all the heuristics (simplifications) may help the child with vocabulary construction, it can obviously lead to errors. For example, one consequence may be the difficulty young children have in understanding the inclusion relations that characterise the hierarchical structure of vocabulary, such as *hypernyms* and *hyponyms*. In other words, the terms *animal* and *cat* are not on the same level, since all cats are animals, but not all animals are cats. *Animal* is a hypernym because it is superior to *cat*, which is instead a hyponym. In order to acquire this type of hierarchical inclusion relationship, young children must learn to circumvent the principle of mutual exclusivity, i.e., they must learn that more than one word can correspond to the same

referent (Garaffa, Sorace and Vender, 2020). Another violation of this principle is that bilinguals know *two words for the same object*. Research shows that monolinguals use this principle up to the age of six, i.e., they attribute a word to an object they do not know. In contrast, bilinguals seem to be much more flexible, relying less on this principle. The tendency is even absent in trilinguals who accept the fact that several words can refer to the same object (Garaffa, Sorace and Vender, 2020). The results of these studies show the slight differences in lexical learning related to bi-multilingualism and in particular the role that language experience plays in shaping and guiding language acquisition. The lower adherence to the principle of mutual exclusivity seems to have positive effects in bilinguals and trilinguals in terms of flexibility and early understanding of the hierarchical structure of the lexicon. However, we must remember that the use of this principle is a quicker route that can help the child in lexical development: not relying on it can make the task more difficult for the bilingual (Garaffa, Sorace and Vender, 2020).

2.3.3. Morphosyntax

In this section will be discussed the development of morphology and syntax in bilingual children. Morphological skills concern the ability to inflect words (e.g., conjugating a verb or forming the plural), and to derive words from other words. Syntactic skills, on the other hand, concern the ability to combine these words for sentence construction.

The development of morphosyntax in bilinguals is still being studied today. These studies seek to understand whether both grammatical systems of bilinguals develop in the same way as those of monolinguals and whether there is interference (transfer) between the two language systems. Research results on the development of bilinguals' morphosyntax confirm that even at the level of grammatical competence, the development *patterns* of monolinguals are the same as those of bilinguals, pointing to the fact that bilinguals are able to acquire the grammatical structures of the two languages simultaneously (Garaffa, Sorace and Vender, 2020).

In particular, studies have analysed the first sentences produced by simultaneous bilinguals. These studies report that children are able to use the structures of each language early on. Paradis and Genesee (1996) observed that English French bilinguals

show the same developmental timing as monolinguals in each of the two languages, e.g., acquiring verb inflection first in French and then in English. Typically, verbal inflection is acquired by French speakers at the age of 2, whereas for English speakers, verbal inflection occurs around the age of 3. It has been noted that this timing is respected by bilinguals who produce flexed verbs in French as early as age 2 and in English only after age 3. It has thus been shown that the two language systems develop independently. Moreover, bilinguals show the same acquisition pattern as monolinguals in each of the two languages.

However, several studies have reported a certain degree of interaction between the two languages, especially at early stages. Döpke (1998, in Garaffa, Sorace and Vender, 2020) studied the acquisition of verb position in sentences by simultaneous English and German bilinguals of approximately two years of age. English and German have the same word order in simple sentences, whereas they have a different order in complex sentences. Let's look at some examples:

1. *a. Die Sonne ist gelb.*

   b. The sun is yellow

2. *a. Ich kann Tennis spielen*

   b. I can play tennis

In example number 1. the verb always occupies the second position after the subject in both German and English. In example number 2. the verb in the infinitive is at the end of the sentence in German while it follows the modal verb in English.

Döpke (1998, in Garaffa, Sorace and Vender, 2020) found that bilinguals do not always respect this rule and often produce agrammatical sentences in German (3a):

3. *a. *ich möchte essen das   [target: Ich möchte das essen]*

   b. I want to eat it

This error seems to be undetected by monolinguals, so it can be assumed that it stems from interference with English the dominant language of the children who took part in this study.

It was also noted that transfer effects, although to a lesser extent, were carried over from the non-dominant to the dominant language, in this case from German to English (4a):

4. a. *I want look have   [target: I want to have a look]

    b. *Ich möchte einen Blick darauf werfen*

It is important to emphasise that the interference effects do not reveal the bilingual's confusion but are merely the natural path of acquisition of the grammar of the two languages. Eventually, the bilingual will reach the same level as the monolingual, despite the initial interactions. It also appears that interference effects are more pronounced from the dominant to the non-dominant language, suggesting the existence of a significant link between levels of exposure to a language and its morphosyntactic development.

What is the relationship between the two language systems in a bilingual? Research is almost unanimous in suggesting that the two language systems develop autonomously. However, as we have seen, this does not exclude that there is a certain degree of interaction between them, since they refer to the same neural substrate (Garaffa, Sorace and Vender, 2020).

The acquisition of second language morphosyntax in consecutive bilinguals deserves a separate discussion: according to some studies (in Garaffa, Sorace and Vender, 2020:36-39), especially at the beginning, bilinguals may be less accurate than monolinguals in comprehension, but especially in the production of morpho syntactically complex sentences. In Italian, a very difficult structure to acquire is that of clitic object pronouns such as in the following sentence (5):

    5. *Il bambino <u>la</u> mangia*

Clitic pronouns are monosyllabic and atonal (unaccented) pronouns that cannot be isolated but must always be associated with the verb. At the morphological level, clitic pronouns are inflected by gender and number, resulting in four distinct forms: *la, lo, le, li*. At the syntactic level, they precede the inflected verb (5), giving rise to a marked word order in Italian (the order is marked because normally the object follows the verb and does not precede it).

Moreover, clitic pronouns are used in specific pragmatic contexts, when the discourse referent has just been introduced into the discourse (6a).

    6. a. *Cosa fa il bambino con la mela?*

       b. *La mangia*

       c. *Mangia la mela*

d. *Mangia

Only the first answer (6b) is the correct one to the question (6a). The referent, the apple, has just been introduced into the discourse. A native speaker would never use (6c) as an answer to the question because it would be redundant. Instead, the last answer (6d) would be agrammatical (as indicated by the asterisk).

Furthermore, if we had a sentence in which the referent is not named in the question (7a), we could not use a clitic pronoun in the answer (7b) because it would give rise to misunderstandings.

7. a. Cosa fa il bambino?

b. La bacia

The presence of all these levels of complexity makes clitic pronouns a very difficult structure to acquire. Even monolinguals, who start producing them around the age of two, tend to omit them until the age of four. A study by Vender et al. (2016, in Garaffa, Sorace, Vender, 2020) found that the production of clitics is difficult for 4–6-year-old bilingual children of Albanian, Romanian and Arabic mother tongues who are exposed to Italian L2 from the age of 2. Bilinguals, however, do not omit the clitic as monolinguals do, but produce an incorrect clitic, usually of wrong gender, producing e.g., the pronoun *lo* instead of *la*. Therefore, the production of clitic pronouns results in difficulties for both monolinguals and bilinguals.

The importance of the length of exposure to a language must also be emphasised. By allowing the child time to learn even the most complex structures, these can be acquired at the same level as monolinguals. In fact, as shown by a later study by Vender, Delfitto and Melloni (2018, in Garaffa, Sorace and Vender, 2020), administering the same test on clitic pronouns to consecutive bilinguals who had been exposed to Italian L2 for at least 5 years, demonstrated the same correctness as monolinguals.

2.3.4. Summary

We have seen the acquisition of phonological, lexical and morphosyntactic skills in bilingual children, also emphasising the timing of development comparable to that of monolinguals. We have also seen that bilinguals are able to differentiate between the two language systems from an early age. Exposing a child to two languages from an

early age is not wrong; on the contrary, having the child come into contact with two language systems from an early age will lead him or her to acquire the same level as the monolingual even in phonological aspects that seem difficult to master at a later age. We have also seen that even if there appear to be initial deficiencies in the bilingual (e.g., less developed vocabulary), this will be resolved with age and exposure to the language. Any differences should be seen as simple stages of linguistic development. The bilingual is not the sum of two monolinguals, but "una persona che, nella sua individualità, sviluppa una competenza linguistica nelle due lingue in funzione delle sue specifiche esigenze" (Garaffa, Srace and Vendere, 2020:43).

Garaffa, Sorace and Vender (2020) remind us, however, that achieving proficiency in both languages is only possible if we ensure a minimum of exposure to each of the two languages. In an ideal situation, the bilingual's input should be 50% in each of the two languages; knowing, however, that it is difficult to find a balanced situation, at least 30% exposure is recommended. Below this threshold, exposure to the non-dominant language may not be sufficient for proficiency in all language levels.

2.4. Critical periods for language acquisition

The concept of the critical period for language acquisition was first proposed by Lennenberg in 1967. As far as language acquisition is concerned, the concept of the *critical period* is generally understood as a *time window* beyond which it is no longer possible to acquire a particular verbal code as a mother tongue (Fabbro, 2004). More recently, studies on children's language acquisition processes have highlighted the need to view the critical period not as a uniform temporal block, but as a *continuum of temporal arcs* during which the brain areas destined for certain linguistic-cognitive functions progressively proceed towards maturation (Gullberg, Indefrey, 2006). Eric I. Knudsen (2004, in Daloiso 2009a) has therefore proposed the concept of *multiple critical periods*, according to which:

1.   *several time windows for language acquisition can be identified*. These time windows mark the various stages of brain maturation related to the areas of language processing;

2. *not all components of language competence are subject to the restrictions of critical periods.* As mentioned above, the critical period implies that as the initial age of second language acquisition increases, so do the difficulties in mastering it. These obstacles, however, do not affect all language components, but to a greater extent, the phonetic and morphosyntactic dimensions.

The presence of multiple critical periods thus implies that language is understood as an interconnected set of components that are processed in different areas and thus follow partially autonomous maturation paths (Daloiso, 2009a).

Daloiso (2009b) then proposes a synoptic table summarising the three critical periods for language acquisition (Table 2.4.):

	FIRST PERIOD (0-3 years old)	SECOND PERIOD (4-8 years old)	THIRD PERIOD (from 9 years old)
Linguistic characteristics	- Perfect pronunciation; - excellent development of language linguistic skills; - excellent grammatical competence.	- Perfect pronunciation; - excellent development of language linguistic skills; - excellent grammatical competence; - possible interference between languages.	- Foreign accent; - syntactic difficulties; - difficulties in acquisition of functional words; - greater possibility of fossilisation.
Neurological correlates	- Maturational factors; - implicit memory;	- Maturational factors; - maturation explicit memory; - beginning of	- Stabilised cognitive functions; - lateralisation fully completed;

			lateralisation.
Brain representation	The acquired languages are represented in the same brain areas.	The languages are partly represented in the same brain areas.	Late-acquired languages are represented in different regions that are more extensive than those of the mother tongue.

Table 2.4. Critical periods for language acquisition (adapted from Daloiso, 2009b:100)

Looking at the distinctions proposed by Daloiso (2009b), it emerges that the first and second critical periods play a key role in the acquisition of one or more linguistic codes as a mother tongue, and thus constitute the most fertile temporal windows for introducing children to bilingualism or multilingualism. Analysing then the linguistic competence (in Daloiso, 2009a) that an individual may develop when exposed to two languages during the first, second or third period, it becomes clear that progressive difficulties do not concern all language components. As also confirmed by Knudsen, language learners after the age of 9 will encounter more difficulties on the phonetic and morphosyntactic front, rather than on the lexical, semantic, and pragmatic front.

Fabbro (2004:78-79) reports an interesting story that occurred around 1970. In California, authorities in Los Angeles found a 13-year-old girl who had been raised in extreme isolation. The girl was nicknamed Genie by the doctors who dealt with her case. Genie was undernourished and both physically and mentally looked like a 6–7-year-old child: she was also unable to speak. Genie was freed and secured, then followed for several years by a team of doctors, psychologists, and linguists. After being reintegrated into a normal social-affective environment, she showed a remarkable recovery of cognitive functions, while the acquisition of language was very limited: at first Genie tended not to produce some vocalisations; after a year and a half she began to produce small sentences formed by two words; after two years she was able to form sentences of 4-5 words. At the age of 18, he had not yet acquired the main grammatical elements of the English language, particularly functional words. Over the years he

continued to make improvements in cognitive and social aspects; his vocabulary also continued to expand, but his grammatical skills remained incomplete. Genie's story confirms the hypothesis of the existence of a critical period in language acquisition, according to which language acquisition is only possible when a child grows up from an early age in a normal communicative environment. If this is not the case, the child will certainly present more or less severe deficits in phonological and morphosyntactic development.

2.5.   Memory and language

Implicit and explicit memory are fundamental functions of the brain. To arrive at this distinction, however, we must first point out that human memory consists of two functionally independent systems: a short-term system and a long-term system. Subsequently, two important *long-term memory systems* have been differentiated (Fabbro, 2004, Fabbro and Cargnelutti, 2018):

1.   *Explicit memory* (or declarative memory), which concerns information and knowledge of which the person is aware. In fact, with explicit memory all knowledge is acquired in a conscious and controlled way through study and repetition of information. In this case, the individual is aware of the learning process and can consciously retrieve and verbally communicate the learning content. In language learning, explicit memory is central to acquiring semantic vocabulary;

2.   *Implicit memory* (or procedural memory) concerns motor, affective and cognitive knowledge that is not accessible to awareness. During linguistic acquisition, implicit memory plays a fundamental role because it allows the memorisation of phonological and morphosyntactic aspects of the language in the form of unconscious automatisms. It also allows the automatic internalisation of linguistic routines (chunks), i.e., the set of linguistic acts associated with a frequent and repeated action within a specific communicative context.

Both types of memory are essential for language learning and childhood language acquisition (Table 2.5.).

EXPLICIT MEMORY	IMPLICIT MEMORY
Characteristics	**Characteristics**
- Unconscious acquisition	- Conscious and voluntary learning
- Acquisition of language in procedural form, i.e., through linguistic automatisms	-Memorisation mainly through metacognition
- Lower levels of attention	- Attention efforts
Processed aspects of language	**Processed aspects of language**
Phonetics	Semantic lexicon
Morphosyntax	Some pragmalinguistic aspects

Table 2.5. Implicity and Explicit memory (Santipolo, 2012:67)

2.6. Language acquisition according to Chomsky

In his book *Language and mind*, Chomsky presents his approach to the study of language as "a branch of theoretical human psychology" (1972:114) with the purpose of "exhibit and clarify the mental capacities that make it possible for a human to learn and use a language" (1972:114).

According to Chomsky, these mental capacities are specific to humans and have no analogue in any other organism. In this sense, human beings are endowed with a very rich and explicit set of mental attributes that determine a specific form of language on the basis of very thin and poor-quality data (Chomsky, 1988). In fact, the doctrines that assert the dependence of language on experience are not supported by any satisfactory evidence, and he adds that "if there were any truth to these doctrines, human beings would be miserable creatures indeed, extremely limited in their capacities, unlike one another, mere reflections of some accidental experience" (1988:162).

The *faculty of language* is defined by Chomsky as a specific structure of the human mind, a highly specialised part of our brain, therefore it must be investigated through a rigorous scientific method. The focal point of the Chomskyan thesis is the affirmation of the innate character of language, the fact that the faculty of language is "part of our biological endowment, genetically determined, on a par with the elements of our common nature that causes us to grow arms and legs rather than wings" (1988:4).

If the faculty of language is an *innate* faculty, how does language acquisition work? The question is answered through what Chomsky calls *Plato's Problem*, which makes us consider the gap between the vastness of human knowledge and the narrowness of experience. Our ability to express ourselves is extremely broad, to the point of appearing inexplicable, if we consider how limited our external stimuli are, which include both those provided by the environment and those produced by language teaching. Chomsky excludes that an explanation for this problem can be provided in terms of ability. We cannot consider the fact of speaking and understanding a certain language as a practical ability, on a par with playing football or riding a bike. A basic difference must be made between *knowledge* and *ability*. Two speakers who share knowledge of a given language will show important differences in their ability to use language. Therefore, these two aspects (knowledge and ability) cannot be assimilated, and function independently of each other. For example, ability can improve with no change in knowledge. Chomsky (1988:10) gives us the example of a person taking a course in public speaking or composition, thereby improving the ability to use language but gaining no new knowledge of this language. In fact, the person will result having the same knowledge of the words, the constructions, and the rules of the language. Chomsky (1988:10) affirms that the ability to use the language has improved, but the knowledge has not". Similarly, ability can be impaired or can disappear without losing knowledge. This is the case of a Spanish speaker suffering of aphasia (paragraph 2.8.2) after a severe head wound, losing the ability to speak and understand. Has this person lost the knowledge of language? Chomsky says: "Not necessarily, as we might discover if Juan recovers his ability to speak and understand as the effects of the injury recede" (1988:10). How did the Spanish speaker started to speak Spanish again, without any experience, and not another language? Chomsky affirms that something was retained while the ability to speak and understand the language was lost. More specifically, what was retained was not the ability, because that was lost, what was retained was a system of knowledge, "a *cognitive system* of the mind/brain" (1988:10), which cannot be identified with ability to speak and understand or with a system of dispositions, skills, or habits. Language, therefore, is regarded by Chomsky as a system of knowledge, and not an ability.

The ways in which this knowledge develops are then examined. How do we come to master complex systems such as linguistics from an early age? The unavoidable aspect that must be considered, when attempting to provide a solution to Plato's problem, is the innate nature of linguistic knowledge. This knowledge is acquired on the basis of the *principles* of the language faculty and their interaction with certain features of the linguistic environment. The fact that children, through a limited number of *inputs*, are able to express themselves beyond what they have been taught, suggests us that a set of principles is present in their mind/brain that enable this rapid acquisition of broad knowledge. Plato's problem, therefore, seems to be solved exclusively by attributing stable principles to the faculty of language, understood as part of man's biological (innate) endowment. The rapidity in acquiring the vocabulary proper to each language must necessarily derive from the possession of concepts that precede linguistic experience. Therefore, there must be a basis for language common to all human beings, which nevertheless allows for *variations*, implemented on the basis of experience. The basic principles of human languages are used by each of us unconsciously, while the variations allowed on the basis of universal principles, are those that then give rise to the different spoken languages. From this perspective, the terms of each language are reduced to "labels for concepts that are already part of the conceptual apparatus" (1988:28).

The process of learning a language is defined by Chomsky not as the result of our own effort, but as something that simply *happens* to us. More precisely, he explains: "language learning is not really something that the child does; it is something that happens to the child placed in an appropriate environment, much as the child's body grows and matures in a predetermined way when provided with an appropriate nutrition and environmental stimulation" (1988:134). However, this statement does not exclude the essential importance of the nature of the environment in which the process of acquiring a particular idiom takes place. It is precisely the environment that determines the way the *parameters* of universal grammar are set, yielding different languages. Language can find a significant obstacle to its development when this takes place in an environment poor in *stimuli* (think of the case of Genie, paragraph 2.3.).

Therefore, Chomsky hypothesises the existence of an innate device for language acquisition called the *Language Acquisition Device (LAD)*, which corresponds to a

Universal Grammar (UG) that contains the description of the structural aspects of all natural languages, prior to experience. The principles of the universal grammar admit no exceptions since they represent the faculty of language itself, a scheme for the acquisition of each particular language. The formation of the multitude of spoken idioms occurs through the interaction of the principles of universal grammar with the data to which we are exposed during learning. These data allow parameters to be set, the arrangement of which determines a particular language from among those possible. To explain how principles and parameters interact, Chomsky uses a simile:

> We may think of the language faculty as a complex and intricate network of some sort associated with a switch box consisting of an array of switches that can be in one of two positions. […]. When they are set in one of the permissible ways, then the system functions in accordance with its nature, but differently, depending on how the switches are set. The fixed network is the system principles of universal grammar; the switches are the parameters to be fixed by experience. The data presented to the child learning the language must suffice to set the switches one way or another. When these switches are set, the child has command of a particular language and knows the facts of that language: that a particular expression has a particular meaning, and so on (1988:62-63).

According to this theory, language with its innate character would develop autonomously and would be independent of the individual's cognitive and social development. Furthermore, linguistic competence precedes the use of grammatical rules. Although Chomsky never discussed the mechanism of L2 acquisition, his theory can be extended to this area (Contento, 2015).

2.7.   The century of the brain

> *"Gli uomini dovrebbero sapere che da nient'altro, se non dal cervello, derivano la gioia, i piaceri, i dispiaceri e i dolori, così come lo sconforto e il lamento. Ed è mediante il cervello che noi acquisiamo saggezza e conoscenza e che possiamo sentire e riconoscere ciò che è cattivo e ciò che è buono, ed è sempre a causa dello stesso organo che noi diventiamo pazzi e deliranti e che ci viene paura. Tutte queste cose dobbiamo sopportare da parte del nostro cervello quando questo non*

è in salute. In questo senso, sono del parere che sia il cervello ad esercitare sull'uomo il più grande potere" (Ippocrate, *Sul Male Sacro,* IV secolo a.C.).

In the previous chapter, we looked at the learning pathway that leads us to be speakers of one or more languages. However, our competence as speakers can also be investigated in its neurobiological characteristics, using new neuroimaging systems that can show what happens in the brain when analysing a language stimulus.

Nowadays, there is a growing interest in neuroscience in the educational, linguistic, and pedagogical sciences, which is resulting in an ever-increasing understanding of the neuropsychological mechanisms in human behaviour. Daloiso (2009b:13) defines the 20th century as the "century of the brain" precisely in light of such discoveries, which have intensified especially in the last 30 years. Thanks to the development of sophisticated neuroimaging techniques, an increasingly precise description of the human brain on an anatomical, physiological, molecular, and cellular level has been achieved. In addition, neuroscience is of particular interest to glottodidactics. Glottodidactics is, in fact, a discipline that analyses and puts into practice theoretical approaches, methods and techniques for language teaching, since, for the purpose of developing effective theories and models for language education, it is important to know the neuropsychological mechanisms underlying language learning.

We often marvel at certain human characteristics, such as children's ability to memorise language or the possibility of acquiring several languages, but language learning is not an entirely inexplicable phenomenon. In fact, neurolinguistic research has long since highlighted the existence of brain areas dedicated to language processing (Daloiso, 2009b). So, starting from the minimum unit of analysis, i.e., the cell and their assemblages in neuro-functional modules, we shall see how languages are located in the brain.

2.7.1. An introduction to neurons and the neuro-functional modules of language

Daloiso (2009b:26) defines the brain as a "network of neuronal connections". In fact, our brain consists of billions of neurons, which are interconnected nerve cells with the task of receiving, exchanging, and processing information.

The main components of the neuron (Figure 2.7.1.) are the *cell body*, the *dendrites*, which are antennae through which nerve cells receive information from other neurons, and the *axons*, which constitute an output segment of the information processed by the neuron. The connection points between one nerve cell and another are called *synapses*. Neurons, as previously said, continuously exchange information. To do this, they release chemical molecules called neurotransmitters at the synapses. The information processed by each neuron travels along the axon as small electrical impulses. In addition, the axon is wrapped by myelin cells that act like an insulating tape to allow faster conduction of electrical impulses (Fabbro, Cargnelutti, 2018).
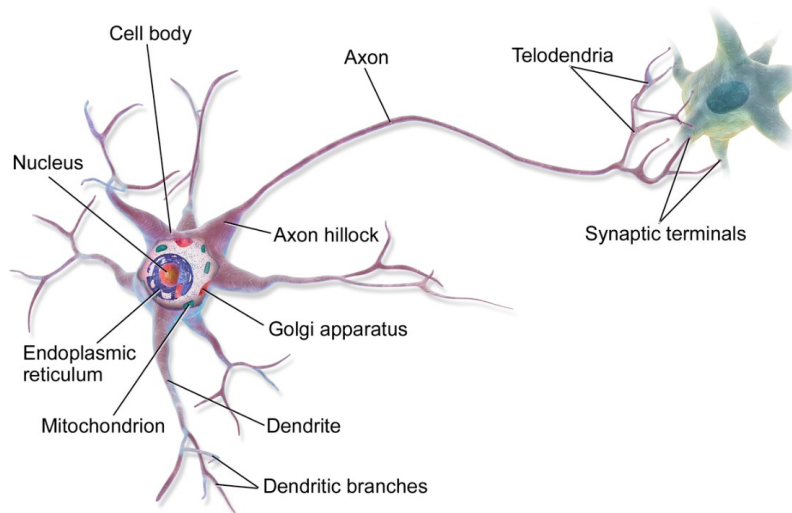
Figure 2.7.1. Representation of a neuron

It is precisely neurons that enable humans to think, remember and perform motor functions (Cardona, 2001). Their task is therefore to coordinate human activity at the level of both organ functioning and behaviour (Daloiso, 2009b). To do this, neurons organise themselves into cell groups, the neurofunctional modules, each of which specialises on a specific function.

This reorganisation into more complex nervous systems sometimes arises naturally as a result of *genetic factors*: the brain is genetically predisposed to create neuronal assemblies to govern certain human functions that do not have to be learnt, such as crying to call for attention during infancy. In other cases, the formation of neuro-functional modules depends largely on the *input* present in the environment and the subject's relationships and interactions with that *input*. Language development, for example, cannot be separated from exposure to linguistic *input*. Without this linguistic *input*, the ability to acquire any native language may be impaired (Daloiso, 2009b).

According to Munakata, Casey, and Diamond (2004:122), the distinction between nervous systems that are genetically determined or determined by interaction with the environment is fundamental. There are in fact two different types of processes:

1.   *experience-await processes*, which activate the genetic potential using environmental information that is widely accessible to all members of the species (e.g., the ability to hear linguistic sounds and to distinguish them from environmental noise);

2.   *experience-dependent processes*, which rely on environmental information that varies according to the contexts and learning situations (e.g., exposure to a specific language or growing up in a bilingual context). Learning a foreign language is thus a process that depends on experience, i.e., on the possibilities offered by the educational environment (degree of exposure to the language, opportunities to use the language in meaningful contexts, presence of reference figures who encourage and support linguistic growth, etc.) taking advantage of certain processes that await experience (phonetic discrimination capacity, attentional predisposition towards linguistic sounds, unconscious imitation mechanisms, etc.).

Recent investigations in the field of neurolinguistics have revealed the existence of a network of neuro-functional modules that specialise themselves in processing specific aspects of language during the acquisition of the mother tongue.

Paradis (2004) hypothesised the presence of four interdependent but at the same time autonomous *neuro-functional modules* that would control four aspects separately:

1.   *linguistic competence* (largely localised in Broca's area, for language production, and Wernicke's area, for language comprehension, which

will be discussed later), which would encompass a series of modular sub-systems deputed to the distinct processing of morphosyntactic, lexical-semantic and phonological dimensions; the competences controlled by this module are largely automated and involve the implicit memory, which allows the learning of procedures and sequences of actions;

2. *metalinguistic competence*, understood as explicit knowledge of the rules of operation of language. In this module there are consciously learned encyclopaedic notions about language, which largely involve explicit memory. Explicit memory is activated for the memorisation and reworking of concepts and notions;

3. *pragmatics*, located in the cortical areas of the right hemisphere, operates in conjunction with the language competence module, as it influences its choices at every level of language processing;

4. *the emotional and motivational dynamics* are governed by the limbic system, which constitutes a centre of emotional control and evaluation of the input. Moreover, positive activation of the input is a prerequisite for the proper functioning of the other neuro-functional modules.

Recent research in the field of neuroscience has confirmed that the acquisition of a second language tends to lead to the creation of *neuronal sub-systems* within each of the four neuro-functional modules described above, giving rise to a complex modular system (Figure 2.7.1.1.):
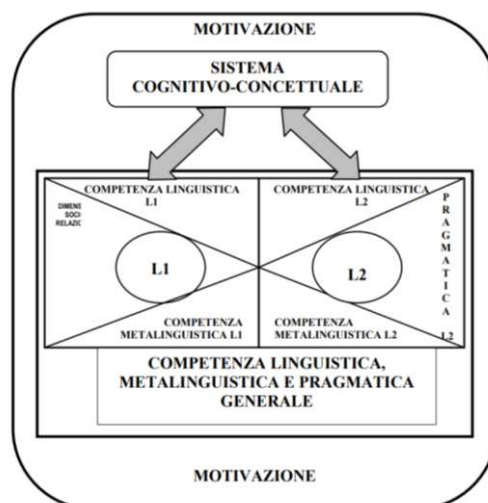
Figure 2.7.1.1. The bilingual neuro-functional system (Daloiso, 2009b:29)

Moreover, the activation speed and efficiency of these sub-systems (which have to process the new language code in a specific way) depends on numerous factors, among which the following should be highlighted (Daloiso, 2009b):

1.   *the initial age of learning the new language:* if the acquisition of the second language begins at an early age, the same neuropsychological mechanisms that also process the mother tongue are generally activated. This can lead to a linguistic and communicative competence similar (if not equal) to that of a native speaker;

2.   *the frequency of exposure and the actual possibilities of using the language:* a certain amount of positive neural impulses is required for the nerve circuits to function. To give a concrete example, a student may have difficulties learning a foreign language at school because of an insufficient exposure to the language and has little chance of using it. Students therefore need a lot of brain energy to activate the sub-systems that process the foreign language;

3.   *emotional involvement while learning:* the functioning of language-specific neural circuits also depends on the learner's emotional condition. To be emotionally involved, the learner must find a stimulating, relaxed and safe learning environment;

4.   *correctness of language input:* neuro-functional sub-systems process, elaborate and store the linguistic *input* to which one is exposed. During mother tongue and second language acquisition, the learner has a vast amount of linguistic *input* offered in a spontaneous context (e.g., through interaction with native speakers). In contrast, learning a foreign language is based on *input* given by a teacher who is often not a native speaker and who uses glottodidactics aids such as audio, video, and paper materials. The teacher bears a great deal of responsibility since incorrect *input* leads to the learning of incorrect behaviour, especially in relation to the linguistic neuro-functional system (incorrect pronunciation, inappropriate or formally incorrect vocabulary, etc.) and pragmatics (such as the inability to adapt the linguistic register to different contexts);

5.   *intellectual predispositions:* a further aspect to consider concerns the predispositions of learners in terms of intelligences and learning styles.

Although neuroscientific research has not yet reached a definitive position, it is likely that if learners are given the opportunity to learn languages according to their intellectual predispositions, the *input* will be processed from their preferred channels and language memorisation will occur more easily.

The dimensions described above interact with each other resulting in a different weight for each neuro-functional sub-system, depending on the conditions that characterised the learning environment.

2.8.   The neuro-functional principles of language education

What are the relationships between the neuro-functional modules and their sub-systems? According to recent studies, these relationships are governed by principles, which determine their functioning. Let's examine which neuro-functional principles are of interest for the purposes of language education.

2.8.1.   The linguistic activation threshold

The linguistic activation threshold hypothesis is based on a generalisation of neurobiological knowledge about the function of action potentials in brain cells. It is known that each neuron has a *critical threshold*, also called the activation level, that must be reached in order for the brain cell to generate an action potential (Kandel, Schwartz, Jessell, 2003, in Daloiso, 2009b). This principle can be similarly applied to the neuro-functional modules and to their language-specific sub-systems. Thus, the activation of the modules and sub-systems is only possible when a sufficient amount of positive neural impulses has reached the brain areas deputed to its processing (Daloiso, 2009b).

The principle of the linguistic activation threshold offers a reasonable neuropsychological explanation for certain findings in language learning. In fact, when learning a new language (in addition to one's mother tongue), an individual tends to have greater difficulty in processing the new code. The learner usually develops comprehension problems, slowness in production, and the need for higher attentional and cognitive effort. In neuropsychological terms, this difficulty in the acquisition of a

second language is due to the fact that the linguistic activation threshold for the second language is higher than the linguistic activation threshold for the mother tongue, which is in fact already fully mastered.

According to Daloiso (2009b), the *second language activation threshold*, however, can be reduced significantly through three small precautions:

1. the *frequency*, i.e., the actual opportunities to use the language in everyday contexts/with a person;

2. the *recency*, i.e., the time elapsed since the last activation of the language in question. Linked to frequency, the more a language is used, the more the brain becomes accustomed to its use;

3. the *emotional involvement*, which strongly influences both the language acquisition phase and the retrieval of linguistic (and non-linguistic) information stored in long-term memory.

2.8.2. Access to language processing areas

The access to the neuro-functional modules that process a language seems to depend largely on the *period* during which language acquisition began. According to this perspective, a subject who acquired several languages during early and late childhood, i.e., within the first seven to eight years of life, tends to have direct access to the neuro-functional sub-systems that process the acquired languages. This means that the input of all mastered languages is perceived, analysed, and processed directly by specific sub-systems for each of them, without incurring translation phenomena (Daloiso, 2009b). In this case, we could affirm the veracity of Renzo Titone's definition of bilingualism, seen in the first chapter:

> Il bilinguismo consiste nella capacità da parte di un individuo di esprimersi in una seconda lingua aderendo fedelmente ai concetti e alle strutture che a tale lingua sono propri, anziché parafrasando la lingua nativa (Titone 1972: 13).

In fact, Titone (1972) states that a bilingual person does not translate from one language to another but uses the appropriate structures of both languages to communicate.

However, recent experiments in the field of cognitive neuroscience applied to language acquisition have highlighted the possibility that in second-language learners, important neurobiological changes occur at the end of the critical periods caused by the prolonged activation of second language specific neural sub-systems. According to these research, convergence phenomena are possible between the areas that process the mother tongue and those that process the second language (Gullberg, Indefrey, 2006). In other words, initially, the brain areas that process the learning code would be different from those that process the mother tongue. At a later stage, thanks to certain factors such as frequency of use and learning-related motivation, it can happen that the areas specific to the second language converge towards those of the mother tongue. It is conceivable, therefore, that even in adulthood, in correspondence with convergence phenomena, it is possible to achieve direct access to the neuro-functional subsystems that process all acquired languages.

2.9.   Language areas

According to Fabbro and Cargnelutti (2018), the association between the paralysis of the right side of the body and language loss, as possible consequences of a brain injury, has been known for centuries. Furthermore, by understanding the phenomenon of the crossing of motor, cognitive, and sensory functions in the brain, it has been possible to conclude that language functions are predominantly represented in the left cerebral hemisphere.

The oldest document describing the loss of the ability to speak as a result of a brain injury is an Egyptian papyrus dating back to 1700 B.C. In the 6th century B.C., in the Jewish cultural environment, the association between loss of speech and right limb paralysis was already known: symptoms that depend on injury to the left cerebral hemisphere. In 5th century Greece, Hippocrates describes cases of loss of the speaking ability after convulsive attacks with paralysis of the tongue and of the right side of the body. In France, in the early 1800s, a doctor of German origin, Franz Joseph Gall, devoted himself to studying the organisation of cognitive functions. He then provided various evidence to support that the brain was the organ responsible for psychic functions. Going against Aristotle and Descartes, he also proposed that the mind is not

unitary, but consists of many independent faculties. He advanced the hypothesis that each cognitive faculty is located in a specific area of the cerebral cortex. He distinguished 30 different faculties, including hope, greed, vitality, secrecy, self-love, etc. Furthermore, according to Gall, the faculties of articulatory language are located in the orbital region of the frontal lobe in both cerebral hemispheres. In the second half of the 1800s, especially within the French Anthropology Society, a heated debate developed around the hypotheses put forward by Gall (Fabbro, Cargnelutti, 2018).

2.9.1. Broca's area

Paul Pierre Broca was a young surgeon, secretary of the French Anthropological Society. Through his clinical activities he was able to verify Franz Joseph Gall's hypotheses. In 1861, Broca examined a 51-year-old patient nicknamed Tan. The patient had advanced gangrene in his right leg. Moreover, the patient could only pronounce a few monosyllables, but could understand all verbal instructions very well. The patient's name was in reality Leborge, a shoemaker who had suffered from epileptic attacks since his youth. Around the age of 30 he had lost the ability to speak, and, for this reason, he had been admitted to the Bicêtre Hospital in Paris. The hospital staff, however, realising that he was a very intelligent person, let him in and out of the hospice at will. Approximately 10 years after the loss of speech, the patient Tan began to show a weakening of the muscles in his right arm until he became paralysed. The paralysis then extended to the right leg until gangrene developed. During his surgical examination Broca noted that:
- the right limbs were paralysed, but general sensitivity was preserved, it was simply less than the sensitivity of the left side;
- the voluntary mobility of the muscles of the face and tongue were preserved;
- hearing and mathematical calculation skills were functioning.

Broca then found that the patient had a brain lesion that affected the left hemisphere. In fact, after the patient's death due to septicaemia, the brain autopsy showed a lesion in the left frontal lobe. The structure most affected by the lesion was the third frontal circumvolution of the left cerebral hemisphere. After the autopsy, Broca

presented a report of the patient's clinical history to the Paris Anthropological Society, stating that he had for the first time localised a mental faculty in the brain. Broca obviously continued to study other cases of language loss due to brain lesions: to his surprise, he found that all patients always presented a lateralised lesion in the left hemisphere. As counterevidence, he also analysed patients with lesions in the right hemisphere, who nevertheless had no difficulty in expressing themselves. Therefore, Broca concluded that human beings speak through and thanks to the left hemisphere. The frontal region of the language-dominant hemisphere, which Broca identified as crucial for language articulation, is commonly referred to as Broca's area (Figure 2.9.1.). The neurologist's work is of considerable importance as it represents the first clear demonstration that brain functions can be located anatomically (Fabbro, Cargnelutti, 2018).

Subsequently, other studies on right-handed individuals confirmed this finding. Ninety-five per cent of right-handed individuals show language lateralisation in the left hemisphere. Very recent studies have confirmed these data, indicating that the left hemisphere is specialised in the processing of fine movement (which is why more than 90% of people prefer to use their right hand to make precise movements) and of certain language components: phonology and morphosyntax. In contrast, the right hemisphere is more involved in spatial processing in visual memory (Urgesi et al, 2010).
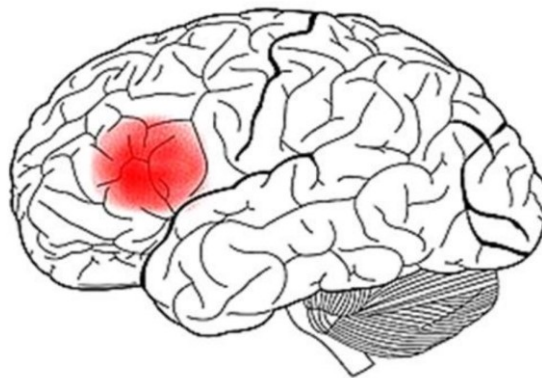
Figure 2.9.1. Broca's Area

2.9.2. Wernicke's area

In the second half of the 19th century, a young German neurologist, Carl Wernicke, published a book entitled *The Aphasic Symptom Complex. A psychological*

study on an anatomical basis, which became one of the most famous books on neuropsychology. The neurologist's work is important because he did not merely describe two new cases of sensory aphasia, but proposed an explanation of how voluntary movement and language could be organised in the brain. According to him, the cerebral cortex is organised into simple psychic functions, some areas are specialised to process visual perception, others affective perception, and still others tactile perception. These are all interconnected. This organisation can also explain memory, in fact, when two areas of the brain are active simultaneously, they remain associated. The more frequent the repetition of a task, the more stable the associations become.

Wernicke also proposed the division of the surface of the brain into two sectors with different functions: the frontal brain, with motor functions, formed by the structures in front of the Rolando cleft, and the temporo-occipital brain, to which he attributed sensory functions. According to him, language is a particular form of voluntary movement, so in the brain there must be both sensory and motor centres connected through pathways. Consequently, the scheme of language proposed by Wernicke is organised into interconnected centres and pathways. Since language is organised into these interconnected centres, it is possible to hypothesise the existence of different types of aphasia depending on the centres or pathways affected (Fabbro, Cargnelutti, 2018).

To give two concrete examples, in Broca's aphasia verbal expression is not fluent. It results in difficulty in pronouncing words, to move from the articulation of one phoneme to the next. Verbal comprehension is good, but there are often problems understanding grammatically complex sentences. Repetition of words or sentences is very limited. Patients with Broca's aphasia have a lesion in Broca's area and usually, as described above, this aphasia is associated with paralysis of the right side of the body (Fabbro, Cargnelutti, 2018).

In Wernicke's aphasia, on the other hand, verbal expression is fluent with numerous paraphasias. Verbal comprehension, repetition and naming capacities are damaged. The lesion that causes this syndrome affects the auditory cortex, which is associated with the left hemisphere (Figure 2.9.2.). Patients with this type of aphasia are

prone to right homonymous hemianopsia. This aphasia accounts for approximately 20% of aphasias (Fabbro, Cargnelutti, 2018).
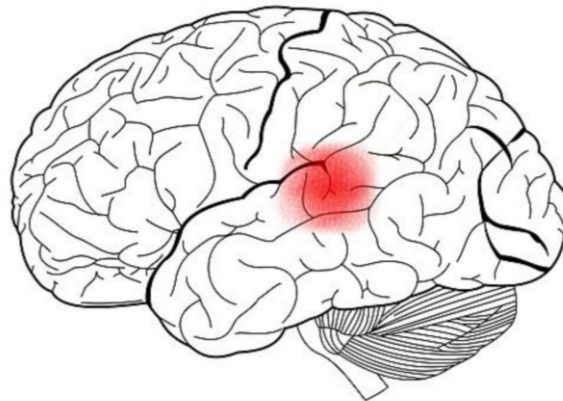
Figure 2.9.2. Wernicke's Area

2.9.3. Right hemisphere and language acquisition

As previously explained, the specialised areas for language processing, Broca's and Wernicke's areas, are located in the left hemisphere of the brain. However, the right hemisphere is also involved in the use of language, especially for pragmatic aspects. The right hemisphere is, for example, necessary to determine whether an utterance is to be understood in its literal sense or is to be interpreted through interference, metaphorically or sarcastically, etc. Research has also recognised the fact that the language learning process is characterised by bilaterality at the neurological level. It can be observed, for instance, that during language acquisition, the child relies primarily on non-linguistic aspects of the situation in which a message is produced. We can assume that even in L2 acquisition, a person relies more on non-linguistic aspects (prosody, mimicry, situational context) and continues to involve the right cerebral hemisphere in the course of comprehension or production in a still undeveloped language. The brain thus functions in a unitary manner, integrating different perceptual modes, which are traced back to different cognitive styles: an essentially verbal, analytical, and local cognitive style in the case of the left hemisphere and a spatial, synthetic and global cognitive style in the right hemisphere (Berlucchi, 2010).

The researcher Marcel Danesi reflected on the effects of neurolinguistic studies in the field of glottodidactics and proposed the *concept of bimodality*, wanting to

emphasise that "language learning becomes a global communicative process only when education aims to activate the two hemispheres in a complementary manner" (Danesi, 1988:95). He then elaborated a series of "bimodal didactic principles": according to the *principle of directionality*, the brain operates not only according to the single hemisphere, but information is processed by the encephalon according to the direction from the right hemisphere (globality, visualisation, contextualisation, analogy, simultaneity, understanding of connotations, metaphors and irony) to the left hemisphere (linguistic processing, analytical, sequential and logical perception, denotative understanding). Humanistic glottodidactics therefore considers the activation of both modes of the brain essential in order to make the most of the person's acquisition potential (Balboni, 1999).

The hemispheres, therefore, collaborate in the production of language, but the left hemisphere is crucial for the comprehension and processing of literal, phonetic and syntactic language; while the right hemisphere is involved in the aspects of the message through which words, sentences and emotional content are expressed (Danesi, 1998).

2.10. The relationship between emotions, feelings and motivation when learning a language: neuropsychological, neuroanatomical and neurophysiological aspects

> La decisione di trasferire le esperienze dal compartimento a breve termine a quello a lungo termine viene presa molto spesso su base emozionale. Se un evento della nostra vita ha una forte connotazione emotiva, è più facile che venga fissato nella memoria, mentre eventi emotivamente neutri rimangono indietro. (E. Boncinelli, 2000, in Daloiso 2009b:41)

Boncinelli is underlining the importance of the emotional mechanisms. In fact, they play a decisive role in the selection and fixation of information in memory stores during the learning process. According to the research on neuropsychology reported in Michele Daloiso *I fondamenti neuropsicologici dell'educazione linguistica* (2009b:42), motivation is no longer understood as a set of psychological dynamics that leads to a *conscious* drive towards learning, but more as a *non-conscious* drive towards learning.

With this more articulated view, it can be stated that the *will to learn* is realised through the learner's involvement at the level of:

1.   *emotions*, i.e., the organism's spontaneous responses to certain environmental conditions. Some emotions are innate (primary emotions) such as joy, fear, sadness; others are determined by the socio-cultural context of (secondary emotions) such as shame or guilt (Daloiso, 2009: 42). The language of psychology, in the Treccani dictionary, defines emotion in a more precise and technical way, describing it as a complex and intense affective reaction, pleasant or unpleasant, which is often accompanied by a reaction that is also physical;

2.   *feelings*, i.e., a conscious rielaboration and representation of emotions - feeling happy, sad, angry, afraid, etc. (Boncinelli, 2000, in Daloiso 2009b);

3.   *motivation*, i.e., a series of conscious dynamics that enable the subject to be willing to learn, making precise choices aimed at satisfying one's needs, or a sense of duty, or the pleasure of learning (Balboni, 2019).

These three dimensions are interconnected and influence each other during the learning process of a student, whether adult or child. For example, a learner may initially be highly motivated to learn a language, but certain contextual factors, which may be the methodology proposed by the teacher or the environment created in the classroom, could generate negative emotions that are not encouraging learning. The continual repetition of emotionally negative conditions and/or negative contexts may lead the student to perceive negative emotions, which may undermine the motivation with which the course was started. In the most extreme cases, this can lead to a rejection of language learning itself (Daloiso, 2009b).

Balboni (2019:83) traces the analysis of *motivation* to three macro-categories, through the tripolar model, which identifies the three causes that govern human action:

1.   *duty*, indicates something imposed, it is an obligation to learn, something imposed by the educational system. The problem with motivation seen as duty is that if learning is not supported by a minimum of interest on the part of the learner, it will only be learning and not acquisition. This means that what has been learnt will soon be forgotten: this logic is often used by students who have to pass a test of a hated subject. They just get satisfied with a decent

grade by storing information the day before. This information, of course, are destined to vanish;

2.   *need* is the type of motivation linked to the left hemisphere of the brain, the student is rationally aware that he or she needs to develop specific knowledge to achieve a goal. The need, however, must be perceived as achievable and this type of motivation will work as long as the learner decides that the need is satisfied;

3.   *pleasure*, the pleasure of learning is a primary pleasure, but beware because failure causes displeasure and thus makes the motivation disappear.

On a neuropsychological level, the three dimensions (emotions, feelings, and motivation) are regulated by a control mechanism called the *limbic system*.

Research in the field of neuroscience has identified that the limbic system controls emotions and many aspects of learning. Three fundamental elements are part of this system (Daloiso, 2009b):

1.   the *amygdala* is located at the centre of the limbic system, in connection with other nervous structures, creating two types of neural circuits:

- the subcortical circuit, immediately assesses input and prepares timely responses such as defence in dangerous conditions;

- the cortical circuit, connects the amygdala to the sensory systems and allows the attribution of emotions to events;

2.   the *hypothalamus* coordinates the autonomic system (sympathetic and parasympathetic) and regulates the relationship between environment and organism. It produces automatic responses to certain stimuli and controls natural instincts such as self-defence;

3.   the *hippocampus* is of fundamental importance for learning mechanisms as it is the basis of explicit memory.

In stressful situations, a neurochemical mechanism is triggered, and it blocks norepinephrine, a neurotransmitter that promotes memorisation. The stress hormone is produced by the adrenal glands and serves the body to react to difficulties. The amygdala regulates the production of this hormone. Therefore, in the event of danger,

the amygdala requires more production, which reaches the brain via the hippocampus (Daloiso, 2009b).

Cardona (2001) affirms that during a condition of prolonged stress, such as language learning or an interrogation in front of a class, an antagonistic relationship is created between the amygdala, which requires greater release of this hormone to cope with the situation, and the hippocampus, which instead tries to limit the quantity. If the stressful situation continues, the hippocampus can no longer perform its control and memorising functions, and consequently the fixation of information in the memory can be blocked.

The analysis of the neurobiological mechanisms seen above allows us to state that language learning is closely linked to the emotional dimension.

CHAPTER 3

PREJUDICES AND FALSE MYTHS ABOUT BILINGUALISM

Il mito non è una fiaba, ma piuttosto un presentare certi fatti in un idioma non appropriato. Dunque, far saltare un mito non è negare quei fatti, ma restituirli al loro idioma. Ed è proprio questo che noi tenteremo di fare.

G. Ryle, *Lo spirito come comportamento,* (1949:4)

3.1. False myths: the problem of past studies

In 1890, the linguist and educator Simon S. Laurie expressed the following negative opinion about bilingual children in his book *Lectures on language and linguistic method in the school*:

> If it were possible for a child or boy to live in two languages at once equally well, so much worse for him. His intellectual and spiritual growth would not thereby be doubled but halved. Unity of mind and of character would have great difficulty in asserting itself in such circumstances (1890:15).

In 1922, the famous Danish linguist Otto Jespersen in his book *Language. Its nature, Development and Origin* (1922) confirmed this negative view of bilingualism:

> It is, of course, an advantage for a child to be familiar with two languages, but without doubt the advantage may be, and generally is, purchased too dear. First of all the child in question hardly learns either of the two languages as perfectly as he would have done if he had limited himself to one... Secondly, the brain effort required to master two languages instead of one certainly diminishes the child's power of learning other things which might and ought to be learnt. Schuchardt rightly remarks that if a bilingual man has two strings to his bow, both are rather slack... (1922:148).

Much other research conducted at the time seem to affirm the problematic nature of bilingualism in language development, cognitive development, and even education. In fact, bilingualism has been seen as something unnatural.

Another example is given by research conducted by Saer in 1923. He studied 1400 7-14-year-old Welsh-English bilingual children in five rural and two urban districts of Wales. He concluded his research affirming that bilingualism seems to result in lower intelligence. Therefore, bilingualism appeared to have a negative effect on intellectual development.

3.2. The revolution: Peal and Lambert's study (1962) of ten-year-old bilingual children attending French schools in Montreal

In 1956, Einar Haugen, in a review of various studies conducted in America, concluded that knowledge of two languages did not appear to impair nonverbal intelligence and that verbal intelligence of bilinguals was, at most, two years behind at any given time. Furthermore, this difference would likely disappear by college age.

Previous pessimistic views and this neutral vision of bilingualism were challenged in the early 1960s, which began to see bilingualism in a favourable light. In 1962, for example, Elizabeth Peal and Wallace Lambert studied the effects of bilingualism on the intellectual abilities of ten-year-old children from six French schools in Montreal. The bilingual children, selected for their balanced bilingualism, were matched for socioeconomic class, gender, and age. At the outset of their study, Peal and Lambert predicted that their results would be similar to previous research, i.e., that while nonverbal tests would reveal little difference between bilinguals and monolinguals, on verbal intelligence tests, monolinguals would perform significantly better than bilinguals. However, both predictions turned out to be wrong. Not only did the bilinguals score significantly better than the monolinguals on the nonverbal intelligence tests, but they also scored significantly better on all verbal tests. In addition, it was found that the bilingual children reached a higher school level than the monolingual children of the same age and also performed better in their schoolwork than the monolingual children in the same class. These findings really question the common belief that learning a second language mines linguistic and cognitive development.

Peal and Lambert (1962) summed up their research in the following way:

> Intellectually [the bilingual's] experience with two language systems seems to have left him with amental flexibility, a superiority in concept formation, and a more diversified set of mental abilities, in the sense that the patterns of abilities developed by bilinguals were more heterogeneous.

It is not possible to state from the present study whether the more intelligent child became bilingual or whether bilingualism aided his intellectual development, but there is no question about the fact that he is superior intellectually. In contrast, the monolingual appears to have a more unitary structure of intelligence which he must use for all types of intellectual tasks (1962:20).

Through this research, Peal and Lambert (1962) showed that bilinguals exhibit a greater cognitive flexibility: the subjects are able to switch from one task to another (task switching), to invent a different use of common objects, to adapt to the use of different rules and, above all, to be able to manipulate the language code. In addition, the better performance of bilinguals on problem-solving and creativity tasks was highlighted. For example, in a creativity assessment task, participants were shown a video about a physical problem and asked to hypothesize how to solve it. The bilingual children developed qualitatively more complex and demanding solutions.

How to explain such a large discrepancy between the studies from the early 1900s and the studies from 1960 onwards? Grosjean (2015) states that one of the main problems in interpreting the results of these studies is to understand whether the groups of children interviewed (monolinguals and bilinguals) were really comparable in every aspect apart from language. Early studies focused on intelligence measurements and attributed a higher intelligence to monolinguals and a lower one to bilinguals. Differences in gender, age, socio-economic situation, and pedagogical context were not sufficiently considered. It was also unclear on what criteria bilingual children were selected and whether they had sufficient command of the language in which they were tested. It would therefore come as no surprise that the results of earlier studies were poor.

3.3. What about the 21st century?

Nowadays, conclusions about bilingualism are no longer as unambiguous as in the past: either entirely positive or entirely negative. Differences between bilinguals and monolinguals, if any, often seem to be reduced to circumscribed and very specific activities.

Ellen Bialystok, a Canadian expert in developmental psycholinguistics, and Lili Senman, in a study conducted in 2004, demonstrated how bilingualism stimulates

problem-solving ability in cases where the solution is conditioned by the control of attention (this is referred to as *selective attention* or *inhibitory control*) because the proposed activity contains misleading information. In their research, monolingual and bilingual children between 4 and 5 years of age were presented with objects. One of these was a sponge-rock: a sponge that resembled a rock. After placing the sponge-rock on the table, the researchers turned to the children and asked them to say what they were seeing, which is an *appearance question*. Most of the children replied that they could see a rock. At this point the two researchers revealed that it was actually a sponge (which looked like a rock) and asked, "What do you think it *really* is?", which is a *reality question*. The researcher criterion for *really* was confined to actual function of the object. Therefore, the correct answer to the reality question for the representational items was determined by their function. In this case, the answer should have been "a sponge" but this question was the most difficult for the children because they had to ignore or inhibit the perceptual characteristics of the object that resembled a rock. On appearance questions (rock), the bilinguals and the monolinguals performed equivalently but on reality questions (sponge), bilinguals performed better (once language proficiency had been controlled). The difference is attributed to the advanced inhibitory control that comes with bilingualism (Bialystok and Senman, 2004).

Another much-studied area, somewhere between cognitive functioning and language, is that of the *metalinguistic abilities* of bilingual children. By metalinguistic ability we mean the ability to analyse language in its aspects (sounds, words, sentences, syntax, etc.) and the ability to access these properties and know how to speak to them. Psycholinguistic scholars have developed various metalinguistic activities that require the use of various cognitive processes. Bialystok (2001) distinguishes two cognitive processes:

1. *the analysis of representational structures*: this is the ability to construct mental representations that are more detailed and structured than those of the initial tacit knowledge. It is used to detect grammatical errors in a sentence or to replace one phoneme with another. In this type of task, bilinguals and monolinguals achieve similar results;

2. *selective attention control*: this is the ability to direct attention to specific aspects of a stimulus or mental representation (as seen in Bialystok and

Senman 2004 research). This control becomes necessary when a problem is ambiguous. In order to get the right solution, one must focus on one of the possible representations while inhibiting or denying attention to the other. Another example of selective attention control is to realise that a sentence can be grammatically correct and semantically incorrect such as the phrase "apples grow on noses" (Bialystok, 2001:174).

Bialystok therefore also notes a significant difference between monolingual and bilingual children only in the control of selective attention. The two cognitive processes must therefore be analysed separately.

In addition to studies on cognitive and metalinguistic abilities, other studies attempt to uncover lexical differences between bilingual and monolingual children. Very often, children's lexical competence is assessed by means of *vocabulary receptive tests*, in which the children are asked to choose from various pictures the one that best represents the word pronounced by the investigator. Bialystok and Feng (2011) analysed various studies using these tests and found that monolingual children outperform bilingual children on this type of task. The vocabulary that bilingual children possess in each language is actually more limited than the vocabulary of a monolingual language. When the lexical competence of bilingual children is examined considering both languages, the result improves. However, if languages are examined separately, it can be detected a difference between bilinguals and monolinguals in favour of the latter. In addition, the two scientists claim that these tests do not consider the principle of complementarity, according to which bilinguals learn and use their languages for different purposes, in different life contexts and to communicate with different people, since some aspects of their life require the use of two different languages. By disregarding this principle, bilingual children are disadvantaged in terms of lexical competence.

Bialystok and Feng (2011) concluded their study by summarizing recent studies on the effects of bilingualism on cognitive development, noting that there are sometimes advantages for bilingual children, sometimes disadvantages, and sometimes no effects at all.

3.4. Different myths surrounding bilinguals

Early bilingualism is often the subject of prejudice and false myths resulting from a lack of information. For this reason, it is very important to know the most widespread linguistic, social, cultural, and emotional prejudices so that they do not influence our decision to educate children in several languages.

3.4.1. Myths about language

3.4.1.1. The phenomena of code-switching, code-mixing, borrowing and transfer

Code-switching is the alternating use of two languages. The speaker therefore switches completely to the other language for a word or phrase and then returns to the source language. Grosjean (2015:63) gives the following example of a bilingual French-English woman: "On a pris un *trail*", meaning "we have taken a *trail*". The code switch is criticized by monolinguals, but also by some bilinguals. Some believe it creates an uncomfortable mix of languages produced by people who don't care how they speak.

Myth: bilinguals change code out of laziness

Code-switching has also been given derogatory names such as italianense (combination of Italian and English) or denglish (combination of English and German). Negativity towards code-switching can also lead professionals such as language teachers, but also parents, to discourage and not practice bilingualism. A wrong choice because bilingualism can only lead to cultural and linguistic enrichment.

Bilinguals can change code for a variety of reasons, one of the main reasons being that some concepts are simply expressed better in the other language. If your interlocutor understands the other language and accepts the code changes, and the better word or phrase belongs to that language, you can just use it in what you say. This means that the word in the other language adds a nuance that allows for more precision than the option of trying to find the equivalent in the source language (Grosjean, 2015).

A second reason for a code change is related to the linguistic need for a particular word or phrase. When an area is covered in whole or in part by a language other than the one currently spoken, and the situation allows for the code change, the words and

phrases we need can be introduced either because they are the only ones we have or because they are at hand (Grosjean, 2015).

Additionally, code switching can be a communicative or social strategy to demonstrate speaker involvement, mark a group's identity, or perhaps exclude someone. Grosjean (1982:150) gives the example of an English French bilingual nurse in relation to exclusion. The nurse worked in the cardiovascular disease department of a hospital on the East coast of the United States. She spoke English at work, but when a French-Canadian colleague arrived, she occasionally started speaking French to her. One day, when Nicole asked a patient some questions about his heart attack, she quickly switched to French, with the colleague, without taking her eyes off the patient. She said: "Ça me parait grave" meaning "it seems serious to me", thereby excluding the patient from the diagnosis.

Carol Myers-Scotton and William Ury (1977) studied code-switching used to gain superior status. The scene takes place on a bus in Nairobi. A passenger gets on the bus and the driver tells him that his ticket to his desired destination costs 50 cents. The passenger gives him a shilling and the driver tells him to wait for change. As the bus approaches its destination, the passenger asks the driver for his change. The driver insists he will give it to him. The passenger then refers to him in English and says that he has now arrived at his destination. In this case, the change of language serves to gain more authority over the driver, since in Kenya English is the language of the educated elite. However, the driver then responds in English and asks if he thinks he can escape with his change. This restores equality between passenger and driver.

However, we must differentiate code-switching from *code-mixing*. Commutation can involve a single word, a proposition or one or more sentences. The commutation that occurs at the lexical level within a sentence (intrafrastic or intra-sentential commutation) is called code-mixing. Like code-switching, this verbal strategy is used by a bilingual speaker in conversation with other bilingual speakers. An example of code-mixing between English and Spanish is offered by Valdés Fallis (in Hoffman, 1991:104): "And all of a sudden, I started acting real curiosa (strange), you know, I started going like this". On the other hand, when commutation occurs at the edges of a sentence (interphrastic or inter-sentential commutation) this is called code-switching. An example of this phenomenon can be the one pointed out by Jeff Macswan (in Bathia,

Ritchie 2004:283): "The student brought the homework *para la profesora* (for the teacher)". The difference between the two phenomena is that, whereas code-switching involves the ability to change code with reference to the situation, function and interlocutor, code-mixing implies the transfer of linguistic elements from one language to another without being limited to the lexicon, but also manifesting itself at the grammatical level.

A second way bilinguals introduce their less activated language in a conversation is to borrow a word or phrase from it and adapt it morphologically (often phonologically) to the source language. If code-switching indicates the alternating use of two languages, *borrowing* is the integration of one language into the other (Grosjean, 2015).
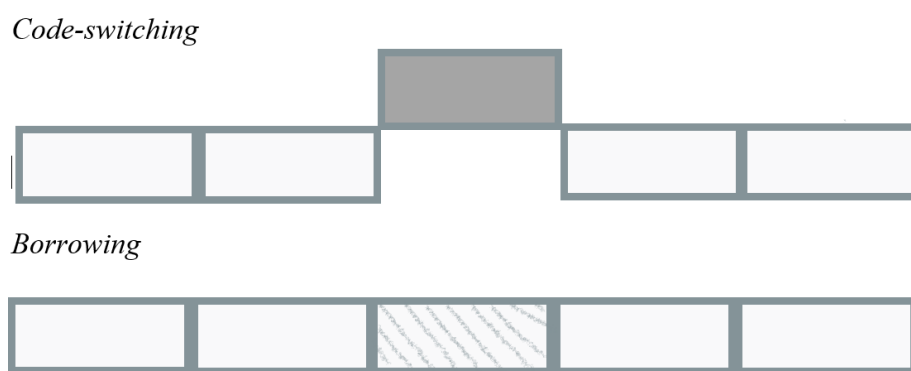
Figure 3.4.1.1. Difference between code-switching and borrowing, adapted from Grosjean (2015:68)

The difference here is that a person using code switching switches from language A (white rectangles) to language B (grey rectangle) and then back to language A. When borrowing, on the other hand, language B (diagonally striped rectangle) is integrated into language A (white rectangle); in this case, the two languages merge.

There are two forms of borrowing, the most common is when both the form and the content of a word are borrowed. This results in the so-called *hapax*, i.e., a word coined for the occasion. An English French bilingual speaker might say: "Ça m'etonnerait qu'on ai *code-switché* autant que ça", i.e., "I cannot understand that we have *code-switched* to such an extent". The word code-switch in this example

(Grosjean, 2015) has been inserted and integrated into the French sentence. In addition, the most commonly borrowed grammatical elements are nouns, verbs, and adjectives.

A second form of borrowing is the *calque*. This occurs when the speaker takes a word from the base language, extracting its meaning to match that of the word in the other language, or reassembles words from the base language following a pattern provided by the other language, thus creating a new meaning. An example is found in the use of the verb *soportar* in the Spanish spoken in Puerto Rico. Normally this verb means to *endure*, but now it is given the meaning of to *support*. As for the reassembly of words, also called *translation calque*, an example can be found in the Spanish of Florida bilinguals, who say tener ben tiempo, based on the English "to have a good time" instead of the Spanish "divertirse" (Grosjean, 2015).

Why do bilinguals borrow? The reasons are similar to those given above for code-switching, although less communicative strategies are involved. At the top of the list is using the correct word, along with the need to use a word from the area covered by the other language. Many linguists have attempted to explain why immigrants, when speaking their mother tongue, borrow so heavily from the language of their host country. In fact, from one day to the next they find themselves in a new reality and have new distinctions in the areas of work, food, school, sport, etc. Very often the vocabulary of their native language is not enough to cover the areas of their new life. Therefore, it is quite natural to derive already known designations from the other language instead of coining neologisms (Grosjean, 2015).

Sometimes bilingual children want to exclude their other languages when they are speaking, writing in monolingual mode, and although they may have adopted a filter to exclude any code changes, the other languages may intervene in the form of *transfer*, i.e., deviations from the language being spoken may be due to the influence of the deactivated languages. No matter how hard many people may try to avoid them, these interferences often accompany them for life. Interferences (or transfers) can be of two types: *static*, which reflect permanent traces of one language on the other such as accent, the extension of a word's meaning and syntactic structures or *dynamic*, which are intrusions of the other language, such as the casual slippage of a word's tonic accent due to the other language's peculiar accentuation rules. However, the two types of interference are not easy to distinguish, except for the accent, which is more often part

of static interference. Interference can occur at any level of the language. At a first level we find pronunciation (phonology and prosody), the foreign accent being a direct reflection of interference with the other language. In fact, the incorrect pronunciation of a word may betray where a person comes from. Interference at the level of words or expressions resembles the lexical borrowing seen earlier. Just like borrowing, the form and meaning of a word can also be imported, in this case unintentionally. Interferences at the level of idiomatic expressions in proverbs are difficult to detect, but very frequent. Bilinguals can literally translate from the other language to the one they are speaking, without being aware that the meaning is not always translatable. For example, if the expression "as alike as two peas in a pod" is used in English, the translation into Italian would be "come due gocce d'acqua" not "simili come due piselli in un bacello". Interferences at the level of syntax are also very frequent, for example when bilinguals take word order in sentences from one language to use in the other. Interferences can also take place at the writing stage. For example, words that are almost homographs, i.e., words that are spelled in a way For example, quasi-homographical terms, i.e., words that are spelled slightly differently in the two languages, are often a problem. Some English French bilinguals have to think for a moment about how many d's there are in address. Because, for example, in French there is only one (adress) (Grosjean, 2015).

Myth: interference (transfer) affects understanding

The interference produced by bilinguals when communicating in one language can have different effects on the comprehension of their monolingual listeners (or readers). At the level of sentence structure, Weinrich (1979) proposed three categories:

1. in the first category, the type of interference is possible in the base language and has no negative effect on comprehension. For example, an English-Russian bilingual who uses a sentence order, subject-verb-object in Russian, based on that typical in English, produces a perfect Russian sentence, even though in Russian that sentence order is not necessary;

2. in the second category of interference, the meaning of the sentence is implicitly understood. For example, an English-German bilingual

may say "Yesterday came he", based on the German "Gestern kam er", with the inversion of the subject not being necessary in English;

3. in the third category, interference produces an unintended meaning that negatively affects comprehension.

The first two cases of interference presented by Weinrich are much more frequent than the last case. It can therefore be said that interference does not affect comprehension too severely. Nor will the interference that bilinguals produce be too numerous. Furthermore, monolinguals who live working with bilinguals get used to hearing the influence of one language on the other, such as an accent, strange sentence structures and words, perhaps not all appropriate.

3.4.1.2. The prejudice of the accent

Myth: bilinguals should not have an accent in the languages they speak

It is normal for bilinguals to have a foreign accent; the exception is having no accent. The presence of the accent mainly depends on the age at which the language is acquired. Having an accent doesn't make you any less bilingual, though. Some of the well-balanced, very proficient bilinguals discussed in Chapter one have an accent in one language and the other, while others who speak less correctly may not have it at all. Grosjean (2015) therefore states that there is no connection between knowledge of a language and accent.

One can have an accent in a language for several reasons. The first reason, the simplest, is that one has acquired a particular dialect of a language, so an Indian speaker of English will simply have the accent typical of Indian English. A second reason is the influence of the first language on the second language. Having learned English first, an English French bilingual speaker might have an English accent. But how can the first language influence the second language? Definitely phonetics. For example, an Italian might use the same sound when pronouncing *hit* and *heat*. An accent can also arise from the influence of the second language on the first, for example, after many years of increased use of the second language and reduced use of the first. It should also be noted that a bilingual may have an accent in any spoken language. This may be the case, for example, if the individual has spent the childhood years moving back and forth between two or more language communities, e.g., Germany, Italy, and Spain. It should

be emphasized again that there is nothing wrong with having an accent in different languages, although a bilingual may feel that the languages are not spoken correctly. This is of course a false impression, since the presence of an accent does not indicate the level of mastery of a language (Grosjean, 2015).

Researchers disagree on the age limits at which the likelihood of having an accent in a second language increases. Some have suggested that pronunciation of a language can be accent-free if acquired before age 6, and that the window remains open until age 12 (Flege, 1988). Early learning is therefore a good guarantee for accent-free pronunciation.

The accent has no real disadvantages. But the more people feel inadequate. This makes them feel different from others. When an accent is very strong and society frowns upon the group one belongs to, an accent can negatively impact the way one is perceived and treated. A person with an accent can also give the false impression of not knowing the language, although sometimes they speak it very well. An accent can also appear as a sign of not putting enough effort into learning a language, when in fact the accent is the result of neuromuscular factors and not a lack of effort. Another disadvantage of the often-mentioned accent is that stress and emotions can make it even more prominent. A more serious disadvantage can be the lack of comprehensibility. Normally, an accent does not impede communication, but from time-to-time people may come across a person who has such a heavy accent that it seems this person is speaking another language. However, such cases are rare (Grosjean, 2015).

However, the accent can also have advantages. One is that the accent can be viewed positively by an individual and a group, e.g., a certain intonation can show interest and empathy. Another benefit of an accent is that it uniquely identifies you as a member of a group, e.g., a French-speaking Swiss who speaks German with a French accent unconsciously reveals which group he or she belongs to. Finally, an accent can be viewed as a means of self-protection, as it prevents the members of the group with whom one interacts from expecting to know all of the social and cultural rules of their group. So, it allows you to be different. Grosjean (2015) points out that knowing and using two or more languages having an accent is in the order of things, it does not make one any less bilingual, and rarely hinders communication.

3.4.1.3. The fear of stuttering

Baker (1995:105) collected the most common questions and worries on raising children bilingually. For years, parents were convinced that stuttering in bilingual children was really caused by bilingualism. Baker, indeed, asserts that:

> Parents of bilingual children tend to focus on bilingualism as the cause of stuttering, rather than looking for other better explanations. Evidence tends to suggest that bilingualism is a rarely direct cause of stuttering. Such evidence as exists also shows that stuttering is no more frequent in bilingual countries than in monolingual countries (Baker, 1995:105).

Neurophysiological and psychological theories claim that the cause depends mainly on other factors: the former locate the problem in brain activity or in a feedback problem between the ear and the brain; the latter sees an anxiety problem, e.g., due to impatient or over-correcting parents (Baker, 1995:102). He goes on asserting that if this phenomenon is common in both monolingual and bilingual children, it is usually temporary and will reappear when the child is particularly restless. In the case of bilingual stuttering, it is important not to prevent children from speaking either language as this would be counterproductive. It is necessary to make the child comfortable with this language by softening the parents' questions and language demands on the child, or by listening to the child with extra encouragement and patience, and in some cases temporarily transitioning to monolingualism. He concludes that if a positive and happy atmosphere makes bilingual acquisition enjoyable, then bilingualism is unlikely to lead to stuttering (1995:103).

3.4.1.4. Other language myths

Myth: bilinguals have a balanced and perfect knowledge of their languages

The language skills of bilinguals have always been judged by the standards of monolinguals. Even some bilinguals complain that they can't speak one of their languages well, have an accent, or mix the languages they speak. Some even reject the label of bilingualism and hide knowledge of their weaker language. Grosjean (2015) argues that this does not consider reality as many bilinguals use their language for different purposes, in different situations and with different people. They therefore do not have to be equally proficient in all the languages they speak. In fact, the level of proficiency achieved in a language depends on the need to use that language and

depends on the area of use. Consequently, it can be said that many bilinguals are dominant in one language: some cannot read and write in both, while others have only passive knowledge of one language. Grosjean (2015) affirms that bilinguals are not the sum of two monolinguals, as they possess a complete but distinct language system from monolinguals caused by the constant coexistence and interaction of two languages.

Myth: bilinguals are born translators

The myth of bilinguals as translators is nowadays widespread. There are many people who believe that a bilingual person can always easily translate from one language to another. However, bilinguals do not have translation skills, which can be explained by the principle of complementarity (Grosjean, 2015). Unless they cover the same areas with two languages or learn the language into which they are translating the output language in order to emphasize the equivalent words for the translation, thus building a bridge between the two languages, they won't have the resources to do a good translation. In addition, they may lack specialist vocabulary and even catchphrases in certain areas. In addition, the bilingual may lack stylistic diversity in the output language, or, for example, cultural knowledge to understand what is being said in the input language. Although bilinguals usually manage to translate simple sentences from one language to another, they often struggle with more specialized areas (Grosjean, 2015). This certainly doesn't make them any less bilingual, but it confirms what was said before, that the different languages spoken are spread across the different domains of their lives.

Myth: the language spoken at home has a negative impact on learning the language of instruction at school

The notion that the language spoken at home can have a negative impact on the language of instruction is a complete misconception. On the contrary, the language used at home can be a linguistic basis for acquiring new aspects of the other language. Grosjean (2015) cites the example of Richard Rodriguez, who in his book *Hunger of Memory* (1983) reported that the nuns at the Catholic School he attended had come to his house to ask his parents not to speak Spanish to him. Such incidents are not uncommon, they happen quite often. Unfortunately, Richard Rodriguez's parents obeyed the nuns' demands and forever prevented Richard from developing his written and

spoken Spanish. For this reason, the role of parents is crucial, as is the role of professionals working with bilingual children, who should learn what bilingualism is. This would allow them to understand what the children are going through and help them providing support.

Myth: childhood bilingualism can cause delays in language acquisition

As we know from the first chapter above, children can become bilingual by learning two languages simultaneously and at the same time. With this form of bilingualism, simultaneous bilingualism, children acquire two languages at the same time. One can speak of simultaneous bilingualism if each of the two parents speaks a different language with the child, e.g., the father is English and the mother is Italian; or when the parents are using language while other carers, such as teachers, use another. Parents and educators are often concerned about the delayed language acquisition of bilingual children. However, several studies have debunked this false myth. Let's start with the babbling phase. The psycholinguist D. Kimbrough Oller and his colleagues have compared the development of canonical babbling in monolingual and bilingual infants without finding differences between the two groups in the age at which it begins (Oller et al, 1997). As for the ability to discern different sounds in bilingual infants, they need to be able to discriminate different possibilities but appear to do so efficiently. Other researchers (in Grosjean, 2015) conducted a study of phonetic representations and found that infants raised in a bilingual environment construct phonetic representations for each of the languages in the same way and at the same time as infants who only need to do this for one language. The first words are spoken by both monolinguals and bilinguals around the age of 11 months. A final much-discussed topic is how children can distinguish between two languages from an early age. Grosjean (2015) explains that children depend on several factors: phonetic and prosodic cues such as the rhythm of each language, other structural aspects, the context in which they are used, but above all the language spoken by a specific person. Anyone who spends any time interacting with a bilingual child will notice the strong connection between a person and the language they speak for that child. Hence, the bond between person and language. It is interesting how in a child's eyes a person is associated with a certain language and when that particular person addresses him/her in a different language the child may find it difficult and not react.

Myth: the earlier a child acquires a language, the more fluent the child will speak that language

Another type of bilingualism seen in the first chapter is late bilingualism. Late bilingualism affects most children who only later become bilingual, i.e., acquire one language at home and later a second language, either at school or outside the family. The first language is then used to acquire the new one. This myth is based on two beliefs, the first is the idea that young children acquire language more quickly, and the second that in early childhood the brain is more plastic and therefore more receptive to language acquisition. The linguist McLaughlin (1993) reminds us that children are no less inhibited and no less ashamed when they make mistakes. In fact, they can be shy and uncomfortable in front of the peer group. In addition, it has been shown that young children are still quite immature in terms of learning technology, as they have not yet acquired any cognitive skills. Such as abstract, generalize, infer, and classify. These skills can help with second language acquisition. Finally, the notion of an impassable critical period for language learning, which would be around the age of 5, was replaced by the notion of a sensitive period (see Chapter 2), which can last up to 10 years and is likely to be different for different language skills. A well-known study by researchers Snow and Hoefnagel-Hohle (1978) examined the acquisition of Dutch by English speakers of different age groups. The researchers showed that teenagers aged 12 to 15 performed better than their younger peers. As seen above with the accent myths, the only real benefit of early language acquisition is pronunciation, but teens and adults can also learn to speak without an accent.

3.4.2. Social and cultural myths

Myth: the phenomenon of bilingualism is rare

This false myth is based on the fact that there is rarely a global view of language contact in the world. It may also be based on the fact that many people have a restrictive definition of bilingualism. What is certain, however, is that bilingualism exists in every country of the world. Just think of an Italian living in the Veneto region and therefore fluent in both Italian and the dialect of the region. Grosjean (2015) states that half of the population is bilingual. Garaffa, Sorace and Vender (2020) report recent data from the European Commission: 54% of Europeans can hold a conversation in two languages,

around 25% describe themselves as trilingual (including their mother tongue) and 10% know three languages (additionally). Bilingualism is therefore not an uncommon phenomenon, as data from the European Commission also confirm the statement by Grosjean (2015). According to the European Commission survey (2006), most bilinguals live in smaller countries: Luxembourg, Slovakia, Latvia, the Netherlands, and Slovenia. In contrast, the monolingual countries are the more populous countries such as the UK (now outside the European Union but included in the 2006 survey), where 38% of respondents said they could speak another language in addition to their mother tongue. In *Life with Two Languages* (1982:54-57), Grosjean also analyses data from the United States. Analysis of a 1976 income and education survey, which asked questions about the languages spoken by people whose family history was linked to a non-English speaking environment, found that fewer than 13 million people (about 6% of the population) spoke a minority language. The conclusion at the time was that the US was a monolingual country. However, in a 2000 census, almost 18% of the population reported speaking another language at home. The numbers seem to be increasing every year. In 2009 there were an estimated 55 million bilinguals in the United States, nearly four times the numbers of 1976. The most commonly spoken languages appear to be English, Spanish, and some European languages such as Italian, German, and French. In summary, bilingualism is currently a global and not just a European phenomenon. It is present on all continents and in most countries of the world.

Myth: bilinguals have a split personality

In *Life with two languages* (1982), Grosjean proposes, with regard to bicultural bilinguals, that what is perceived as a change in personality is nothing more than a change in attitudes and ways of behaving that are functional to the characteristics of a new context or situation, regardless of the language. Bilingual bicultural subjects, therefore, tend to adapt to the context in which they find themselves. Susan Ervin (1964) had come to similar conclusions, stating that a change in language is associated with a change in social roles and emotional attitudes. Moreover, since language is learned and used in different contexts, it may be the case that the use of each language may be associated with changes involving a wide range of behavioural patterns. It is therefore more plausible that different situations induce different behavioural patterns, regardless of bilingualism.

Myth: bilingualism is the same for everyone

This myth seems to identify different individuals with different lives, cultures, and passions within the adjective bilingual. In this context, Cristina Piva (2012:6) has identified a list of individual differences between bilinguals:

> - *linguistic factor*, i.e., the individual history of learning different languages and the relationships between languages;
> - *linguistic stability*, i.e., whether the bilingual person's languages are still being learned or whether the bilingual person is restructuring (and possibly losing) their language knowledge or skills;
> - *linguistic functionality*, i.e., which languages and skills are being used fluently, in what context, for what purpose and to what extent;
> - *proficiency*, i.e., what degree of competence the bilingual has in the different skills for each of the languages he/she knows;
> - *linguistic mode*, i.e., how often and for how long the bilingual is in a monolingual or bilingual state;
> - *biographical data*, i.e., the age, sex, socio-economic and educational situation of the individual.

Myth: bilinguals always belong to two cultures

Being bilingual does not necessarily mean being bicultural: the use of two or more languages in daily life does not correspond to the presence of two or more different cultures. For example, an Italian may speak Italian, German and Spanish but belong exclusively to the Italian culture. Of course, there may be individuals who speak several languages and belong to several cultures. In this case, one speaks of culture when it is reflected in all aspects that characterise the life of a group of people: social conventions, behaviour, beliefs, values, customs, traditions.

3.4.3. Psychological myths

Myth: teaching the second language implies forgetting the first language

In fact, research has shown that the development of one language benefits all the languages the subject acquires, i.e., each language enriches the other. The child is led to consciously reflect on language as an abstract tool for thought and communication, thus

becoming able to compare both languages by extrapolating appropriate aspects of them for use in linguistic tasks whatever the language they require. This result highlights a certain interdependence that operates at the metalinguistic level, enabling the acquisition of multiple language codes with greater ease. In this regard, Jim Cummins (1996) proposed the *theory of linguistic interdependence*, which he best represented through the metaphor of the *dual iceberg*.

> The surface features of L1 and L2 are those conversational features that have become relatively automatized or less cognitively demanding whereas the underlying proficiency is that involved in cognitively demanding tasks. Although the surface aspects (e.g., pronunciation, fluency, etc.) of different languages are clearly separate, there is an underlying cognitive/academic proficiency that is common across languages (Cummins, 1996, 110-111).

The peaks, therefore, represent the two languages (words, grammars, phonologies) seemingly separate and unrelated to each other. Below the surface, however, the two peaks merge, demonstrating that the two distinct language systems do not function separately, but operate through the same central system. The submerged part is equivalent to linguistic and extralinguistic competence. Regardless of the language used for speaking, reading, writing, and listening, the thoughts that accompany this linguistic activity are drawn from a single base constituted by the immersed part. In the bilingual child, the development of one language entails a simultaneous, unconscious reinforcement of the other language, so grammatical, semantic, and communicative notions acquired in one language are automatically transferred to the other.
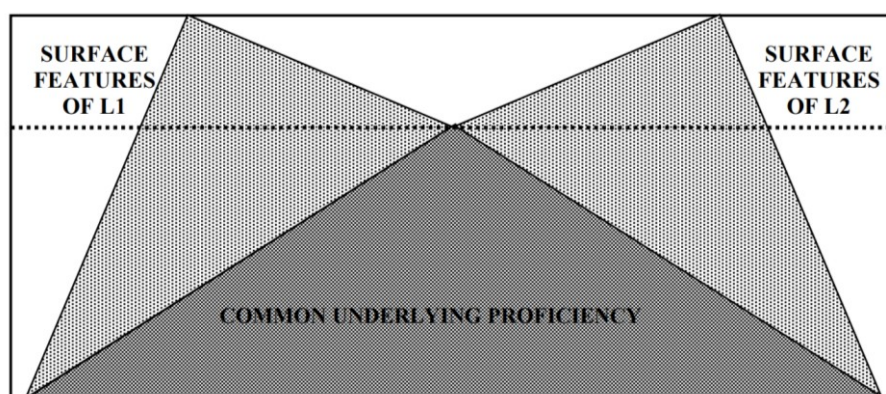
Figure 3.4.3.: The Dual Iceberg Representation of Bilingual Proficiency (Cummins, 1996: 111)

Therefore, learning the second language does not mean forgetting the first. However, it must be remembered that children need a minimum exposure to each language, which would seem to be around 30% (Garaffa, Sorace and Vender, 2020).

Myth: bilingualism causes delays in the child's cognitive development

It used to be believed that the child's brain absorbs and processes information more slowly due to two different language repertoires. However, recent research has shown that bilingual children perform better cognitively than their monolingual peers on certain tasks. In a 2009 study, Mehler and Agnes Melinda Kovàcs observed twelve children, six bilinguals and six monolinguals, while they were engaged in a task that required control of their executive functions. Under the influence of sound stimuli in the form of different words with different structure, the subjects had to understand on which side of the computer screen the figure of a puppet would appear: for some words the puppet would appear on the right, on others on the left. From the start, bilinguals showed that they understood the trick by responding quickly and correctly, while the monolinguals had more difficulty matching the difference between the words and the side on which the puppet would appear. This result is due to the fact that a child who knows two languages from birth is able to differentiate between them before speaking and learns linguistic regularities faster than a monolingual child. Mehler then compared the results of the two groups and found that a bilingual child's brain is more flexible because it is trained to distinguish the verbal stimuli of the two language codes without them interfering with each other. The advantage of bilinguals lies in their ability to select and monitor stimuli, allowing them to consider only what is relevant in a given context. Mehler and Kovàcs (2009: 611-612) explained that the human brain has enormous plasticity and is not confused by different stimuli. Between the ages of 7 and 12 months, a bilingual child learns to successfully deal with increasingly complex tasks, to acquire different language structures, to distinguish them and at the same time to monitor them more effectively than a monolingual child.

Myth: bilingualism impairs brain functioning

In the past, it was suspected that the acquisition of multiple languages could impair various aspects of development and cause a lowering of intelligence. To dispel this prejudice, various research have shown that speaking several languages increases

learning capacity and speed of comprehension; boosts the nervous system and thus brain activity; sharpens hearing and attention; and may even delay, if not avert, diseases such as Alzheimer's and dementia. A recent study by Ellen Bialystok, Fergus I.M. Craik, and Morris Freedman (2007) examined the effect of lifelong bilingualism on maintaining cognitive function and delaying the onset of dementia symptoms in old age. To proceed, they needed the following information: languages spoken, fluency in English, place of birth, date of birth, and year of immigration to Canada. This information was shared without further detail to 11 judges experienced in conducting behavioural research on bilinguals, who classified each patient as monolingual or bilingual. The criterion for bilingualism was that the patients had regularly used at least two languages for most of their life (at least from early adulthood). At first, the sample was selected from the records of 228 patients referred to a memory clinic with cognitive complaints. The final sample consisted of 184 patients diagnosed with dementia, 51% of whom were bilingual. Interestingly, bilinguals showed symptoms of dementia 4.1 years later than monolinguals, with all other measures being equal. In fact, dementia can be influenced by a variety of factors, including genetic, neurobiological, environmental, intellectual, and lifestyle factors. The finding that bilingualism in our sample delays the onset of dementia by four years falls into the latter category. These results show how a psychological factor can influence a biologically based disease state. Fabbro (2018:189) states that being bilingual is a bit like doing crosswords. It is a constant, unconscious training that individuals do throughout their lives, and it is very useful for preserving a young brain even in old age. In fact, knowing how to juggle languages trains the capacity for cognitive control, inhibition, and flexibility, as well as memory.

Myth: there is limited brain space for language acquisition

The neurological space myth dates back to the first half of the 20th century: if there is limited space for language in the brain, the presence of L1 in the child's brain can only be a neurological obstacle to the development of L2, and vice versa . Albert and Obler (in Balboni, 1996:8) have shown that the presence of two verbal codes in the brain leads to brain enrichment. In fact, the two bilingual codes complement each other and cooperate in processing verbal input. This means that many brain regions are activated when processing verbal input, and that the presence of more than one language

in the brain enriches its neurofunctional capacities rather than shrinking neurological space.

3.4.4. Emotional myths

Myth: bilinguals express their emotions always and only in the first language

Firstly, attention must be paid to the definition of the first language. In fact, there will be cases where one grows up learning two languages at the same time, so that there will be two first languages through which the bilingual can express feelings. Even for most bilinguals who learn languages at later stages, perhaps the first in childhood and the second a few years later, the mechanism is not as linear. Aneta Pavlenko has been dealing with the bilingualism associated with emotions for years and states that she no longer believes that there is a simple connection between languages and emotions, but that this connection is structured differently depending on the individual and also depending on the language spoken (2005:227). For example, it is certain that bilingual people prefer to express their feelings in their mother tongue, which is often the dominant language. For example, if despite being bilingual, you have always lived in the same place and always used your mother tongue, then it is understandable that you would talk about your affections in the mother tongue you use most often. However, Pavlenko (2005) argues that claiming that those who become bilingual in adulthood are only capable of forming affective bonds with the first language is reductive. For example, bilingual people may have had a traumatic experience related to their mother tongue and therefore choose not to use it. Pavlenko (2005) quotes the linguist Monika Schmid, who has been dealing with cases of language loss for years and cites the experience of two spouses who met in Germany and were forced to emigrate because of the war. The traumatic experience of war meant that they stopped speaking German (their mother tongue) to each other for over 50 years.

Pavlenko (2005) reports another interesting fact. The author notes that when angry, some bilinguals tend to have no communicative purpose and therefore begin to speak in a language incomprehensible to those around them. Emotions and feelings are externalized, even if the words are not understood. The connection between emotionality and bilingualism is therefore complex and non-linear. It also depends

heavily on subjective experience: some bilinguals prefer to use the first language, others the second, and still others use both.

3.5. Conclusions

In this chapter, I have cited various studies and research that debunk some of the most ingrained false myths. This research therefore shows that there is a need to change the general view of bilingualism, especially at the early bilingualism. Children are born predisposed to learn one or more languages naturally, without becoming confused and without showing linguistic and cognitive delays. Importantly, as mentioned above, parents ensure their children have ample opportunities to hear and speak both languages (Garaffa, Sorace, Vender, 2020). False myths and prejudices are still widespread in a multilingual society. It is important that teachers, paediatricians, speech therapists and psychologists refute them and begin to rely on scientific information in favor of bilingualism rather than widespread negative beliefs. In conclusion, it is important to remember that all misconceptions about bilingualism are still widespread among parents today. It follows that there is an imperative to change the parents' point of view through the intervention of educators mentioned above, who can provide families with reliable information and dispel all their doubts.

CHAPTER 4

ADVANTAGES OF BILINGUALISM

The recent and diverse research on bilingualism seen above (Chapter 3) has helped to dispel the false myths associated with bilingualism and has shown that bilingual development in children involves much more than just the knowledge of two languages. Over the years, there has been a shift from a totally negative conception of the phenomenon, according to which being bilingual entails many disadvantages, to the current conception according to which bilinguals have more resources than monolinguals.

This chapter looks specifically at the individual, social, cultural, economic, metalinguistic, and cognitive benefits of being bilingual. Given the extensive scholarly research on the metalinguistic and cognitive benefits of bilingualism and the lack of opinions on individual, social, cultural, and economic benefits, the following chapter will also include a selection of questionnaires compiled by people raised bilingually. The questionnaires' aim is to look at bilingual's thoughts and opinions on individual, social, cultural, and economic advantages in detail and to confirm previous literature.

4.1. Previous literature on individual, social, cultural, and economic advantages

This first section of the chapter reports the previous research on individual, social, cultural, and economic benefits on which I based the questionnaire. Some of the advantages used here for the questionnaire creation will be discussed later in the chapter and further explained.

4.1.1. The individual advantage

Bilingualism certainly leads to *individual enrichment* (Moretti, Antonini, 1999). In fact, bilingualism surely enriches the personality. Because bilinguals know two languages, they have *access to more information*: they can read books and newspapers in different languages, consult different websites, read literary works in the original

language and watch films in the original language, while monolinguals are forced to do so through the filter of translation (Abdelilah-Bauer, 2013:23).

Some bilinguals also believe that being bilingual allows them to express themselves more clearly and with a *wider vocabulary*. Another highlighted linguistic benefit is that knowing multiple languages seems to make it *easier to learn other languages*. Learning can be facilitated by relating new languages to those you already know, e.g., someone who knows Italian can easily learn Spanish, and someone who knows Dutch can easily learn German. In fact, the human brain structures languages, and thus phonology, morphology, syntax, etc., in such a way that connections are made between them. These connections can, in turn, be an aid to the acquisition and use of new languages (Grosjean, 2015).

4.1.2. The social advantage

Knowing more than one culture also means having an *orientation tool* to navigate, from a sociolinguistic point of view, in an increasingly complex reality (Moretti, Antonini 1999). In fact, the possession of two languages gives the bilingual the opportunity to connect with more interlocutors inside and outside the family and to exchange ideas, traditions and beliefs. Knowing two languages allows you to *communicate with different people* and interact with people from different backgrounds (Grosjean, 2015).

There is evidence that knowing two languages can give children *greater social sensitivity*. Genesee, Tucker, and Lambert (1975) wanted to test whether second language instruction affects social skills. For their test, three groups of students from kindergarten, 1st and 2nd grade were tested in an interpersonal verbal communication task. Tested children were English speakers and were tested in their mother tongue. One group attended English schools with English speaking teachers; the second group attended English schools with French-speaking teachers; and the third group attended French schools with French-speaking teachers. The groups were comparable in terms of age, socioeconomic level, and verbal and nonverbal IQ. The task asked children to explain how to play a game to two different listeners: one blindfolded and one not blindfolded. There was no significant difference between the groups in the number of

rules they told each listener. On the other hand, the second and third groups mentioned more about the game materials to the blind listeners than to the sighted listeners. Therefore, the researchers found that English-speaking children in French school immersion programs (those who received instruction in French) were more sensitive to the communication needs of blindfolded listeners than other children.

Another advantage of the bilingual child is their *greater communicative sensitivity*: the awareness that the interlocutor may not speak the language used, forces the child to think more often about which language to choose and which means of communication to follow. This greater sensitivity in dealing with others leads to greater attention to the needs of the interlocutor and to a more appropriate interpretation of verbal and non-verbal aspects of communication (Baker, in Abdelilah-Bauer 2008:25).

4.1.3. The cultural advantage

One of the cultural advantages of being bilingual is that they have a more *tolerant attitude* towards other languages and cultures. In this respect, Guimond and Palmer (in Abdelilah-Bauer 2013:26) set out in their study to determine Canadian attitudes towards the two language communities that coexist in their country. In this research, some monolingual Anglophone or French speaking students and some bilingual students had to rate the members of their own group and those of the other group based on some of their characteristics such as friendliness, beauty, intelligence, etc. The results showed that monolingual French-speaking students displayed negative attitudes towards anglophones and vice versa, while bilingual students were more tolerant towards both French-speaking and anglophone communities. This shows that bilingual children can identify with both communities and are less likely to develop exclusive attitudes towards those who are different.

Knowledge of several languages enables more direct access to other cultures and thus a broadening of the horizon of experience (Moretti, Antonini 1999). Mastering languages means not only speaking them, but also being open to their cultures, ways of thinking and living. Through regular exposure to two or more different codes, the bilingual child not only acquires the ability to communicate in multiple languages, but also acquires *cultural know-how*. A bilingual person knows how to apply the formulas appropriate to the situation, how to adapt the behavior in contact with monolingual

speakers of one language or another, and can thus draw on a broader repertoire of knowledge to deal with different communicative situations. Baker (in Abdelilah-Bauer 2013:24) found that bilinguals see the world through two different windows. What does that mean? Mastering several languages also means opening up your own way of thinking and not feeling rigidly locked into one way of doing it. Bilinguals have the opportunity to learn about cultural differences and to act as intermediaries between multiple cultures due to their greater cultural flexibility.

Finally, knowledge of several languages gives the bilingual the opportunity *to convey cultural identity* (Moretti, Antonini 1999). Language and culture form an inseparable pair, which is why passing on languages cannot avoid conveying cultural values. The ability of a bilingual is to combine, blend and embrace the distinct characteristics of each culture to which he or she belongs.

4.1.4. The economic advantage

Apparently, bilinguals receive *more job offers* and enjoy *greater social mobility* (Grosjean, 2015). Abdelilah-Bauer (2013:24) adds that bilinguals have a better chance of finding employment in the workplace, as almost all companies today require knowledge of at least two languages. In a research report on interculturality and employment by Abdelilah-Bauer (2013:24-25), surveys of the world of work revealed that bilinguals proved to be excellent mediators and able to resolve language conflicts because of their bicultural competence. In all professions that bring people from different cultures together, bilinguals contribute their multicultural skills, i.e. the ability to make themselves understood and to explain themselves in the language of the other; the ability to understand the other when the cultural codes are different; the ease of contact that allows a smooth start to communication and the ability to make the interlocutor feel like they belong to the same world, thus creating a climate of trust.

In a large-scale survey conducted by the European Union in twenty-nine countries in 2006, when asked: "what are the main reasons that might induce you to learn more languages?", the respondents mentioned the work factor. In fact, one third of the respondents answered: "for professional purposes (such as business trips abroad)". Also,

a quarter of the respondents answered: "to be able to work in another country and to get a better job".

The final report of the above-mentioned EU survey (2006) summarises various advantages seen above: the benefits associated with knowing foreign languages are indisputable. Languages provide a pathway to understanding other ways of life, which in turn opens up a space for intercultural tolerance. Proficiency in other languages also offers more professional outlets, more opportunities to study, travel abroad and enables intercultural interaction and communication (2006:1).

4.2. Discussion of the questionnaires on individual, social, cultural and economic advantage

As mentioned above, given the lack of concrete data on individual, social, cultural and economic benefits, it has been decided to check the accuracy of the existing literature by developing specific questionnaires (see Appendix 1 – Questionnaire for bilingual advantage). The questionnaires were then distributed to people who had grown up bilingual and filled out anonymously.

To maintain the anonymity of the participants, each questionnaire (and therefore each participant) was assigned a pseudonym, composed by the letter Q, which stands for Questionnaire and a number (example: Q1, Q2, Q3…).

Participant Q1 is a 72-year-old bilingual woman who speaks Dutch and English. She was born in the Netherlands to an English mother and Dutch father and currently still resides there. She was raised in both languages from a young age, Dutch was used in everyday life, and English was the family language when she went to England. Participant Q1 also stated that she has a basic knowledge of German (A2) in addition to Dutch and English. Participant Q1 indicates that she has experienced a range of benefits from being bilingual, confirming the existence of individual, social and economic benefits throughout her life. On the other hand, she doesn't seem to have experienced any cultural benefits.

Participant Q2 is a 23-year-old bilingual girl who speaks Portuguese and Italian. She was born in Brazil like her parents, but her grandparents were Italian. Therefore, having her parents Italian roots, they decided to raise her speaking both languages. At

the age of 14 they moved to Italy so that she could attend an Italian school. At home, participant Q2 states that she speaks Portuguese with her parents, while for her Italian is the language of education and friendship. Participant Q2, in addition to being bilingual Italian Portuguese, affirms to know English (C2) and Spanish (B1). These data also confirm previous literature on the individual advantages of bilinguals, i.e., that they are able to learn languages faster. Q2 states that she has experienced individual, cultural, and economic benefits throughout her life. She states that she has not experienced any social benefits but in the answer on the individual benefits, she affirms bilingualism makes it easier for her to communicate with people, which contradicts her answer on the social advantage.

Participant Q3 is a 21-year-old boy, bilingual in English and Italian. He was born in the United States to an English mother and Italian father. English is the language he now speaks most with his mother; in fact he lives in New York. However, he pointed out that he has also lived in Italy and Italian is the language he speaks with his friends and father. The participant states that he does not speak any other language. Finally, the participant indicates that he sees all the advantages (individual, social, cultural and economic advantages) suggested in the questionnaire in his state of bilingualism.

Participant Q4 is a 25-year-old bilingual French-Italian girl. She was born in the French canton of Switzerland and grew up with Italian parents. Today she lives professionally in Germany. Since she was a child, her parents only spoke Italian to her at home, while French was studied at school. Participant Q4 states that the languages were then switched naturally when needed. Now Italian is the language of family members and some colleagues, while French is the language she speaks with her family (alternating with Italian) and is the language in which she thinks. Q4 states that she has experienced all the benefits of being bilingual (individually, socially, culturally and economically) examined in the survey. She also states that, in her opinion, being bilingual does lead to other advantages such as cognitive advantages.

Participant Q5 is around 30 years old and speaks English and Italian. She was born in Italy and still lives in Italy as an English teacher. Her father's native language is English, and her mother's native language is Italian. From an early age, she addressed her father in English and her mother in Italian. In addition, she was used to addressing both Italian and English relatives in both languages (e.g., using Italian for American

relatives). Nowadays, she speaks Italian and English with her peers at university, with her co-workers, and with her students she usually try to speak only English. In addition to Italian and English Q5 claims to know other languages: she can speak, read and write in Chinese (level B2+), she can read French and Spanish newspapers (B1), she studied German a long time ago, but she didn't use it for about 15 years (A2), she can read Korean, but can only speak at an A1 level. In fact, as an individual advantage she states she can surely learn languages faster than a monolingual. Finally, participant Q5 states that she has experienced individual, social, cultural, and economic benefits throughout her life, providing valuable examples for this little research. Finally, I quote her closing statement here because it sums up well the view one should have about bilingualism:

> Bilingualism is also a state of negotiation of who you are….your identity constantly deconstructs and reconstructs itself as you study, travel, work, etc…You learn early on that change, flexibility and open-mindedness are part of your life experience, they are tools that you improve as you grow (Participant Q5 – see Appendix 1).

Participants indicated that they believe there are benefits to being bilingual. Three out of five participants said they experienced all four benefits (individual, social, cultural, and economic). One out of five participants stated that she experienced individual, cultural and economic benefits of bilingualism. Finally, one out of five participants said she experienced individual, social and economic benefits of bilingualism.

All the participants therefore confirmed the benefits indicated in the previous literature, some to a greater and some to a lesser degree.

The following figure (figure 4.2.) summarises the answers of the Questionnaire's participants:

Figure 4.2.: the advantages of bilingualism according to the questionnaire's participants

4.3. The cognitive advantage

From an academic cognitive point of view, many advantages have been highlighted, including *cognitive flexibility*. In fact, several studies have concluded that bilinguals are more cognitively flexible than monolinguals. However, the construct cognitive flexibility, has never been adequately defined. The notion of flexibility has been loosely used and abused to account for bilinguals' superior performance on cognitive tasks. In the literature on bilingualism and cognitive development, the term cognitive flexibility was used first by Peal and Lambert (1962) to distinguish bilinguals' performance on measures of general intelligence. Specifically, in their research (cfr. 3.2.), the term was used to explain a puzzling finding, namely, that bilinguals performed significantly better than monolinguals on several nonverbal tests of intelligence. Nevertheless, this poorly defined construct is widely used, and many students and researchers in the field argue bilinguals are more cognitively flexible than monolinguals, without knowing the precise meaning of what they are saying (Diaz, 1983).

The bilingual advantage in terms of cognitive flexibility was later echoed in a study by Bialystock (1999), in which he presented children with a selection task in which they were asked to sort scales according to a criterion (e.g., colour) that was then changed (e.g., the number of subjects represented). Normally, a change of criterion would elicit several incorrect answers. Bialystock's (1999) study, however, shows that bilingual children perform better than monolingual children after the introduction of the second criterion, suggesting greater flexibility in the use of different rules.

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Silvana Contento (2016), on my account, proposes a modern and easy definition of cognitive flexibility, strongly linked to Bialystock's (1999) study mentioned above. According to her, cognitive flexibility would seem to be a generic expression to indicate the subject's ability to switch from one task to another (task-switching), to invent a different use of common objects and to adapt to the use of different rules. Miyake et al. (2000) seem to agree with Contento definition, stating that cognitive flexibility may refer to an individual's ability to switch between different task states and mental stereotypes. Cognitive flexibility can therefore acquire different shadows of meaning according to different shades of definitions.

Divergent thinking is closely linked to cognitive flexibility. Several studies have shown that children think more flexibly and openly. Divergent thinking is the opposite of convergent thinking. The difference between the two lies in the amount of solutions to a problem that a person can find. If we were to ask people to imagine the different uses a brick could have, people with the convergent thinking style would enumerate conventional, obvious, and less common uses, such as building a wall, house, chimney, etc. People with the divergent thinking style will find original uses instead, such as plugging a hole where mice live, breaking a glass, stabilising a table, using it as a paperweight, etc. (Abdelilah-Bauer, 2008).

For example, in Guilford's (1967) *Alternate Uses Task* (AUT), people are given simple objects, such as a pencil, and asked to find as many uses for that object as they can. Results are generally scored on the number of responses (fluency), the number of different categories used (flexibility), the degree to which the responses deviate from the standard or group mean (originality), and the level of detail (elaboration). In 1973, Scott (in Saunders 1988:18) conducted a seven-year study of a group of English-Canadian children who had been given the opportunity to become bilingual by completing their schooling in French. Scott found that these bilingual children performed better than their bilingual peers on divergent thinking tasks.

Also associated with cognitive flexibility and divergent thinking is *creative thinking*, i.e., the ability to think outside the box. Carringer (1974, in Saunders 1988:18) measured the creative thinking of balanced 15-year-old English-Spanish bilinguals and compared it to that of monolinguals. The bilinguals scored higher in verbal and visual fluency, flexibility and originality. Discussing the results of his study, Carringer notes

that bilingualism appears to encourage creative thinking and serves to free the mind from the tyranny of words. In fact, since bilinguals have two terms for one referent, attention is focused on ideas and not words.

Another research by Carolyn Kessler and Mary Quinn (1987, in Saunders 1988:19) demonstrated the positive effects of bilingualism on children's *linguistic and cognitive creativity*. These studies confirmed Carringer's (1974) conclusion about the superiority of divergent thinking in bilinguals and also demonstrated other cognitive benefits that result from being bilingual, such as formulating better hypotheses. In Carolyn Kessler and Mary Quinn's study (1987), bilingual Spanish-English children, who were in 6th grade in the United States and came from a low socioeconomic class, were compared to a group of monolingual English speakers who were in the same grade but belong to a higher socioeconomic class. The goal was to understand their ability to solve scientific problems and formulate hypotheses after a five-week science program. The results showed that bilinguals performed significantly better than monolinguals in terms of both the quality and linguistic complexity of their hypotheses.

In another study by Carolyn Kessler and Mary Quinn (1987, in Saunders 1988:19) with very similar sample groups of 11-year-old, 6th grade children, it was concluded that although English monolinguals from a higher socio-economic class performed better on standardised English reading tests than bilinguals from a lower socio-economic class, the latter formulated hypotheses three times more correctly than monolinguals, proving their divergent thinking. Moreover, they used more complex language in their formulation. In addition to divergent thinking, bilinguals also demonstrated higher levels of *convergent thinking* by making a greater use of metaphors, as metaphor is regarded as an indicator of cognitively creative ability to utilise data in making generalisations (Kessler & Quinn, 1987, in Saunders, 1988:19). In fact, whereas divergent thinking entails generating a large number of solutions to a problem; convergent thinking involves zeroing in on disparate objects or ideas, relating them to each other. In fact, convergent thinking can be defined as a more constrained process that searches for a possible outcome. Scholars Kessler and Quinn (1987) finally concluded by saying that from the point of view of both linguistic and cognitive creativity, bilinguals seem to excel.

Several research have been conducted on the *executive function*. Executive functions are cognitive processes that direct behaviour to achieve goals. These higher-order cognitive abilities are essential for behaviour planning, ignoring irrelevant information, paying attention to stimuli and interesting information, and creative thinking. Constant monitoring, inhibition, selection, and planning are always present processes of bilinguals. One might reasonably expect that bilingual language processing will draw more heavily on these cross-sectoral executive functions than in the case of monolinguals, and that the resulting transference effects will lead to bilingual advantages in executive functioning as measured by neuropsychological tests such as Stroop, Simon, and Fanker tasks (Antoniou, 2019).

Ellen Bialystok is considered a pioneer in research into the connection between bilingualism and cognition. Her work goes beyond executive functioning skills, although these are highlighted here as the debate focuses more on whether bilingualism improves executive functioning and the tasks that measure its components, such as the Simon task. It is important to notice that bilingual advantages in executive roles were observed most frequently in older adults and then in children. The *Simon task* demands the participants to push a button depending on the colour of a square (e.g. left button, green; right button, red). For congruent attempts, the square appears on the side of the screen that corresponds to the answer button. In incongruent trials, the square appears on the opposite side, and this conflicting spatial information must be suppressed before responding, typically resulting in increased response times. The reaction time difference between congruent and incongruent trials is called the Simon cost. Bialystok et al. (2004) reported the data of two groups of bilinguals they analysed using the Simon task. The subjects were aged between 30 and 58 years (middle-aged adults) and between 60 and 80 years (older adults). These two monolingual groups outperformed the groups of age-matched monolinguals on the task, and the older adults (60-80) showed the most robust bilingual advantage. Bilinguals showed lower Simon costs than monolinguals, suggesting that they were better at processing conflicting but irrelevant spatial information.

Although greater benefits were noticed in adults, bilingual advantages in executive function have also been reported in children, tested with different tasks:

- the *Attention Network Test*, in which participants indicate the direction of a central arrow in a series of five arrows pointing either in the same or opposite direction (Kapa & Colombo 2013, Yang & Yang 2016, Yoshida et al. 2011, in Antoniou, 2019);

- the *Dimensional Change Card sorting task*, in which participants sort a set of cards by one dimension (e.g., colour), and then re-sort the same cards by another dimension (e.g., shape) (Białystok 1999, Bialystok & Martin 2004, Carlson & Meltzoff 2008, Kalashnikova & Mattock 2014, in Antoniou, 2019).

The general claim in this literature is that bilingual children perform better in executive functioning than their monolingual peers. This is attributed to the demands that bilingualism places on brain networks and structures within them that perform general executive functions of the domain (Antoniou, 2019).

Surely, an important step in the history of bilingual advantage research and on the executive function was made by Green (1998, in Contento, 2016) with the *Inhibitory Hypothesis* model. According to this model, bilingual subjects are constantly practising inhibition of irrelevant language, and this ability involves the same executive function cited above. Therefore, bilinguals should have a greater ability to inhibit irrelevant stimuli than monolinguals, not only in relation to language but in general. Abdelilah-Bauer (2013) states that the need to organise language into two symbolic systems at a very early age results in the child being able to separate language from meaning. Compared to a monolingual child, the brain of a bilingual peer has more complex tasks to perform: in every communication situation, it has to choose the appropriate language code, inhibit what it doesn't need, and thus strengthen executive control of language. This ability remains acquired into adulthood but tends to decline with age. In addition, bilingual children, who switch from one language to another several times a day, acquire the ability to view words as interchangeable. According to experts, this ability to analyse language is the first requirement for learning to read, a skill that bilingual children appear to develop up to a year earlier than their monolingual peers and thus learn to read faster (Abdelilah-Bauer, 2013). Bilingual subjects are therefore more adept at suppressing irrelevant information and solving tasks where there is cognitive conflict, i.e. characterised by the presence of conflicting information. Constant practice in

choosing the language the bilingual needs in the communication situation they are in, while avoiding the intrusion of the other known language, can have a positive impact on skills related to selective attention, inhibition and general cognitive control. In the third chapter we saw how bilingual children were able to distinguish reality from appearance, i.e. that the sponge in front of them was actually a rock, thus demonstrating inhibitory control (Bialystock and Senman, 2004).

Finally, bilingualism seems to be viewed as a *protector of cognitive functioning*. Following the emergence of studies showing that bilingual older adults outperformed their monolingual peers in executive functioning tasks, large longitudinal studies have revealed evidence that *bilingualism may promote healthy cognitive ageing* worldwide (Antoniou, 2019). One study followed 814 older Israeli adults (aged around 75-79 years-old) over a 12-year period and found that multilingualism is a better predictor of cognitive ability than age, age at immigration, education, or gender (Kave et al .2008).

Apparently, bilingualism leads to improved cognitive ageing outcomes. Could it also have a positive impact on neuropathological disorders associated with age-related cognitive decline, such as Alzheimer? Research by Bialystok, Craik, and Freedman (2007), also cited in the previous chapter, shows how lifelong practice of bilingualism can be a *protective factor* against the development of diseases such as Alzheimer's and dementia, and can delay, if not prevent, their onset. In fact, analysis of two groups of people divided by age, sex, cognitive level and educational level 88 revealed that bilinguals were diagnosed with cognitive decline, both normal and pathological, 4.3 years later than monolinguals and that the symptoms occurred 5.1 years later.

4.4. The metalinguistic competence of bilinguals

Interest in the impact of bilingualism is not only focused on the cognitive domain, but there has also recently been an increasing number of studies examining its impact on metalinguistic aspects. Indeed, Bonifacci, Cappello and Bellocchi (2012) state that the study of the relationship between language and cognition can be considered an interdisciplinary *leitmotif* between the fields of psychological, linguistic and philosophical research.

Metalinguistic competence refers to a person's ability to view language as something to think about and not just as a means of communicating or expressing one's

ideas. It appears that early bilinguals have more developed competence than their monolingual peers in terms of metalinguistic competence, as they can understand that the languages they acquire are just a few of many possible options and how the relationship between signifier and signified is completely arbitrary (Vygotsky, in Proietti Ergün 2013: 599). In this sense, the metalinguistic ability is closely linked to the executive function mentioned above. In the same line of thought we also find Leopold (in Proietti Ergün 2013: 600) who stated that his daughter's exposure to two languages from birth improved her intellectual development, especially her abstract and symbolic thinking, and theorised that that this result is due to the fact that bilingual children are used to focusing on the content of words rather than their form and that they often have two different words for the same referent. Several researchers affirm that bilinguals possess an earlier and greater *awareness of the arbitrariness of language*. Anita Ianco-Worrall (1972 in Baker, 1988) studied bilingual (African-English) children from South Africa, aged between four and nine years. The study showed that bilingual children analysed language more intensively than monolinguals and that they were capable of analysing language as an abstract system. Bilingual children become aware much earlier of the fact that names are arbitrarily assigned to objects and are subject to change. A word is simply what people associate with its meaning. It is not an attribute of the thing being named. In her study, Ianco-Worrall (in Baker 1988: 28) asked children questions such as: "if you had to invent a term for naming something, would you name a *dog* after the word *cow* and *cow* after the word *dog*"? The monolinguals generally answered that the names of objects cannot be changed, whereas most English-Afrikaans bilinguals agreed that it is possible to change the terms.

Jim Cummins's (1978) study of grade 3 and grade 6 Irish-English bilingual children confirmed Anita Ianco-Worral's findings: 70% of the Irish-English bilinguals, compare with only 27.5% respectively of the children in the monolingual control group, asserted that the names of things could be interchanged. It seems, therefore, that the language experience which bilinguals have acquired, part of which is an early realisation that most things are referred to in two ways, not just one, promotes this awareness.

Bilinguals appear to be able to *distinguish earlier the meaning of words from their sounds*. Jim Cummnis (1976:33) points out that the ability to separate the meaning of a

word from its sound is "necessary if a child is to use language effectively as a tool for thinking". In this case, bilingualism can give children a head start. Ianco-Worrall (in Saunders 1988:17) also conducted another study to analyse the semantic and phonetic capabilities of these samples. The aim of this research was to find out whether children focused more on the meaning of words than on their sound. The study consisted of the oral presentation of eight three-word sentences in each language, where two of the spoken words were phonetically similar but semantically different, and alternatively two of the three words were phonetically different but similar in meaning. For example, children were exposed to phrases such as, "I have three words: *cap*, *can*, and *hat*. Which is more like *cap – can*, or *hat*?" Of the 4-6 year old bilinguals surveyed, 54% interpreted the similarity between these words in terms of meaning rather than sound: they chose *hat*. The monolinguals, on the other hand, stated that *cap* and *can* were the same because of the sound similarity. These observations were also confirmed by Sandra Ben-Zeev's study (1972, in Saunders 1988: 18) of bilingual Hebrew-English children, from which she drew this conclusion:

> A bilingual, who constantly hears two words for one thing, is compelled to pay more attention to the meaning expressed than the word used to express it, whereas the monolingual is often satisfied with a hazy definition of a word and will use it without understanding it fully.

These examples demonstrate the ability of bilingual children to focus on the content and meaning of words rather than their shape or sound.

The *metalinguistic awareness* of bilingual children, i.e. the ability to manipulate language, has been underscored trough an experiment by Bialystok (in Baker, Prys 1998, 73) in which 120 children aged 5 to 9 divided into two groups (monolingual and bilingual), asked them to judge the correctness of certain sentences and to correct them if necessary, in order to test the ability of the samples to analyse the linguistic structure of the sentences. This study showed that bilinguals, in contrast to monolinguals, judged the grammatical correctness of sentences more precisely and accurately. It is possible that bilinguals who own two languages can analyse sentences better and gather more knowledge about their structures. As bilinguals constantly interact with multiple languages, they seem to regulate, organise and control them better.

A current area in which bilingual advantages are being studied concerns the *theory of mind*, a theory that can be defined as the ability to ascribe mental states to others in order to explain and predict their behaviour. Peggy J. Goetz (2003, in Contento 2016: 37) observed for the first time in 3-4 year old children a better performance of bilinguals in *false belief tasks*. A false belief task is designed to test children's ability to attribute a belief to other people's thoughts. The crux of the matter lies in the role played by the attribution of a false belief: indeed, predicting another person's behaviour based on a belief that the child knows to be false constitutes evidence that it does not make trivial projections, transfers one's own opinion about reality to the other person. The subject identifies this particular behaviour and assumes that it is causally due to an intentional state of mind in the other person. This state of mind, coinciding with the false belief, exists only in the mind of the other person and not in the mind of the child, who can therefore distinguish and knowingly ascribe it to the other person. The scientist believes that bilinguals are better at this type of task because they are better at inhibition (inhibiting the answer they would give that is not the right one) and because they have greater metalinguistic competence and sensitivity to sociolinguistic interactions with other interlocutors. This result was also confirmed by Agnes Kovács (in Contento 2016: 27), who administered a classic and a modified false belief test to three-year-old children. Based on the results of both tests, both Goetz and Kovács found that bilingual children performed better on tests of incorrect beliefs compared to their monolingual peers, and this effect was thought to be a consequence of a better ability to prevent incorrect answers, a better interpreted metalinguistic competence and a greater sensitivity to sociolinguistic interactions. Garaffa, Sorace, and Vender (2020) state that this *cognitive decentralisation* (theory of mind) is usually achieved about a year earlier in bilingual children than in monolingual children. Moreover, this advantage appears to derive from their constant practice of assessing the interlocutor's linguistic competence in order to adapt their choice of language to the type of person they are interacting with, i.e., whether this person is monolingual or bilingual.

Studies by Siegal and colleagues (in Bonifacci, Cappello and Bellocchi, 2012) attempted to assess whether bilingualism confers an advantage on children's ability to understand certain *pragmatic aspects* of conversation. Specifically, the goal of their studies was to determine whether bilingualism might confer an advantage in the ability

to distinguish between effective and less effective communicative responses in terms of increased *sensitivity to conversational maxims*, as operationalized by Paul Grice:

- *maxim of quantity*, i.e., saying no more or less than is necessary for the purpose of the communication;

- *maxim of quality*, i.e., telling the truth and avoiding statements for which there is insufficient evidence;

- *maxim of the relationship*, i.e., to be relevant;

- *maxim of modality*, i.e., avoid ambiguity or ambiguity.

In a first study, the authors conducted the *Conversational Violation Test* (CVT) in a group of 22 bilingual Italian-Slovene and monolingual Italian children between the ages of 4 and 6 years. In this test, 25 short conversations are presented via computer, in which one puppet asks a question and two other puppets answer, one correctly and the other violating one of Grice's conversational maxims. The child was then asked to indicate which of the two puppets had said something inappropriate, thus violating one of the maxims.

A second study was then conducted with a different sample, in which, in addition to conducting the *Conversational Violation Test*, measurements of vocabulary knowledge (*Peabody Picture Vocabulary Test*) and executive control (*Day-Night and Card Sort Task*) were also taken into account. The results of these experiments showed that bilingual children have a significant advantage in detecting violations of maxims despite poorer vocabulary, whereas there were no differences between bilingual and monolingual children in terms of leadership advantage. However, it was found that the bilinguals had poorer and more limited vocabulary. The authors hypothesise that the reduced vocabulary size of bilingual children may lead to the development of specific compensatory skills over time: through difficulties in understanding vocabulary, particularly in the weaker language, the bilingual child would learn to direct more attentional resources towards the pragmatic aspects of communication, making greater use of contextual information to infer the meaning of the speaker's messages.

Therefore, it can be concluded that pragmatic competence plays an even more important role in bilingual children, as they constantly have to choose the appropriate language according to the language spoken by their interlocutors: the bilingual context

would therefore provide a valuable window for the development of pragmatic competences and their relationship to other metacognitive competencies (Tare and Gelman, 2010, in Bonifacci, Cappello and Bellocchi, 2012). Recent studies by Nicoladis and Genesee (1996, in Bonifacci, Cappello and Bellocchi, 2012) have shown that bilingual children are already able to choose the appropriate language depending on the language of their interlocutor around the age of around two years. Finally, Bonifacci, Cappello, and Bellocchi (2012) state that pragmatic differentiation from earliest language acquisition would allow children to develop early skills related to metacognitive awareness, which in turn increases the ability to pay attention to the pragmatic aspects of an interaction to direct would make the child increasingly proficient in the linguistic selection work required to make his production match the language spoken by his interlocutor.

A recent study by Bonifacci, Giombini, Bellocchi, and Contento (2011) hypothesises that the condition of bilingualism may have an impact on *anticipatory abilities* and that this benefit may be relatively independent of the advantage in executive functions. These anticipatory mechanisms appear to play a role in various aspects of cognitive functioning such as imitation, language use, planning, and theory of the mind. The human brain is never in a passive state, but is constantly busy making predictions about future events. These predictions are intended to facilitate perception and cognition by preparing the system and activating relevant information to foresee future actions through memory-organised associations in the form of contextual frames, i.e., global representations that include properties inherent in the same experience. These frames are not only activated by the specific experience associated with them, but also in new situations: the brain looks for similarities between the new situation and the one already experienced and activates associated representations that enable prediction. This activity is continuous and involves complex information, such as that concerning social interactions, which, when speaking to someone, allow us to syntactically and grammatically anticipate what the interlocutor will say. In the study by Bonifacci, Giombini, Bellocchi and Contento (2011), it was observed that bilinguals can more accurately anticipate the elements belonging to a learned sequence than monolinguals. These data underscore how the benefits of the bilingual experience can be traced back to specific mechanisms of cognitive functioning, and how the ability to anticipate in this

sense represents an important and innovative area of inquiry in the field of bilingual advantage.

4.5. The ten neuropsychological theses in favour of multilingual education

In *I fondamenti neuropsicologici dell'educazione linguistica*, Michele Daloiso (2009b) elaborated ten key principles that govern the neuropsychological mechanisms of childhood language acquisition. These demonstrate the safety of multilingual education from an early age and eliminate possible fears of negative effects on children's overall development.

Some of these theses confirm with further examples all the advantages seen above.

Children have a unique brain plasticity

Brain plasticity is the ability to form a large number of synaptic connections and specific neuronal groups in connection with learning experiences (Bear, Connors, Paradiso, 2003, in Daloiso, 2009b). The most important neuroevolutionary factors are:

- *neuronal density*, i.e., the number of brain cells per cubic millimetre;

- *the increase in length of the dendrites*, i.e., the parts of the neuron that receive information from other brain cells;

- *myelination*, a process that makes information transmission more efficient by forming a myelin sheath around the axons with insulating and protective functions;

- *synaptogenesis*, i.e., the formation of new connections between neurons;

- *metabolic activity*, which peaks around the age of four.

Full development and functioning of a given brain area does not occur until the neuroevolutionary factors described above have finally reached adult levels. This course of neurological maturation is the result of the interaction between a genetic component inherent in the human species and environmental experience. It is therefore clear that a learning environment full of stimulation, aimed at a specific cognitive function,

influences brain development by increasing neural representations in the areas that process that function. In conclusion, it is important to emphasise that while developmental stages are common to all brain regions, maturation rhythms vary significantly from region to region. This explains the differences in language development. For example, by the age of five, children do not have significant difficulties in the articulation of language because the areas responsible for controlling orofacial movements are largely developed, but skills related to language planning and control of text coherence and cohesion mechanisms are lower and are progressive.

Therefore, knowledge of the cerebral potentials that characterise learning in the first few years of life leads us to believe that exposure to multiple languages can lead to the formation of neural channels and neural groups that are specifically responsible for processing the input of each language.

Early years coincide with critical periods for language acquisition

As seen in Chapter 2, it is useful to keep in mind Knudsen's definition of several critical periods (Knudsen, 2004, in Daloiso, 2009b), according to which there are different time windows for language acquisition that mark the stages of brain maturation in relation to the Areas responsible for language processing. Looking back at Table 2.3, you will see that the first and second periods play a key role in the acquisition of one or more language codes as a mother tongue and thus represent the most fertile windows for introducing children to multilingualism. Anyone who learns a language from the age of 9 will certainly have greater difficulties on a phonetic and morphosyntactic level, but they will still manage to learn the language (Wartenburger, Heekeren, 2003; Fabbro, 2004, in Daloiso, 2009b). It can be argued that there are better time windows for language acquisition, but other language components such as pragmatics and semantics do not seem to be subject to critical periods.

In infancy, neurosensory responsiveness reaches its highest potential

In the early years of life, children activate learning strategies that involve the integrated use of the senses through which they explore and interact with the surrounding reality. The interaction with the environment allows the integration of the different sensory modalities that already function from the moment of birth and the

assignment of meaning and an appropriate response to environmental cues. In fact, every input is associated with a sensation and a response: when the environmental feedback is positive, stable synaptic connections are formed. If a given input is no longer repeated, the connection, if stabilised, is not lost, but only defunctionalized and can be reactivated on repeated input (Tasca, 2005, in Daloiso, 2009b). On the one hand, every child explores reality by seeing, touching, experiencing and manipulating it, on the other hand it is reality itself that offers sensory stimuli for processing. Neurosensory responsiveness therefore reaches its highest potential in the first years of life and is also an important tool for language acquisition, since the discovery of the potential of verbal language occurs in part through the association between language and multisensory stimuli. When analysing an utterance, the child first activates all the channels of perception (hearing, touch, sight, etc.) and then assigns meaning to the utterance through the integration of the data collected through the senses. The processing of language through forms of sensory attention enables the phenomenon of *perceptual conceptualization*, which allows the child to associate sensory data with symbolic structures. Research shows that, in contrast to adults, who generally atrophy some senses and prefer others - particularly vision and hearing - for language acquisition, children have multiple neurosensory resources available that can be activated for multilingual acquisition.

The child has a predisposition to language acquisition

Two opposing positions can be outlined in the current scholarly debate: those who claim that language acquisition is autonomous with respect to overall development (Chomsky's Innatist Hypothesis), and those who claim that language is a skill dependent on development depends on many other dimensions of development (cognition, motor skills, etc.). From a neuropsychological point of view, it is emphasised that even before birth, infants pay more attention to spoken sounds than noise and are able to memorise and recognize the sounds they are exposed to in the womb (Mandler, 1988, in Daloiso, 2009b). In addition, as mentioned earlier, infants have an innate curiosity and drive to interact with their surroundings, which favours rapid language development.

Children activate language processes that are inherent to infancy

In the first years of life there is a natural activation of interaction mechanisms between adults and children (Kuhl, Andruski, 1997; Aglioti, Fabbro, 2004, in Daloiso, 2009b):

- *contagion*, which allows the child to imitate behaviours of various kinds, first as an automatic reflex and then more consciously and voluntarily;

- *vocal accommodation*, i.e., the child's tendency to approximate his own verbal expression to that of the interlocutor.

In order to improve their own language skills, using the above described mechanisms, children imitate adults because of their strong motivation for language acquisition.

The phenomena of contagion and vocal accommodation are neurophysiologically controlled by mirror neurons (Rizzolatti et al., 1996; Rizzolatti, Craighero, 2004, in Daloiso, 2009b). In fact, to recognize phonetic sequences, the brain internally simulates the motor processes involved in the production of these sounds, activating some specialised neurons, the mirror neurons, in the premotor cortical areas. It is likely that mirror neurons are directly involved in language acquisition in childhood, as they enable imitation of motor and verbal behaviour on the one hand and empathy, understood as the ability to understand and anticipate the actions of others, on the other (Munakata, Casey, Diamond, 2004 , in Daloiso, 2009b).

During childhood, language acquisition is driven by a natural urge to socialise

In children, there is a clear natural interest in acquiring multiple verbal codes, unlike in adults, who often judge the appropriateness of learning a language based on various criteria, such as sociolinguistic prestige, professional utility, cultural enrichment, etc. Children approach languages without the influence of external factors and are therefore not motivated by utilitarian goals. The joy of acquiring multilingualism is related to their strong need for communication (Camaioni, 2001, in Daloiso, 2009b). The acquisition of multilingualism would therefore allow children to use an additional code of verbal expression and thus a new tool at their disposal for the satisfaction of their communication needs and the development of socio-relational competences.

The acquisition of multilingualism contributes to the formation of an enriched semiotic system

From an early age, children develop a specific semiotic ability, including the ability to encode, decode and transcode signs in different languages: verbal, visual, mimic-gestural, iconic, etc. The development of this ability allows them to associate sounds with objects and then form related concepts. However, the connection between signifier, signified and referent (e.g. between the word *apple*, the term *apple* and the specific fruit) is linguistically conditioned, because it depends exclusively on the language to which one is exposed. However, what De Saussure called the *conventionality of language* cannot be perceived by monolingual children immersed in a monolingual environment. The acquisition of multilingualism, on the other hand, enables children to spontaneously develop a high metalinguistic awareness, which arises through the comparison of different language inputs and enriches their semiotic abilities.

This was confirmed by an experiment given by Balboni, Coonan, and Ricci Garotti (2001, in Daloiso, 2009b), who reported that to the question "Could the sun be called the moon?", only bilingual children previously answered "yes" as societal word usage convention was established. This answer attests to the positive contribution of multilingualism to children's semiotic development, promoting higher metalinguistic development than others.

There is no irrefutable neuropsychological evidence for a possible conflict between languages acquired by multilingual speakers

Although recent research has provided convincing answers to the desirability of introducing children to multiple languages from an early age, certain misconceptions about childhood bilingualism sometimes persist among parents and educators, who would consider it an obstacle to a child's psychological, emotional and affective development. As we saw in the previous chapter on the false myths of bilingualism, research on bilingualism prior to the study by Peal and Lamberts (1962) indicated a cognitive and intellectual deficit in bilingual children. This is discredited by much modern research at the cognitive, metalinguistic, and social levels. Finally, at the neuro linguistic level, the hypothesis of the neurofunctional module (cfr. 2.6.1.) further

confirms recent linguistic and neuropsychological research, since it postulates the existence of neuronal subsystems that process each acquired language in a specific way and thus create a complex one modular system that prevents neurological conflicts between the spoken languages.

For language acquisition, children activate powerful memory mechanisms that are typical of infancy

In the first few years of life, working memory, which allows a precise selection of the inputs to be transferred to long-term storage, is not yet developed. In fact, it is located in the frontal lobes, the maturation of which is mainly completed in the years before puberty (Kroll, De Groot, 2006, in Daloiso, 2009b). It follows that during language acquisition, since the child does not have a system for selecting the forms of speech to be memorised, the child tends to directly activate the long-term memories for processing speech input. Specifically, in language acquisition, implicit memorization mechanisms control the acquisition of the phonetic and morphosyntactic aspects of language, while explicit memory processes are fundamental to the internalisation of the semantic vocabulary. While semantic processing through explicit memory remains active throughout life, morphosyntactic memorization seems to dominate only in the early years of life. The distinction between these two types of processing allows the formulation of some hypotheses to explain certain phenomena related to language development. Consider, for example, the ability to master functional vocabulary (articles, conjunctions, prepositions): while it is very difficult for a late bilingual to develop this ability in the later learned language, these difficulties are less severe for the early bilingual. This is due to the different types of processing. In fact, the late bilingual is forced to memorise explicit functional vocabulary, in contrast to the early bilingual, who activates syntactic processing for this category of words and stores them in implicit memory. Magnetic resonance imaging studies reported in Aglioti and Fabbro (2006, in Daloiso, 2009b) also indicate that in children who have acquired more than one language from an early age, irregular verbs from both languages are stored in the inferior temporo-parietal areas, associated with explicit memory and thus with semantic processing. Regular verbs, on the other hand, are stored in the lower frontal area, which is associated with implicit memory and therefore with syntactic processing. These

studies show the enormous potential of children with regard to memory mechanisms, the activation of which favours a high degree of multilingual acquisition.

The acquisition of multiple languages could lead to the formation of a uniform concept system

One of the most obvious differences between those who learn multiple languages at a young age and those who learn them as adults is the speed of language processing. Those who have learned a second language late in life have greater difficulties in developing linguistic automatisms and, when communicating in a language other than their own, often resort to translation mechanisms from the mother tongue, which slows down communication processes. Data from some psychological research (Daloiso, 2009b:33-34) on multilingual mental representation at a young age leads to the formation of distinct lexical systems for each language, but both of which are directly linked to a single conceptual system. This would mean that the late second language learner has a system of concepts that is only indirectly related to the second language and therefore has to go through the mother tongue to access concepts, while the early bilingual or multilingual learner has the ability to access the system of concepts directly and clearly through two different languages without having to resort to mental translations.

4.6. Conclusions

The various scientific studies on the bilingual brain discussed in this chapter have shown that bilingual development in children involves much more than just knowing two languages. In fact, knowledge of multiple languages provides access to different cultures and brings multiple benefits in terms of learning and mental flexibility. Growing up bilingually brings many benefits at different levels, including cognitive development, language development, and personality and identity development.

It is important to emphasise that although the research cited so far shows many benefits of bilingualism, bilinguals are not always alike, and the benefits can be influenced by external and different conditions for each bilingual person.

CHAPTER 5

EARLY SIMULTANEOUS BILINGUALISM: THE ROLE OF THE FAMILY AND EDUCATION

Nella lunga storia del genere umano (e anche del genere animale) hanno prevalso coloro che hanno imparato a collaborare ed a improvvisare con più efficacia.

– Charles Darwin

Bilingual education has been practiced since ancient times. In the Roman world, the wealthiest classes were used to teach children an early knowledge of Latin (L1) and Greek (L2). Roman children learned to read and write in both languages while studying Latin and Greek literature (Fabbro, 2004). However, the question of bringing up children bilingually has only been systematically discussed since the beginning of the 20th century. In fact, as we saw in Chapter 3, there has been a shift over time from a totally negative view of bilingualism (see 3.1.) to a neutral view of bilingualism, i.e., positive or negative, depending on the experiment performed (see 3.3.).

The next chapter (Chapter 6) will be concerned with illustrating an English language project carried out in a bilingual kindergarten (I define it bilingual because of the important presence of foreign children who have been brought up with two languages from an early age: the language of the family and the Italian spoken at school). Therefore, this chapter has the task of analysing the role of the school and of the family in the education of a bilingual child.

5.1. Why is it better to learn a second language as soon as possible?

One speaks of simultaneous early bilingualism when a child between the ages of 0 and 3 years learns two languages at the same time. Bonifacci (2018) adds that the adjective *early* indicates that learning two languages occurs before the age of three, while the adjective *simultaneous* indicates that the two languages are learned at the same time. Of all, early simultaneous bilingualism is considered the most natural of all the types of bilingualism (Abdelilah-Bauer, 2008) because it occurs spontaneously, effortlessly, and at a time when the child's brain is at its most agile. Taking advantage of

this extreme plasticity and ductility of the brain in infancy, the child is able to learn any language with great ease and naturalness.

The neurosurgeon Wilder Graves Penfield (in Fabbro, 2004:102) developed some considerations of early and late bilingualism. Penfield had observed that in some immigrant families, young children learned the second language fully and naturally, while their parents had great difficulty despite attending language-learning courses. On a linguistic level, they could not keep up with their children. He explained that the outcome depended on a number of factors including:

- adults have less imitative skills than children;

- they have greater inhibitions;

- they have less free time;

- they are aware that they are learning a new language and live with the fear of possible mistakes;

- high communication efficiency is expected from adult interlocutors, while expectations from young children are much more limited;

- adult mistakes are less understood than children's mistakes;

- an adult's brain is less plastic than a child's brain.

The first and most difficult goal of learning a second language is perfect pronunciation. All children up to about 8 years of age, who grow up with a second language, learn to speak it with a native accent, indistinguishable from people living in the country of the acquired language. In fact, the pronunciation of a language depends on the ability to articulate sounds (phonemes), intonation (linguistic prosody), and accent. Studies in the US and in the Netherlands have shown that only children who immigrated to these countries before the age of eight were able to acquire perfect pronunciation in their second language. The ability to acquire this pronunciation was independent of school level and of the number of years spent in the immigration country. For example, if a Chinese child, who is 4 years old, comes to the United States at the age of 6, he or she will have a perfect pronunciation in English, while another Chinese child who comes to the United States at the age of 25 will have the same after

thirty years in the new country will still have a strong foreign accent in English (Fabbro and Cargnelutti, 2018:87). Thus, with few exceptions, adults generally do not acquire a native accent (despite the fact that they speak in every other respect).

Scovel and Penfield (in McLaughlin, 1984) also contend that it is biologically impossible for an adult to acquire an accent indistinguishable from that of a native speaker because they have lost the brain plasticity typical of children.

The second most difficult goal to achieve learning a second language is complete grammatical competence. The greatest grammatical difficulties concern the correct use of closed class words, also called function words.

Much research has been done to determine the critical period for acquiring full grammatical competence in the second language. Groups of immigrants to the United States from China and Korea had to listen to English sentences that exhibited some grammatical complexity and had to assess whether the sentence they heard was grammatically correct. These experiments showed that accuracy in assessing grammaticality tended to decrease in individuals who arrived in the United States after the age of 8 (Fabbro and Cargnelutti, 2018:89). The existence of a critical phase for phonological and morphosyntactic learning also emerges from self-assessments of immigrants' second language skills in a foreign country. Native Chinese speakers, who came to the US before the age of 10, believe they have perfect knowledge of English (second language) and Chinese (first language), while those who came to the US between the ages of 11 and 13 claim to understand and speak them and can read both Chinese and English fairly well. Finally, immigrants who came to the US after the age of 16 believe they have perfect Chinese skills but average English skills (Fabbro and Cargnelutti, 2018:89).

Therefore, in addition to the numerous benefits that bilingualism brings on a social, cultural, economic, cognitive and metalinguistic level (see Chapter 4), we also recognize the importance of learning the language as early as possible.

5.2. Education at home: different types of bilingual families

Following Romaine (1995, in Contento, 2016), which in turn revisits Harding and Rileys' (1986) proposal, bilingual families could be characterised by three main parameters:

1.   whether the parents have the same mother tongue or not;

2.   whether the language of the community is the same as that of the parents;

3.   language spoken by the parents to the child.

Based on these parameters, six broad types of contexts that create childhood bilingualism can be identified (Romaine, 1995, in Contento, 2016:20-21):

1.   *one person - one language*: since the child's birth, every parent speak to the child with its own mother tongue, which differs from that of the partner; moreover, the dominant language in the community is that of a parent;

2.   *one person – one environment* (*non-dominant language in the household*): the parents have different mother tongues, one of which is the same as the dominant language in the community. Both parents speak in the non-dominant language to the child, who instead is exposed to the dominant language outside of the house;

3.   *non-dominant language at home without community support*: Both parents speak to the child in a language different from the dominant language in the community;

4.   *dual non-dominant language at home without community support*: Parents speak to the child in their mother tongue, which is different from each other and also from the dominant language in the community;

5.   *non-native parents*: Although the parents share the mother tongue among themselves and with the community, one of them speaks to the child in a different language;

6.   *mixed languages*: The parents and part of the community are bilingual and they swap and mix the two languages.

Obviously, such a schematization denies us of a range of information that could be of crucial importance, such as what language the parents normally use among themselves, whether the children answer their parents in the same language, what the

parents' attitude towards bilingualism is, whether the community is already bilingual etc...

In view of these six possible situations, the question immediately arises: are there constellations in which the chances of raising a bilingual child are better? Susanne Mahlstedt (1996, in Moretti and Antonini, 1999:104) draws two opposing profiles, that of the family with greater chances of success and that of the family with less chances of success. The prototype of the most successful family would be characterized by the following characteristics:

1. The father and mother consciously practice bilingual education, using for example the *one-person-one-language* principle;

2. The second language has a high prestige;

3. The partner, who is the weak figure, has a strong connection to his or her origin and language.

According to Mahlstedt (in Moretti Antonini, 1999), the prognosis, in this case, is that the child will most likely be bilingual. On the other hand, the prototypical family in which the prognosis is negative is the following:

1. neither the father nor the mother practice a conscious bilingual education;

2. one of the two languages has low prestige;

3. parents have a weak connection to their own culture and language.

Moretti and Antonini (1999) affirm that one always moves at the level of statistical probabilities and that it is possible for a situation that one considers hopeless to have a positive outcome and vice versa. In fact, these two constellations are extreme cases in which all parameters go in a completely positive or completely negative direction. Between these two extremes there are a number of intermediate solutions that also take into account other factors that can influence the result.

5.3. Strategies in the family and the parents' role

Moretti and Antonini (1999) asked themselves exactly what positively influences the development of the bilingual child. It is definitely about creating opportunities and needs for the child's bilingualism.

Opportunity means that the child must be given the appropriate inputs that will enable him/her to learn both languages and retain them, of course in relative balance. At the same time, he or she must be given effective motivation to do so. It is difficult to identify sufficient conditions, but one aspect of the problem is the relationship between languages and their relative weight, i.e., that both languages are constantly present in the child's life.

As for necessity, on the other hand, the emphasis is on the fact that the child must be faced with situations where he or she can't fall back on the other known language, and therefore must understand that there is a real need for both languages to use. At the intra-familial level, the obvious implication is that the language most at risk of not being passed on must also be present and its replacement by another language is not readily tolerated. The need must therefore evoke the will to learn the language fully.

The notion of necessity is reminiscent of the third main principle, that of pleasure. A language is learned primarily as a means of making contact with people. A language can therefore be fun when combined with funny activities such as special occasions or games with friends. Passing on a language is certainly safer if a child associates positive feelings with it.

There may be a conflict between pleasure and necessity. For example, when the parents interpret the necessity as forcing the child to speak a language and when they are constantly correcting the child. Moretti and Antonini (1999) believe that in such cases the pleasure component should prevail. Ideally, it can be said that possibility, necessity, and pleasure are three different views of the same strategy aimed at teaching the child both languages.

Now let's analyse the most effective ways to learn bilingualism from childhood. One of the most effective methods is to introduce your children to numerous *language inputs* as early as possible through discussions with parents, siblings, relatives or people close to them. Ronals Macaulay (in Arnberg, 1987:110) has emphasised the two basic

principles that parents should follow in order to achieve good results when talking to their children:

1. *treat the child as a conversational partner whose opinion is valued and whose feelings are respected*: if parents follow this advice, they will automatically pay close attention to what the child is saying and try to understand. In addition, they will speak clearly to him and adapt their language to that of the child so that parents do not make him or her feel inferior. This last concept is very important because in order for the child to incorporate the inputs received from the parents into the construction of its utterances, these inputs must be at the same level as the child's linguistic development;

2. *the presence of a relaxed, accommodating, and loving context facilitates conversation between interlocutors*: it is important for parents to show their approval of the child by being interested and enthusiastic about what the child is saying and about the child's progress. It is also important to spend a lot of time chatting with him.

Another essential element in the growth of a bilingual child is the presence of a *routine*. There are privileged moments in daily life, such as bathing, feeding, and going to bed, that amount to rituals in which parents interact with their child in a pattern that is predictable and easily recognizable by the child. Thanks to these repetitive and emotionally charged interactions, the child can also learn the languages of its closest relatives in an easier way (Abdelilah-Bauer, 2008:7). In fact, since these habitual situations are repeated every day, routines also have something ritualistic from a linguistic point of view. During these moments, the adult tends to give the child the same input, using the same structures and vocabulary, thereby simplifying the task of understanding. It is no coincidence that these formulas are more quickly memorised and reused (Balboni, Coonan, Garotti, 2001: 55).

When raising a bilingual child, the *quantity* and *quality* of expressions parents use to speak to their child is crucial to the child's language development (Abdelilah-Bauer, 2013:33). It is not enough for each parent to speak their language with their child to become bilingual. In fact, it is even more important to consider how long the child will be exposed to each language. In the first three years of life, the amount of language the child is exposed to determines the acquisition of an active, unconscious vocabulary.

In addition, children often have to hear words and phrases many times before they can use them without having to think about their meaning. This is particularly so with children who speak a minority language, as their exposure to this code may be limited and inappropriate. To compensate, it is useful to involve the child in various activities, introducing them to new words or phrases and repeating them more often. The acquisition of new terms and concepts can be promoted by *involving the five senses* simultaneously. For example, giving the child a pillow, the child can learn the word pillow not only by learning the word, but also by using it. Also, it makes sense to use the *same word in different contexts* so that the child has the opportunity to understand the concepts behind this new term (Arnberg, 1987: 113).

As also noted by Moretti and Antonini (1999), in order for children to learn two languages simultaneously, they must be able to hear both spoken to a sufficient degree. Above all, children need frequent opportunities for use through interpersonal relationships, but also through *songs, nursery rhymes, games, readings, videos and other materials* that can not only be input but also an incentive for the child to speak the language (Fabbro, 2013: 17).

Many parents have noticed that their children enjoy learning *new songs* and *nursery rhymes* in the language. This method is very effective as it allows the child to acquire speech without realising it and is a great help for memory. This type of activity can be used to practise pronunciation, for example by choosing songs that contain phonemes that are normally more difficult to produce. Songs and nursery rhymes are also useful because they contain unusual words that can be explained to the child, thus introducing them to new vocabulary. Another benefit of songs is that they can be useful for minority language development as they help the child adjust to different accents and different speakers. Finally, it is important to remember that the song or nursery rhyme will need to be repeated several times before the child can fully learn it (Saunders, 1988).

Saunders (1988) also states that it might be stimulating for a child to *play a game* that has already been played in one language through its translation into the other language. In this way, the child has the opportunity to acquire new words in the other language, which belong to different fields of meaning. For example, if the child has previously played a particular game with a language at school, it is very likely that they

have already developed the vocabulary inherent in that context, so that they can develop further by playing the game at home (a different context) with the other language. Frequent repetition of these words helps the child integrate them into their active vocabulary and restore some balance between the two codes.

Obviously, as recalled several times, pleasure is fundamental in language acquisition: "the most important thing, of course, about games and similar activities is that they are enjoyable and reasonably effortless ways of increasing and consolidating the children's range of language" (Saunders, 1988: 249).

Reading also plays a very important role in a child's growth. According to Saunders (1988), reading not only increases vocabulary but also makes children aware of different styles and levels of formality. Both are features of the language that are not directly noticeable when the parent is speaking to the child, as there is a tendency to always use the same informal style. Books can also be useful for acquiring poetic language skills, especially if the book is read in the language spoken only at home and not at school. Also, to make reading easier for children when they don't know words, it would be essential to get a monolingual dictionary so that it accurately explains the meaning of the words in the language being read. Another method is to develop a story all together, reserving narrative spaces for the parents and others for the child. In this way, the child will acquire ideas about the roles and turns of the interlocutors and pauses within a conversation or story (Arnberg, 1987).

Family outings and trips are also essential for bilingual children. When available, the idea of finding shops and restaurants that speak the languages children are learning can be very stimulating, as it shows them that their languages are being used outside the home and that they have a certain standing. If this is not possible, one could think about, for example, taking the children to the supermarket and shopping in one language instead of another to introduce them to a range of new vocabulary related to this. Increasingly, some associations organise weekends or even holidays for children, giving them the opportunity to carry out activities exclusively in their language. There are also children's clubs where different languages are spoken and where parents with their children have the opportunity to meet other families who have decided to raise their children bilingually and maybe also meet people who speak the same languages as them (Saunders, 1988: 250-253). Also, planning regular trips (at least once a year and lasting

about a month) to countries where the languages the children have learned are spoken may be a good way to keep bilingualism in the family. Sometimes, for geographic, political, and economic reasons, this strategy may not be feasible, but if possible, the benefits of regular trips are numerous: both children and parents are fully immersed in the appropriate language and culture, and children also have opportunities to connect with their peers and use the language, often realising that it is an essential means of communication. It is important to prepare the child before departure by explaining and describing to them what the country they will be visiting will be like and the different activities they will be able to do upon arrival. It is even more important to explain to the children that during their stay everyone will speak one of the languages learned and that if they use an inappropriate language code, they will not be able to understand it. During their stay, children have sufficient time to understand that one language is spoken more than another in the country in question and to develop and improve their language skills (Saunders, 1988: 254).

5.4. The strategies for language teaching and the school's role

We have therefore recognized the essential role of parents in the balanced growth of a bilingual child, which must be continuously encouraged through targeted strategies. Now let's investigate the role the school plays when it comes in contact with bilingual children and the strategies that may be used.

In this section we will look at the methods educators use to try to motivate their students to use languages. It is important to remember that the main goal is to introduce children to languages in a natural way and to engage them in various activities. Based on this concept, it seems necessary to recall the Eastern maxim (Balboni, Coonan, Garotti, 2001:13) according to which: "if you explain to me, I forget; if you show me, I remember; when you make me do it, I learn".

5.4.1. Continuity and diversity with respect to the family

The family continues to have the pedagogical priority in the linguistic field, both in terms of time and importance. It is therefore necessary for the kindergarten to

establish a natural continuity relationship with the family. In the family there is usually an atmosphere of trust and confidence, verbal communication is easy and even more rewarding than anywhere else. Similarly, the kindergarten should be a quiet environment for every child, in which it is easy to play alone, in pairs or in groups, and in which interesting conversations with adults and children are possible. In fact, when positive affectivities such as trust and compassion are lacking in any community, alienation between people and verbal inability to communicate are inevitable (Spini, 1982).

In the family, the word is used in relation to everyday actions, thus to concrete situations and problems. There is no abstract speech. The kindergarten should therefore listen and speak with reference to individual or collective games, practical life activities, and real facts (Spini, 1982).

At home, parents usually use the language that the child knows more. In the same way, the kindergarten, especially in the early days, should cordially accept and really value the verbal code of the individual pupil, even if it may be another language or dialect. If the school is up to its role, it should allow all children to have more varied experiences and numerous adult figures who combine understanding with solid culture and professional competence (Spini, 1982).

The variety of experiences, the competence of the educators, the availability of resources, the stimulating relationships with peers, and the appropriate methods are certainly positive differences of the kindergarten compared to the family. Certainly, there are also negative differences, such as too many classrooms, which make dialogue between individual teachers and individual children impossible (Spini, 1982).

5.4.2. Encouraging socialisation at school

The socialisation of bilingual children is a journey full of critical moments. Scientific research underscores the good abilities of bilinguals, but they remain at risk of academic failure and sometimes psychological distress. All of the factors that contribute to the achievement of bilingual emotional well-being can be grouped around the concept of *identity*. Achieving a solid personal identity presupposes for each child the opportunity to experience stable attachment relationships, to have adequate self-esteem

and to have developed meaningful relationships with the external environment (Bonifacci, 2018).

The role that the school plays in supporting children's language development is important not only because it can perform during the lessons, but also because it supports parents in this task, which is not easy and sometimes not recognized as important. In fact, parents often choose not to use their mother tongue in order to give their children the best chance of integrating at school, which unfortunately is sometimes also promoted by poorly trained educators. The renunciation of the mother tongue not only carries the risk that the child is exposed to a learning deficiency. But also to family relationships that tend to get worse, also in the daily communicative exchange. This will also jeopardise school education. In fact, education at home and at school are strictly connected, because in the family primary bonds are formed, on which later relationships are based. Some research has shown that attachment to other caregivers, such as teachers or educators, is positively associated with development, regardless of the child's language skills and the attachment they have developed with their parents (Oades-Sese, Li, 2011, in Bonifacci, 2018).

In contrast, an environment that does not value the child's dual cultural affiliation, either because it disregards it or because it judges it negatively, acts as a risk factor for identity formation, leading to psychological and relational discomfort or even failure at school. The school therefore has the task of enhancing the value of less common languages and cultures of origin and of enabling good socialisation despite linguistic diversity. The operational suggestions included getting to know the language situation of the students, for example by using language biographies to make the native languages visible to the students, creating multilingual messages for all the families and above all their appreciation, e.g. through multilingual storytelling. It also highlighted the importance of engaging with bilingual families as much as possible in order to fully understand them (Bonifacicci, 2018).

5.4.3. The input

We have already talked about the importance of family input, but input at school is also of primary importance. According to Krashen's *Second Language Acquisition Theory* (SLAT) (in Santipolo, 2012:15), one learns a language through inputs as long as

they are understandable; they are placed in the natural order; and the affective filter is not active. Krashen contends that language is acquired only by exposing the learner to input made understandable by the teacher so that their language acquisition device can be activated and therefore acquisition is activated. It is also important that this input follows a natural order of capture, so coming first is a necessary requirement for capturing subsequent input. It is not enough that the input is understandable and placed in the natural order, it is necessary that the affective filter is lowered. In fact, in the presence of the activated affective filter, there can be no acquisition, only learning.

It is possible to make the input easier to understand by modifying it. This is what happens when educators use what is known as *caretaker speech* to children. This language is characterised by three main aspects: a special vocabulary, which contains words related to concrete concepts such as real objects, body parts, animal names and terms related to games; an increasing intonation at the end of sentences, emphatic accents, slowness and precision when speaking; changes at the grammatical level, i.e., there is a tendency to use mainly nouns and pronouns, third person constructions and few verbs, conjunctions and prepositions.

The caregiver speaks naturally to the children, tries to keep the attention of the little interlocutors, repeats certain words or phrases more often and refers to objects or actions in context, so that children can see what is being talked about, and thus children are helped to develop the language (McLaughlin, 1984:32-33).

5.4.4. Routine at school and chunks

Normally, the children's day in the school context is characterised by clearly defined moments: the *routine*. These are very favourable moments for dealing with foreign languages, since the familiarity of the context combined with easily recognizable and interpretable communication situations helps children to understand what the educator is saying (Santipolo, 2012:194). In the kindergarten, for example, there are well-defined routine moments during the day (Balboni, Coonan, Garotti, 2001:33): the arrival/departure of the children, snack time, lunch, personal hygiene, bedtime before reading a story or of a song and snack time.

Usually a limited number of language routines are chosen to be used whenever there is a particular situation. The use of routines without didactic purposes provides an easily comprehensible input for the child as they are always anchored to the same

context of use. The child can, therefore, acquire the language routine in a completely natural way without the aim of learning it. After some time, the educator can make changes to these expressions by adding, removing or replacing a linguistic element, thus bringing the child closer to new vocabulary and increasing his or her ability to observe the morphosyntactic variations of the language in question (Balboni, Coonan, Garotti, 2001: 70).

During routines, children are exposed to *chunks*, i.e., linguistic expressions associated with precise actions and procedures that do not require any analysis, which can subsequently be internalised in long-term memory as unitary blocks. Subsequently, these chunks can be broken down allowing the child to discover possible morphosyntactic variations of the language (Daloiso, 2007:34).

5.4.5. Games and activities to promote language learning

Through games and activities, children acquire the foreign language while immersed in a pleasant and stimulating environment in which they learn through practical exercises, they learn by doing (Balboni, Coonan, Garotti, 2001). The ludiform experience can prove to be an effective mediator in the acquisition of concepts and new knowledge, allowing the child to acquire structures and vocabulary through a global and motivated experience (the joy of play, the challenge) that engages him or her cognitively, but also on the affective, social and creative side. From a didactic point of view, playful activity can therefore promote the simultaneous development of both linguistic-cognitive and socio-educational skills (Caon, Rutka, *sine data*:6).

The following sections will list playful techniques that can be used within the school context to foster the child's approach to the foreign language, the acquisition of new vocabulary and morphosyntactic constructions, and to teach native pronunciation.

5.4.5.1. Handling

It includes activities in which children are asked to build something using paper and glue, or modelling substances such as sand and water. Manipulation activities are very common but given the high degree of involvement at the execution level, it is useful to implement some strategies to make them more effective at the language level. Among these, it is advisable to divide the children into small groups and approach each of them by stimulating them with simple questions in the foreign language about what

they are building, e.g., "Is your leaf green or brown?". Based on the child's answer, the educator can observe if he/she understood the question.

The manipulation technique is particularly appreciated by those pupils who prefer to experience reality through concrete activities involving the senses (Santipolo, 2012:186).

5.4.5.2. Storytelling

Storytelling aloud is a language activity that children especially enjoy and can be a very useful tool in language learning. The level of focus on language that a good storyteller can achieve is rarely matched by other techniques, with significant implications for motivation and acquisition. The intense level of involvement and identification activated in the child when storytelling is related to the fact that through listening children build knowledge of the world and of themselves, also recognizing in the characters' emotions specific feelings that they can feel. Storytelling is therefore important not only for language education but also for promoting the child's emotional development (Santipolo, 2012:184). Another possible method is to develop a story together. In this way he/she will acquire ideas about the roles and turns of the interlocutors and pauses within a conversation or story (Arnberg, 1987:114-115).

5.4.5.3. Songs and nursery rhymes

Songs, nursery rhymes, and jazz songs are authentic material that allow children to hear different accents and varieties of speech. Songs are words and music sung together; nursery rhymes are short poems with rhyming words at the end of each verse; jazz songs consist of rhythm without a sung melody (Santipolo, 2012:206).

Songs and nursery rhymes have been found to increase children's motivation to speak and learn a foreign language as they repeat new expressions and unusual words without realising it. In addition, these techniques improve their pronunciation, especially with phonemes that are usually difficult to reproduce. In order to achieve these results, rhymes and songs must be repeated several times and in different moments of the day (Arnberg, 1987).

5.4.5.4. TPR method

The main purpose of *Total Physical Response* method (TPR) is the achievement of basic communicative competence in oral language through activities based on listening comprehension: this type of activity offers the teacher the advantage of being able to directly observe the student's level of comprehension and possible sources of confusion through the student's physical response. The goal of the method is to develop oral fluency, thanks to these listening comprehension exercises. In fact, Asher sees developing listening comprehension skills as the most efficient way of developing spoken language skills. Moreover, as we have seen, this approach is extremely effective because of its similarity to children's first language acquisition (James J. Asher, 1969). This method's peculiarity of linking language and physical movement allows students to learn in an environment that is particularly attentive to minimising frustrating or anxious situations and experiences. In fact, lowering the affective filter increases interest and motivation. There is also the idea that students can learn a language faster and more effectively: the teacher gradually gives more complex orders and directions, directs an activity, until students are induced to use the language spontaneously (Balboni, 2019).

TPR activities are helpful when educators want the children to follow directions, mime a song, a nursery rhyme, or an action, and teach new vocabulary. A typical song that uses the TPR method is the *Head, Shoulders, Knees and Toes* song (Santipolo, 2012:206).

5.4.5.5. Drawing and colours

These are expressive activities with paper and colours that are used very often in preschool. In order not to distract attention from the linguistic focus, the educator often gives foreign-language information about the foreign-language information on the product to be procured. Also in this method, the educator approaches the children while they are drawing, asking simple questions in the foreign language about what they are creating (Santipolo, 2012:193).

5.4.5.6. Flashcards

The technique of flashcards, i.e., cards often arranged according to subject, on which a picture is shown, and which usually also shows the first letter of the word

describing the picture and the word itself, is often used in schools with children. With flashcards it is possible to expand the vocabulary of a foreign language. For example, if the educator wants to introduce the children to new vocabulary related to body parts, flashcards can be used on the subject to develop an awareness of the structure of the human body and help the children learn to work in groups and respect the rules of the game, introduce, fix or recall vocabulary related to body parts and suggest speech routines related to compliance with the rules of the game in groups (Santipolo, 2012:185).

5.5. Conclusions

We have seen that both family and school play a key role in the child's language education, sometimes possibly using the same strategies such as the presence of a routine and of an input. As a final recommendation, it is good to remember that family and school should work together to maximise the potential of both. In addition, all the activities proposed in this language education chapter are always subjective and certainly some may work more for some children and less for others.

CHAPTER 6

CASE STUDY: HOCUS THE DINOCROC

In the following chapter, after a brief introduction to the *Hocus and Lotus* didactic method for foreign language teaching, a case study at the P. Boranga Preschool is reported. Professor Taeschner's original project *The Adventures of Hocus and Lotus* was adapted to the audience and supplemented with pre- and post-project activities with the aim of testing the various advantages and benefits of being bilingual in terms of language learning.

6.1. *The Adventures of Hocus and Lotus*: second language acquisition in kindergarten

The didactic method *The Adventures of Hocus and Lotus* is a foreign language teaching model intended for students of all ages and especially for children (from birth to 11 years old). This method was developed after many years of research by a team composed of the inventor and coordinator Professor Traute Taeschner, Professor of Developmental Psychology of Language and Communication at the Faculty of Psychology of the Sapienza University in Rome, and a team of researchers from the same University. Taeschner's interest in second language acquisition processes arose from her desire to pass on her mother's language (German) to her Italian daughters, who are now fluent in five languages. With the publication of her first monograph in 1983, *The Sun is feminine*, the world's first longitudinal study of language acquisition in bilingual children, she became part of the international research landscape and has also taught in Germany, the Netherlands, Spain, Portugal, Great Britain, Canada and the USA. She soon realised that the language teaching methods proposed to teachers in Italy were lacking in real field research and adequate teaching materials, and so she began experimenting first in middle school, then in primary school and later in kindergarten until he consolidated the Narrative Format language teaching model with Hocus & Lotus! The mission of *The Adventures of Hocus and Lotus* is to teach languages to children in a context in which L2[4] is loved by the child, where pleasure is therefore a

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[4] In the chapter, the abbreviation L2 will be used to identify a language learned after L1, regardless of the learning context.

fundamental ingredient of the learning process. Professor Taeschner (Hocus-lotus.edu, 2023) says of her project that in thirty years of research [she] succeeded in finding the scientific solution to the age-old problem of teaching languages to children; with *The Adventures of Hocus and Lotus* it was possible to have the ideal teaching tool to apply what she discovered in practice (Hocus-lotus.edu, 2023). Who are Hocus and Lotus? Hocus and Lotus are two fictional characters (half dinosaur and half crocodile) with whom children enter a magical world where only the language of the two new friends is spoken, namely L2 (Hocus-lotus.edu, 2023).

6.1.1. Theoretical principles of the model

As can be deduced from the text *L'insegnante magica* written by the author and creator of the method (Taeschner, 2003), the didactics of *The Adventures of Hocus and Lotus* are based on various theoretical principles based on learning theories that favour the acquisition of language in a natural way as is the case with the mother tongue. Professor Taeschner clearly shows in her work that in the method devised, the crucial issue is that the process of language acquisition is respected and made possible (Teaschner, 2003). She also postulates four theoretical assumptions that are necessary and sufficient for language acquisition to take place effectively.

6.1.1.1. *The principle of good communication*

The first principle is that of good communication, which presupposes that:

> Fra insegnante e alunno [debba] esserci un'interazione di affetto che si raggiunge con un buon rapporto comunicativo, il quale a sua volta si realizza attraverso l'intersoggettività (percezione reciproca dell'altro) e l'alternanza dei turni di conversazione (Taeschner, 2003: 28).

In other words, this principle considers affectivity to be the central component of good communication (Taeschner, 2003). The two must first communicate and then slowly love each other. The child, by loving the teacher, will learn to speak the language suggested by the teacher.

When we speak of primary motivation to learn a language, we are referring to this very phenomenon:

> Il desiderio di parlare una determinata lingua perché tale lingua piace. E piace non per la sua bellezza intrinseca o per la sua utilità, bensì perché piace la persona che la parla. E la

persona piace perché siamo riusciti a sintonizzarci con lei
(Taeschner, 2003: 29).

Therefore, in order to achieve the harmony of which the author speaks, an individual relationship with each child must be created and the strategy suggested is one in which "the teacher enters in contact with each child by gazing at them one after the other in turn" (Taeschner et al., 2013: 225). In a class group it would in fact be impossible to systematically examine all the children as the one-to-one interaction is replaced by the one-to-many interaction and the teacher is therefore led to sweep her gaze over the whole class and capture the group (Taeschner, 2003: 29). The role played by the gaze is fundamental in human relations both to initiate and to continue a communicative relationship (Taeschner, 2003) and makes it possible to create a unique contact with each child even within the group. Another central element for a good communicative interaction is identified in the ability to grasp and know how to put into practice the different communicative shifts (Taeschner, 2003). This ability is certainly supported by both the gaze and the mimic and gestural behaviour that will be addressed in the theoretical principle of the Narrative Format (6.1.1.3.) (Taeschner, 2003).

6.1.1.2. *The principle of Bilingualism*

The second theoretical assumption defined by the author states:

> Nel buon rapporto comunicativo il parlante imposta e aggiusta la propria produzione linguistica su ciò che lui ritiene sia la capacità di comprendere del suo interlocutore. [quindi] l'insegnante non deve comprendere la lingua madre del bambino se desidera che questo parli la nuova lingua (Taeschner, 2003: 29).

This second principle takes into account that speaking teaches us to understand and through the mechanism of comprehension we learn to speak (Taeschner, 2003: 30); in other words, in a communicative process, when others speak to us we try to decipher the message and when it is our turn we will adopt the language that seems most suitable to the interlocutor, a language that will allow the interlocutor to grasp what we want to express (Taeschner, 2003). To trigger this mechanism in the child in contact with an L2 it is necessary to introduce a teaching strategy that Professor Taeschner identifies in fiction:

> bisogna [infatti] che l'insegnante faccia finta di non parlare e di non capire la lingua madre del bambino […] e lo può fare perché la sua lezione inizia con l'ingresso del gruppo classe in un mondo fantastico, tutto magico, in cui sono vissute molte avventure tutte nella lingua straniera (Taeschner, 2003: 30).

By pretending not to understand the child's mother tongue, a bilingual environment is created. This will encourage children to speak L2 in order to be understood by the teacher who, immediately after the entry ritual into the magical world, will no longer understand or communicate in the children's mother tongue (Taeschner, 2003).

6.1.1.3. *The Narrative Format*

The third principle is that of the narrative format, which states that

> le attività svolte fra insegnante e alunni devono avere le caratteristiche di un format narrativo che si svolge in L2 (Taeschner, 2003: 31).

Professor Taeschner, explains that format means a routine of shared actions between adult and child. (Taeschner, 2003: 31). She also takes the concept of *Format* from the scholar Bruner (1975) and makes it her own by applying it and making it a cornerstone of her method.

Communicative intention is fundamental to the realisation of communication. Indeed, through real communicative intentions and the willingness to be understood by the adult in various shared experiences (formats) and routines of the day, the child initiates language development. Similarly, the proposed didactic method offers an approach to L2 through situations in which the child is exposed to real communicative intentions because, as the author states, in order to express intentions in L2, the child must have shared experiences with people who speak and understand only L2: the child must therefore experience formats in L2 (Taeschner, 2003: 32).

The format is characterised by several components (Taeschner, 2003):

- the shared and repeated experience between adult and child;
- the initiation of a process of *intersubjectivity* between two persons from which the two subjects will be able to grasp and deduce each other's behaviours, moods and emotions;

- the development of the child's awareness of the presence of alternating shifts within a dialogue;

- the repetitiveness of the format.

Taeschner (et al. 2013: 227) affirms that "repetition has at least four important functions: it builds the concept and therefore denotation; it enriches the semantic-pragmatic field building connotation; it focuses on meaning and, it helps memorization".

However, repetitiveness might seem boring to children because it lacks the narrative aspect, i.e., those events that lead to a final event. For this reason, teacher Taeschner created the narrative format. Compared to the format, the narrative format consists of several repeated stories shared between teacher and children that relate back to an experience of the child (Taeschner, 2003). Thanks to these shared stories from the child's life, it is possible to

> find a multiplicity of emotions developing in contexts known by the children and therefore predictable for them. Emotions make the events interesting, easy to memorise and full of passion; the known context supplies the meaning and the predictability puts neurons to work (Taeschner et al., 2013: 226).

6.1.1.4. *Linguistic progression*

The fourth and final theoretical principle is called the linguistic progression. Learning language through a progression from easy to more difficult is a fundamental aspect of didactics (Taeschner et al., 2013). Linguists therefore recommend learning step by step from the easiest language aspects, but

> What is easy or what is difficult in language learning is not easy to guess. We consider linguists' suggestions for deciding what is easy or difficult not reliable as they are done by adults who do not remember what they considered difficult or easy when they learned a language in a natural home environment. In the Narrative Format Model we therefore propose to look at the development of language in children and to use those structures and that lexicon for an initial and basic language course (Taeschner et al., 2013: 228).

Thus, considering linguistic development, in the *Hocus and Lotus* model, linguistic progression develops at two levels: within each individual narrative format

and along all narrative formats (evolution from the first one to the last one). However, these are two different progressions (Taeschner, 2003):

1. linguistic advancement (language structure, syntax, word classes...) is developed within each format and involves three stages:

   a. only single words or short expressions;

   b. short sentences made up of the predicate and its arguments;

   c. complex sentences.

2. the vocabulary is developed throughout the formats by always adding new words and keeping those belonging to the previous formats in order to favour comprehension and memorisation. For example, if in the first format we have a global lexicon of 50 different words and in the second format we have 50 more, we will not have a global lexicon of 100 new words, but we will have a smaller number, since some of the words in the second format are repeated from the first. The choice of the type of vocabulary is conditioned by pragmatics: depending on the events in the story, suitable words are chosen to express those events. Stories are always constructed from the child's experience (e.g., meeting a friend). Moreover, specific words have been chosen for each Format, usually words used by native speakers.

6.1.1.5. Summary of the four principles

The Principle of Good Communication	*The Principle of Bilingualism*
The good communication process leads to affection for the teacher; intersubjectivity and alternating turns of conversation take place.	Bilingualism: L2 understanding in the child passes through the teacher's L2 production and vice versa L2 production in the child passes through only the teacher's L2 understanding.
The motivation to speak L2 is created.	The motivation to speak L2 is created.
The Narrative Format Principle	*The Principle of Language Progression*
The Narrative Format: sharing of	The level of progression: for sentence

repeated experiences leading to the emergence of inferences about the behaviour of others, the intention to speak to the other is born. The motivation to speak L2 is created.	structure is within the format and following the stages of first language acquisition. Vocabulary choice depends on the event and lexical progression occurs with the sum of the formats.

Table 6.1.1.5.: Summary of the four principles (Adapted from Taeschner, 2003:34)

6.1.2. Narration: the point of contact between theory and practice

Narration is the link between the theory and classroom activity. One possible form of narration is drama, which is particularly suitable for children as it allows them to act out the story and thus experience it, rather than just listen to it or read it. In fact, as mentioned in the section about the Narrative Format (6.1.1.3.), any story can be accompanied by gestures or images to facilitate the interlocutor's understanding and make him/her enter more into the story. The theatrical form used is partly reminiscent of the Greek chorus and allows the communicative processes that take place within a format to be resumed in the classroom. The theatrical action is a shared experience, both because it takes up the experiences of past formats and because it is repeated and shared in class (Taeschner, 2003).

Narrative and drama-mimicry define the teaching method by bestowing it with various peculiarities. First and foremost, the main characteristic of the narrative format is that it offers a defined context (Taeschner et al., 2013). Through narration, children are able to enter clear contexts and known situations, so that "words stop being a senseless group of sounds. [In fact,] they [become] part of events, or they are experienced" (Taeschner et al., 2013: 234).

In addition to the defined context provided by the narrative that supports the child in grasping meaning, another fundamental aid is provided by the theatre-mimic in which the story is made up of words and gestures. As the author explains "gestures are essential in the narrative format because they are cues that help children work out the meaning of what is being done. The gestures used are as iconic as possible" (Taeschner et al., 2013: 227).

The last important feature also fosters the ability to understand the alternation of turns that is supported by both the gaze (6.1.1.1.) and, indeed, the narrative format (6.1.1.3.) accompanied by mimic gestures. During the performance of the theatrical

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format the teacher has to move her gaze alternately on the children and on the gesture she is performing; in this way she will succeed in capturing the children's attention by involving them and allowing affection and emotional contact (6.1.1.) and, at the same time, making them follow the story and making them understand what they are talking about. Taeschner (2013: 226) expresses that

> A teacher is called magic when he/she is capable of signalling these two communicative messages alternatively: 1. when gazing at the children he/she wants to have an intersubjective relationship with each child and start a good relationship with each one, and 2. when gazing at his/her own narrative actions he/she signals the focus of their common interest, the story they are miming.

Furthermore, focusing in particular on alternating shifts, the professor states that

> In the Dinocroc Model turn-taking is connected to role changing and to the fact that all participants interpret all roles. From the point of view of psychological development and human growth this fact is very positive because it enables children to experience and to feel what the other children experience and feel. It strengthens empathic feelings and comprehension towards the others (Taeschner, 2013: 226).

In summary, the theory is based on the importance of routines of shared experiences, taking turns, mutual affection through good communication, conclusions, premises, and intentions. Through the process of narration, theory is put into practice, represented by theatre and the following features:

- theatrical repetition as a routine of shared actions;

- role changes in the group allow for alternate shifts;

- theatrical action allows for affection and emotional contact;

- stories from childhood experiences allow inference and intention;

- gestures, facial expressions and structure of the story enable the understanding of words and sentences.

Finally, the narrative format is proposed not only in the mimic theatre form described above, but also through other perceptual and didactic channels: listening to a song, reading a book and watching a cartoon.

6.1.3. How is a lesson of the original project structured?

The lesson of *The Adventures of Hocus and Lotus* is highly structured and follows the following different phases (Taeschner, 2003; Taeschner et al. 2013):

1. *entrance* into the magical world of Hocus and Lotus takes place in two moments: the first consists of wearing the magic shirt (white shirt with the two Dinocrocs printed in the middle); the second consists of counting with eyes closed from 1 to 10 in L2. Having reached number 10, the children with the expression "Open your eyes. Blink!" find themselves in the magic world. The magic t-shirt, worn by the teacher, constitutes a real and tangible element of the transfer from the real world to the magic world of L2. Once they enter the magic world, the teacher will no longer be able to speak the mother tongue and will only communicate with the children through L2.

2. *theatre-mimicry* (Dramatisation or Acting-out): the script of the narrative format is told by the teacher with attention to intonation, facial expressions and gestures. The children repeat and learn actively, through their whole body. This phase favours an auditory and kinaesthetic approach.

3. *the mini-musical* (Song): The script of the narrative format used in the acting-out phase is proposed to the children through a song. The teacher and the children sing together and repeat the gestures performed during the mini-musical. This moment encourages a musical intelligence and auditory approach.

4. *the picture book*: The script of the narrative format in this third phase is proposed to the children through the reading of a book and the accompanying illustrations. The magical teacher reads the story, while the children look at the pictures to which the text refers. In this way, L2 terms will be made comprehensible through illustration and visual learning will be promoted.

5. *the linguistic cartoon* (Video): This fifth part is dedicated to the cartoon. The script of the narrative format is proposed in video format. Once again, visual-auditory learning will be favoured.

6. *return* to the real world: the children close their eyes and count from 1 to 10, definitively returning to the world of their mother tongue. This phase ends with the removal of the magic shirt.

In the original method of *the Adventures of Hocus and Lotus*, the class takes about 30-45 minutes, once a week. Since it is not a long time to learn a language, family support at home is considered essential. In fact, each family is invited to propose listening to the song, reading the book, watching the video and, if they wish, performing the theatrical-mimic performance at home.

However, the researcher adapted the project to the type of target group and this research. Therefore, from now on, the adaptation of the original project (*The adventures of Hocus and Lotus*) to the P. Boranga kindergarten will be explained.

6.2. Methodology and results

This chapter describes in detail the methodology employed for the project and the found results. The context, the participants, the first analysis of the children background, the structure of the lesson, an analysis of the story used for the project, childrens' attitude towards english language, a comparison between monolinguals and bilinguals and the limitations founded in the original project and therefore the subsequent adaptation.

6.2.1. The context

The Pierina Boranga Kindergarten, in Padua, is a welcoming, friendly and safe environment where children are welcomed with love and attention. The little ones do not feel judged, but rather slowly become aware that learning is possible and fun there. In fact, many of the children come from poor backgrounds and low economic profiles and at school they are able to express themselves in various contexts and experiences.

The Pierina Boranga Kindergarten accepts children aged 3 to 6 years. A peculiarity of this school is the low presence of Italian children (a couple per class,

which normally is composed of 22 children) and the high presence of children of different nationalities (Chinese, Nigerian, Senegalese, Bengal, Moldovan, Romanian...). For this reason, the study on bilingualism was carried out at this school. Not so much because the classes are held in two languages, but because many children are actually bilingual, speaking both Italian and their own language.

The Pierina Boranga kindergarten is divided into five sections:

- Section A (blue)

- Section B (red)

- Section C (green)

- Section D (orange)

- Section E (yellow)

The school has spaces organised for group activities with the possibility of corners for structured and unstructured activities. There are areas that encourage symbolic play (e.g. the kitchen corner); corners to support language development where listening and conversation can take place (e.g. in the library); conversational or linguistic spaces used for day-to-day operations (calendars, poems, nursery rhymes, and especially circle time); areas designed to encourage the development of children's graphic, pictorial, manipulative and creative expression (e.g. large tables in the classrooms for painting and drawing) and spaces for free or guided movement play to develop motor skills (e.g. the built-in gym or the reception). In addition, the school has a beautiful garden outside, which allows children to play freely in nature.

As for language acquisition in general, in recent years only Romanian and Moldovan children have had the opportunity to engage in differentiated activities with a Romanian native speaker once a week. Of course, the willing families have to join the project in order to participate.

As far as dealing with the English language is concerned, there have never been projects carried out by external experts. On the other hand, at the discretion of each department teacher, the children are often motivated to learn songs in English, accompanied by gestures and movements, as a moment of sharing and fun. One of the children's favourite songs is the song "Row Row Row[5]", which requires the children to

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[5] https://youtu.be/zdIMT9cvkyc

use tissues to pretend they are rowing down a river in a boat (following the instructions in the song). The instructions almost always repeat the same expressions: in-out, up-down, slow-fast... With these small exceptions, the English language is therefore not particularly present in everyday school life.

6.2.2.   The participants

The orange section, where I applied the adapted project of *The Adventures of Hocus and Lotus*, consisted of 22 children of different nationalities. However, the researcher decided to exclude from the analysis three children who did not attend enough lessons of the project (less than 5 lessons out of 12). Therefore, a total of 19 bilingual and monolingual children were involved in the project.

AS is a 4.10 year old girl who speaks Italian and Bengali. Her parents are both Bengali, but she also speaks Italian very well. She is a very interested child and always takes an active part in activities. She was also notable for her intelligence. She was therefore classified as *bilingual* for the purposes of the project.

BE is a very sweet 3.11 year old girl who speaks Romanian and Italian. Her parents are both Romanians. She doesn't speak much but understands Italian very well, is always interested in the proposed activities and was excited to have a new character in the classroom. She was therefore classified as *bilingual* for the purposes of the project.

BM is a 5.5 year old boy who speaks Moldovan and Italian. His parents are both Moldovans and he speaks Moldovan and Italian perfectly. The child showed enthusiasm for the project, especially during the first few lessons, but then lost interest in the last few lessons and indicated that he had already learned all the vocabulary. For the purposes of the project, he was classified as *bilingual*.

DDB is a 5.8 year old child who speaks Bengali and Italian. His parents are both Bengali and the child speaks Italian and Bengali perfectly, although he only arrived in Italy in 2022. The kid is always smiling and was very enthusiastic throughout the project. Unfortunately, due to his vivacity and exuberance, he was often distracted. In the latter sense, he was classified as *bilingual*.

DA is a 3.7 year old child. The parents are both Bengali but the child does not seem to speak Italian or Bengali (at least at school). The teacher often asks DDB (an

older child who has a good command of Italian and Bengali) to speak to DA in Bengali, but the latter doesn't seem to have any particular reaction. Despite his lack of confidence in the language, DA was very interested in the proposed activities, even though he repeated the gestures rather than the words. For the purposes of the project, he was classified as *monolingual*.

EGM is a 5.5 year old child of Nigerian descent who speaks English and Italian. Anyway, for the purposes of the project, the child was considered *monolingual* since, even after asking the class teacher for advice, we found that he understands Italian but does not speak it; In fact, he speaks English at home with his family. However, the child responded very well to the project as he cares about the English language and was actually very happy (even if he is really shy) and actively involved in the participation.

HJM is a 5.9-year-old girl who speaks practically only Bengali. Her story is peculiar: she arrived in Italy in 2022 and had never attended school before arriving at P. Boranga Kindergarten. She is very shy, suspicious and towards the project. For the purposes of the project, she was considered *monolingual*.

HNO is a 4.8 year old girl who speaks Italian and Bengali. Her parents are Bengali and although HNO is a child with a mild relationship disability and is cared for six hours a week by a support teacher, she was very involved in the project. It is of course unclear whether the child understood the meaning of the English language terms, but he was certainly interested in the music and imitation part. For the latter, it was considered *monolingual*, since it does not express itself in complete sentences in Italian. The few words she formulates are: mom and dad when she wants to go home.

JV is a 6 year old girl who speaks English and Italian. Her parents are both Nigerian and speak English at home. Despite initial distrust, the child was enthusiastic from the second lesson. JV was enthusiastic about every single part of the project. She especially liked that there was someone in the classroom who also spoke the language she speaks at home with her family. For the purposes of the project, she was considered *bilingual*.

KO is a 3.11 year old child who only speaks Bengali. The child was so interested in the English sentence that during the game he repeated all the sounds and imitations. For the purposes of the project, he was considered *monolingual*.

MF is a 6.2 year old Italian girl. She is the only *monolingual* Italian child in the class. Although she is used to being surrounded by people speaking different languages, at the beginning of the project she was not happy that we were not speaking Italian. In fact, when I would put on the magic shirt and stop speaking Italian, she would always ask me "now you don't speak Italian any more?". Uncomplicated, however, she had a lot of fun, especially during the play. At the end of the project he showed that he had learnt many phrases. Probably the project was also a way to enrich the friendship between MF and JV who speaks English.

MR is a 4.9 year old girl who does not speak Italian. She is a Moroccan girl who arrived this year and has struggled to fit in at school, she speaks mainly Arabic, little Italian. Her difficulty in adapting did not allow her to participate with interest in the project. For the purposes of the latter, she was considered *monolingual*.

MLM is a 4.11 year old girl. The parents are Moldovans and the girl speaks both Italian and Romanian. The child was very enthusiastic about the project. In terms of the latter, she was classified as *bilingual*.

ME is a 3.7 year old child. The parents are Nigerian and speak English at home. The child became very interested in English during the project, probably because he is familiar with it. However, due to his overly exuberant behaviour, he was often a disruptive element in the project. As the child cannot express himself clearly in Italian, he was considered *monolingual* for the purposes of the project.

NKP is a 5.2 year old child. His parents are Cameroonians and speak French at home, but the child can also express himself in Italian. The child is very shy and reserved, he did not seem to be very interested in the project. He often left the project to sit alone in a chair. The department teacher told me that the child has a long time to accept new suggestions and is therefore not very participatory. For the purposes of the project, he was considered *bilingual*.

NA is a 5.11 year old girl. The parents are Pakistani but the child is fluent in Italian. NA was absent a few times during the project, but when present she proved to be very intelligent and interested. It was also interesting that she spoke her mother tongue with her friend SP. For the purposes of the project, she was considered *bilingual*.

SP is a 5.4 year old girl. The parents are Pakistani, but the girl speaks Italian. SP also speaks her native language to her friend NA at school. The girl was quite active

during the project, but also a bit reluctant to interact. For the purposes of the project, she was considered *bilingual*.

SVG is a 5.5 year old child. The parents are Romanians, but the child knows the Italian language perfectly. He turned out to be one of the most interested children in the project and even told me about his experiences with English at home. In fact, the mother told the teachers that she teaches her son a few small words like "hello" or "good night". For the purposes of the project, he was considered *bilingual*.

WM is a 5.3 year old boy. His parents are Chinese and he speaks Chinese at home. However, the child also speaks Italian. The child was very interested in the project, especially the theatrical part. Despite his shyness, he always attended with a smile. For the purposes of the project, he was considered *bilingual*.

In order to elaborate the above-mentioned linguistic and personal bibliographies, the researcher in the first lesson asked the children questions directly, whose answers were then confirmed or modified with the help of the school data provided to the teacher at the beginning of the year. The questions were based on the following points, through which a table was compiled (which will not be attached for privacy reasons):

1. First name and surname

2. Gender

3. Date of birth

4. Nationality

5. Monolingual or bilingual

6. Language spoken at home

7. Language spoken at school

The bilingual children turned out to be 11, while the monolingual children turned out to be 8 (Figure 6.2.2.). It should be noted that not only Italian children were considered bilingual, but also foreign children who cannot express themselves in Italian.
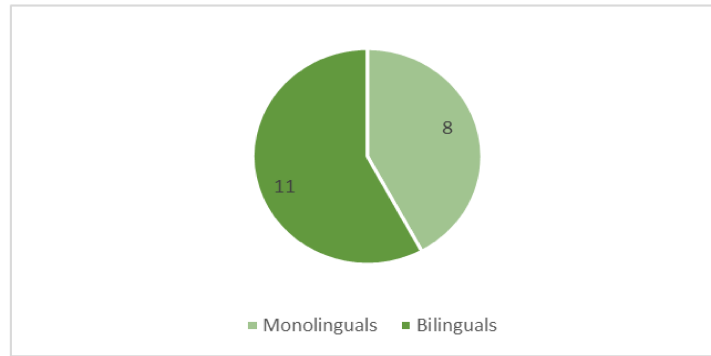
Figure 6.2.2.: Number of bilinguals and monolinguals

6.2.3. *The Adventures of Hocus and Lotus* readapted: the objectives, the research questions and the aims of the project

Section 6.1. and its subsections explain the didactic method *The Adventures of Hocus and Lotus* developed by Professor Taeschner. Professor Taeschner's project requires specific work with children, carried out with the activities mentioned in 6.1.3. However, as I already mentioned, the project the researcher carried out in P. Boranga Kindergarten was adjusted to its aims and to the participants. More specifically, the researcher used the first narrative format called *Hocus the Dinocroc* (6.2.6.) to study and compare English learning of bilingual and monolingual children. The aim of the project was therefore the comparative analysis of language learning between monolinguals and bilinguals, in order to confirm the superiority of bilingual children in language acquisition.

The researcher devised the following research questions:

1. Are the linguistic outcomes of bilingual and monolingual children the same during the project and at the end of it? Are there differences in language learning?

2. Are there limitations in the original project? Are there advantages of the project?

The project lasted 12 days in total (about 4 days per week as the orange section had their swimming project on Thursday morning) including a first analysis of the children's language and a final analysis of what the children had learned. The children

were then exposed to the same English words several times a day and through different methodologies.

For the first analysis (6.2.4.), the possible English level of all children was assessed using flashcards (*Appendix 2 – Vocabulary test*). The lesson was then divided into six parts with a total duration of 40 minutes (6.2.5.). Finally, to collect the final data, the researcher developed several games and tests for the children (*Appendix 4 – Children drawing activity, Appendix 5 – Memory game, Appendix 6 – Children's enjoyment index*) and a final questionnaire for the parents (*Appendix 8 – Parents' questionnaire*). Finally to thank the children for their participation the researcher created a personalised Diploma (*Appendix 7 – Hocus the Dinocroc Diplomas*). The following paragraphs illustrate each of the steps mentioned here and their respective results.

6.2.4.   First phase: language assessment

As anticipated, before starting the project, the researcher tested the children's English level, since some of them spoke English as their first language. Appendix 2 contains the flashcards used for the first test (*Appendix 2 - Vocabulary Test*). As we saw in the previous chapter (5.4.5.6.), flashcards are often thematically ordered cards on which a picture is shown and usually also shows the first letter of the word describing the picture and the word itself are often used in schools with children. It is possible to expand the vocabulary of a foreign language with flashcards (Santipolo, 2012). In this case, however, the researcher has chosen to show an image from the illustrated story of *Hocus the Dinocroc* and suggested three different meanings written underneath and associated with the image. The children sat in a circle, the researcher went to each child individually and read out loud each word written at the bottom of the flashcard. Then, the researcher asked each of them which word they thought represented the picture. Finally, children were asked to point at the word they thought to be the right one.

The following table shows the different answers of the children (Table 6.2.4.). R1, R2, R3, R4, R5, R6, R7, R8, R9, R10 represent each individual card with the three possible answers, the correct answer is indicated below in brackets.

Children	Monolingual or Bilingual	R1 (SPOTS)	R2 (MIRROR)	R3 (EYES)	R4 (SAD)	R5 (BIRD)	R6 (DUCK)	R7 (PARK)	R8 (EGG)	R9 (FROG)	R10 (TAIL)
JV	Bilingual	SPOTS	MIRROR	EYES	SAD	PINK	DUCK	STONE	EGG	FROG	TAIL
NKP	Bilingual	TEETH	MIRROR	MIRROR	SAD	LEG	DUCK	PARK	BROWN	GREEN	TALE
SVG	Bilingual	TEETH	EGG	EYES	SAD	BIRD	CHICKEN	TREE	BROWN	GREEN	TAIL
MLM	Bilingual	HANDS	EGG	MIRROR	SAD	PINK	DUCK	TREE	GREEN	FROG	TALE
AS	Bilingual	HANDS	EGG	EGG	SAD	BIRD	CHICKEN	STONE	EGG	FROG	FEET
BE	Bilingual	TEETH	EGG	EGG	ORANGE	BIRD	BLUE	PARK	EGG	WATER	TAIL
SP	Bilingual	SPOTS	EGG	EYES	ORANGE	BIRD	DUCK	TREE	EGG	WATER	FEET
NA	Bilingual	HANDS	EGG	EYES	SAD	BIRD	CHICKEN	TREE	EGG	FROG	FEET
DDB	Bilingual	TEETH	MIRROR	MIRROR	ORANGE	BIRD	BLUE	TREE	EGG	FROG	FEET
BM	Bilingual	HANDS	EYES	MIRROR	HAPPY	LEG	DUCK	PARK	EGG	FROG	FEET
WM	Bilingual	TEETH	EYES	EYES	SAD	PINK	CHICKEN	STONE	EYES	GREEN	FEET
EGM	Monolingual	TEETH	EGG	EYES	HAPPY	BIRD	BLUE	PARK	EGG	FROG	FEET
MF	Monolingual	HANDS	MIRROR	EYES	ORANGE	LEG	CHICKEN	STONE	EGG	FROG	FEET
DA	Monolingual	TEETH	MIRROR	EGG	ORANGE	LEG	CHICKEN	PARK	EGG	FROG	FEET
HJM	Monolingual	SPOTS	EGG	MIRROR	ORANGE	PINK	BLUE	PARK	BROWN	GREEN	FEET
HNO	Monolingual	TEETH	EGG	EGG	SAD	BIRD	BLUE	PARK	EGG	WATER	TALE
ME	Monolingual	HANDS	EGG	EYES	ORANGE	LEG	DUCK	TREE	EGG	FROG	TAIL
KO	Monolingual	TEETH	EGG	EYES	ORANGE	PINK	BLUE	STONE	EGG	GREEN	FEET
MR	Monolingual	HANDS	EGG	MIRROR	ORANGE	PINK	BLUE	TREE	BROWN	GREEN	FEET

Table 6.2.4.: Children's answers

Notice that the children often recognized the colour in the picture shown to them. The class teacher later confirmed to me that they had dealt with some basic colours in English. For example, the frog is shown in green, and indeed, many children identified the image with the colour green; another example is R4, representing a sad Hocus. Children in this case recognised the skin colour of Hocus, which is orange.

The bilingual children have thus guessed a total of 46 words. The monolingual children guessed a total of 26 words. Then dividing the total of 46 words by the 11 bilingual children, the average bilingual child guessed 4.18 words correctly. In contrast, when the 26 words were divided among the 8 monolingual children, a monolingual child guessed correctly an average of 3.25 words.

This first test already shows that bilingual children are more flexible than monolingual children. Of course, it has to be taken into account that three of the 19 children speak English at home. However, even bilingual English children could not guess all the words (see JV, EGM, ME).

6.2.5.   Second phase: the structure of the adapted lesson

In this section we see the breakdown of the approximately 40-minute lesson adapted from *The Adventures of Hocus and Lotus* project of Professor Traute

Taeschner. The researcher underlines again that the adaptation regards the use in class of only one Narrative Format (the first one, which is called *Hocus the Dinocroc*). In order to get an idea of the timing of the individual parts of the lesson, I kindly asked the class teacher to set the time for each part, every day of the lessons. The times reported therefore represent the fastest and slowest lesson. It should also be added that at the beginning the children were much slower in repeating some of the stages, while towards the end of the lesson many of them knew the story by heart.

1. *Entering the magic world* (5-7 minutes): in this first stage, the researcher (the magic teacher for them) arrives in class and says hello to the children. The researcher decided to say hi by always using the same expression: "Hello!". In this way a routine (5.4.4.) was created. Secondly, the materials needed for the class are prepared (ex: computer, LIM, pdf of the story). When everything is ready, all the children sit in a circle and the magic teacher wears the magic t-shirt. The magic teacher sits down, speaks Italian and asks "Siete pronti?", which let the children know that it is the time to enter the Magic World. Then the magic teacher starts counting from 1 to 10. Children speak the numbers with her and after the number 10, the magic teacher and the children make the sound "Bliiink!" and say: "Open your eyes!" and they all open their eyes. In this way, the group is carried into the new world, the magical world of Hocus and Lotus.

2. *Acting-out Stage* (10-15 mins): the magic teacher starts the acting-out stage. She begins telling the story to the children while making the gestures that go with each word. She says the sentences one after the other and the children repeat them directly. After a few lessons, some children (mainly bilinguals) were able to repeat the magic teacher's story at the same time.

3. *Song Stage* (5 mins): once the acting phase is over, the magic teacher turns on the music on the LIM and uses the gestures shown in the previous phase to have the children dance and try to sing together.

4.   *Book Stage* (5-8 mins): the fourth stage is reading activity. The magic teacher reads the story and shows the children the corresponding pictures. Personally, the researcher decided to project the PDF of the story (which was scanned earlier) onto the LIM so kids could see it better. The children listen and look at the pictures in the book.

5.   *Video Stage* (5-10 mins): All the kids sit in front of the LIM and they watch the cartoon related to the story developed in the class.

6.   *Leaving the Magic World* (5 - 6 mins): After the cartoon, the class returns to the Italian world. The return to the Italian world takes place during a process that consists in the reverse process of what usually happens in the first phase (beginning of classes). In the first step, the magic teacher says "Let's count from 10 to 1". When the magic teacher and the children get to the end of the ten numbers, the same sentence is produced as at the beginning: "Bliiiink! Open your eyes!". The magic teacher takes off the Magic t-shirt. Before leaving, the magic teacher bids farewell again to establish a routine "Bye bye" (5.4.4.).

6.2.6.   An analysis of the story *Hocus the Dinocroc*

Now let's look at the story used for the research, which is the first Narrative Format. In the appendix (*Appendix 3 - Hocus the Dinocroc: the Acting Out transcription, the Story and the Song*) will be found a transcript of the acting-out phase and two scanners of the story and song lyrics respectively.

The first story is called *Hocus the Dinocroc*. The story is characterised by:

- Use of simple language: mainly present tense verbs, SVO structure;

- The abundance of onomatopoeia: "croc croc" for hocus-egg-breaking; *"ssssh"* for silence; "chirp chirp" for the bird; "quack quack" for the duck; "croak croak" for the frog; "splash", for jumping into the water;

- The repetition of concepts, expressions and formulas within the same story. Several linguistic elements are repeated in the same story: when Hocus is heard hatching from the egg, the children repeat "What's that, what's that?" three times; If Hocus says hello three times, "hello, hello, hello"; Furthermore,

throughout the story, Hocus meets three animals, a bird, a duck, and a frog, and always asks each of them the same question, using the same linguistic structure "Are you a bird, are you a duck, are you a frog?" or when he sees something interesting he says: "Oh, look! Nice".

Now let's look at the vocabulary and repetitions in the story of Hocus the Dinocroc, in particular the analysis of verbs, nouns, adverbs, prepositions, pronouns, articles and adjectives. I will use tables to be clearer and more concise.

VERBS	USED FORM	FREQUENCY	TENSE
To be	Am	12	Present
	Are	12	Present
	Is	4	Present
	was	4	Past
To listen	Listen	3	Imperative
To look	Look	7	Imperative
	Looked	1	Past
To have	Have	3	Present
To walk	Was walking	1	Past progressive

NOUNS	FREQUENCY
Bird	5
Day	1
Duck	5
Dinocroc	3
Egg	3
Eyes	1
Frog	6
Hocus	9
Park	1
Spots	1

Tail	1
Time	1

ADVERBS	FREQUENCY
Inside	1
Not	5
No	5
Once	1
There	3
Too	3
Yes	2

PRONOUNS	FREQUENCY
I	13
That	3
What	8
Who	2
You	11

ADJECTIVES	FREQUENCY
Nice	6
One	1
This	1

PREPOSITIONS	FREQUENCY
In	1
Of	1
Upon	1

ARTICLES	FREQUENCY
A	20
An	1
The	4

6.2.7. Third phase: using games to analyse results

After completing the 12 lessons in about 3 weeks, the researcher tested children using games to see how they had reacted to the project, what they had learned about the story, and to study their language learning. To assess whether the children had actually learned the story and the words in English, the researcher d

eveloped three different activities:

- a *musical game* (15 minutes): after blocking out music with a bass drum the researcher let the children dance/walk to their heart's content. Each time the music was stopped, a word related to the story of *Hocus the Dinocroc* was shouted and children had to show me the word with their bodies. For example, when the word "frog" is shouted, all the children would start jumping around the room like frogs. Obviously, the game is reminiscent of what the children did during the acting-out lessons. During this game, every single child was able to transform into movement what I was saying with my voice. Therefore, I did not notice any significant differences between bilinguals and monolinguals;

- a *drawing activity* (40 minutes): after a short break from the musical game, the children sat at the tables where normally they did their drawings or creative activities. One by one the children were called next to me and told to draw something related to the story of *Hocus the Dinocroc* (*Appendix 4 - Children drawing activity*). I did not notice any significant differences between bilinguals and monolinguals;

- and the *memory game* (one hour) made with the pictures from the story of *Hocus the Dinocroc* (*Appendix 5 - Memory game*): in this game the children had the task to pair the pictures. In order to win, they always had to say aloud the name of the picture they paired. Even during this game, the children always

guessed all the words related to the pictures, each at their own pace, and the researcher could not find any significant differences between bilingual and monolingual children.

For the music game and the drawing game, the TPR technique (5.4.5.4.) was used. This methodological feature of combining language and physical movement allows students to learn in an environment that pays special attention to minimising frustrating or anxious situations and experiences (Balboni, 2019).

To check whether the children liked the project, three coloured faces were created and printed (*Appendix 6 - Children's enjoyment index*):

     - A green happy face

     - A light blue uncertain face

     - A red sad face

The researcher then handed each of the faces to the children, asking them to raise their faces to indicate how much they liked each moment of the lesson, i.e.,:

     - enjoyment of the acting out: 16 children showed me an happy face, 3 children showed me an insecure face;

     - enjoyment of the story: 15 children showed me an happy face, 2 children showed me an insecure face, 2 children showed me a sad face;

     - enjoyment of the song: 14 children showed me an happy face, 3 children showed me an insecure face, 2 children showed me a sad face;

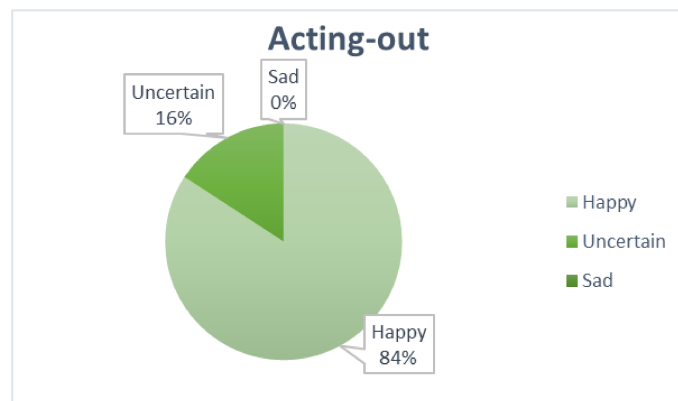   - enjoyment of the video: all the children liked the video.

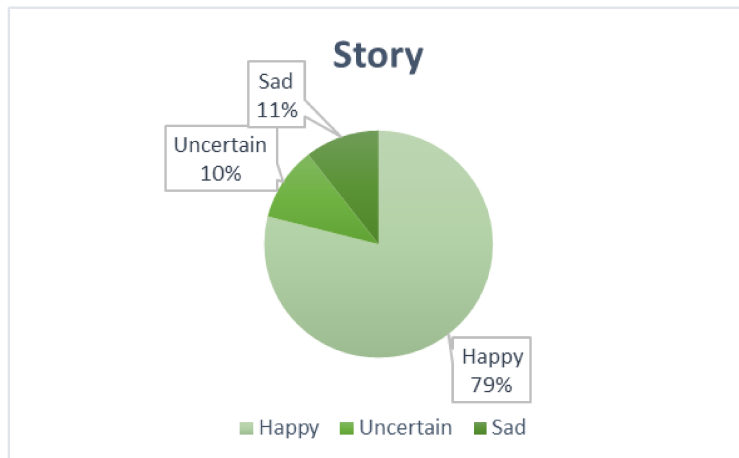*Diagram 6.2.7.1.: Enjoyment of the acting-out*
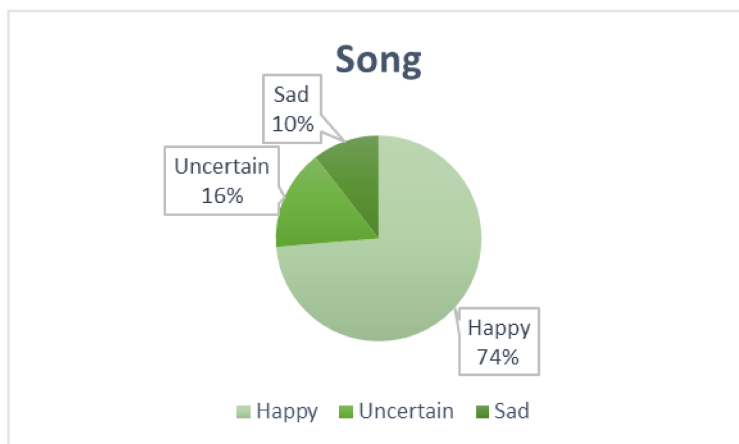
Diagram 6.2.7.2.: Enjoyment of the story
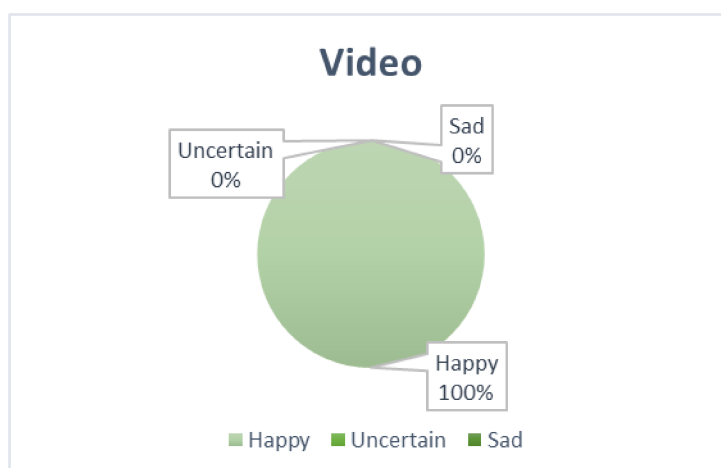

Diagram 6.2.7.3.: Enjoyment of the song

Diagram 6.2.7.4.: Enjoyment of the video

After the enjoyment test, the researcher decided to ask the children a direct question, as many of them had become very comfortable with me and my presence in the classroom:

"Would you still like to do English in school? And what would you like to do?"

Here the various answers:

SVG: "Mi è piaciuto tutto e vorrei saper parlare come Hocus"

BM: "Mi è piaciuto tutto"

JV: "Vorrei ascoltare più musica in inglese"

MF: "Vorrei parlare bene come gli animali nella storia di Hocus"

DDB: "Vorrei leggere un libro in inglese"

AS: "Vorrei guardare i cartoni in inglese"

MLM: "Vorrei cantare in inglese"

WM: "Vorrei cantare in inglese"

BE: "Vorrei fare musica in inglese"

In general, therefore, children would like to engage in more English-language activities at school, i.e., singing, watching videos, reading stories, and learning to speak the language.

In the final various exercises, it was found that by the end of the 12 *Hocus the Dinocroc* lessons, both bilingual and monolingual children had learned the vocabulary. What changed between bilinguals and monolinguals was the capture time, which will be addressed in 6.2.9.

At the end of the games, the researcher handed the children personalised diplomas with their names written by hand to thank them for their participation and further stimulate them for the future (*Appendix 7 - Hocus the Dinocroc diplomas*). The children were delighted with it and greeted me with their usual "Bye bye".

6.2.7.1. Parents' questionnaires

After studying the children's preferences, the researcher decided to also study the parents' and children's enjoyment and satisfaction using a personalised questionnaire (*Appendix 8 – Parents' Questionnaire*). Unfortunately, only five parents completed the questionnaire in full, even though the researcher personally went to the school to have the questionnaires completed and despite teachers' repeated requests to the class representative. Another 4 parents just ticked a few boxes and didn't share their thoughts.

Furthermore, it should be noted that given the large presence of foreign parents, the researcher had also taken care to write the questionnaire in both Italian and English.

The purpose of the questionnaire was to check whether the children were so enthusiastic about the project that they talked about it with their parents at home. These low numbers could be due to families not being aware of the language lessons. In addition, some parents did not understand Italian or English when I tried to explain the reason for the questionnaire, as I had given the printed questionnaires in person. This also shows that they themselves had a language barrier and could not understand the researcher.

In the appendix (*Appendix 8 – Parents' Questionnaire*) will be published all the original transcribed answers. However, the researcher did not analyse the data from the questionnaires, since 5 correctly completed questionnaires (meaning completed in all its parts) from a total of 19 children are not sufficient for a real and truthful analysis.

The only thing worth noting is that the five fully completed questionnaires indicated that the children were taking part in an English-language project for the first time, that these five children nonetheless spoke positively about it at home, and that the parents defined the project experience as positive or very positively. Finally, parents noted that their children now have a different attitude towards the language.

6.2.8.   The children attitude towards the English language

The attitude of the children towards the English language seems to have positively evolved from the beginning of the course.

In the questionnaires, four parents affirmed that they saw a change in their child's attitude, and they perceived this change since their children often use some English words. In fact, many parents affirmed that their children try to repeat some English words at home:

<div align="center">

MLM mum: "Parla in inglese dice delle parole"

SVG mum: "A casa dice parole e frasi in inglese"

DDB dad: "Gli piace parlare la lingua inglese"

BE mum: "She repeats many english words"

</div>

This change in the children's attitudes was also reflected by the classroom teacher, who one day told the researcher a funny fact. Almost at the end of the lesson with the

children, the researcher entered the classroom. The class teacher explained that during the lunch break in the canteen, many of the older bilingual children were trying to converse in English. The teacher explained that:

"In un momento di conversazione spontanea i bambini ripetevano termini in inglese come *oh yes, me too, bye bye*".

Therefore, this positive attitude towards the English language is clearly stated from both parts: the parents (even though with not sufficient data) and the teacher. Furthermore, in section 6.2.7., some of the statements made by the children themselves were reported, which were also very positive.

6.2.9. Monolinguals vs Bilinguals: language acquisition

In section 6.2.7. was seen that the end results did not differ significantly between the bilingual and the monolingual children. In fact, both categories learned the story in English in their own time and the vocabulary. However, *acquisition time* has been identified to be the main difference between bilinguals and monolinguals.

The bilingual children demonstrated that after just a few lessons they were able to form *complex sentences* in English, combining the meaning of several words into a complete sentence. This ability can be already present in children between 2 and 3 years old and it is defined as telegraphic language which consists of children's ability to memorise even quite long linguistic expressions and reuse them appropriately (2.2., Daloiso, 2009a). The bilingual children were found to be faster at verbally forming complete sentences in English, but even the only monolingual Italian child (MF) was able to *understand* (not *produce* like the bilingual children) a condensed sentence in

English without the aid of movement (as is usually the case in the acting-out phase). For an example, let's see one of the drawings in *Appendix 4*, which is included here for your convenience. Child MF was asked to draw "Hocus is walking in the park". As the drawing confirms, MF understood and drew it perfectly.

As we saw in section 6.2.2. three children out of 19 speak English at home. The three children are JV, a child who is very intelligent and not shy at all (after realising the new situation), EGM, a child who is very shy and who does not speak a word outside the project, and ME, a child who is not very interested and unfortunately a disruptive element during class. Notably, at the end of the study, JV was considered Italian English bilingual, while EGM and ME were considered English monolinguals. However, since English is their first language, all three obviously showed impressive learning speeds considering that they already had a basic knowledge of the language. Moreover, the class teacher shared with the researcher that according to her, they were less shy than usual because they felt confident with their own language. In particular, after only the fourth lesson, JV was able to repeat the entire spectacle alone, at the same time as the magic teacher!

In contrast, all of the monolingual children showed that they had actually memorised the story only after the eighth lesson out of twelve. In particular, the only monolingual Italian child in the class, MF, told me, during the ninth lesson, that she had not yet memorised all the words, while her best friend JV knew them all. Another bilingual child who demonstrated this ability to memorise new words in a new language was NA, a bilingual child from Pakistan. In fact, as seen in section 4.1.1. (Grosjean, 2015) on the benefits of bilingualism, bilingual children have the ability to learn other languages much more easily than their monolingual peers. In fact, the human brain structures languages, and thus phonology, morphology, syntax, etc., in such a way that connections are made between them. These connections can, in turn, be an aid to the acquisition and use of new languages. It is also worth noting that many of the bilingual children talk to each other in their own language whenever possible and help each other. For example, NA often speaks in Pakistani to her friend SP, who is less talkative than NA in Italian and displays greater communicative sensitivity (4.1.2., Abdelilah-Bauer 2008). Another example of greater communicative sensitivity and greater social sensitivity (4.1.2., Genesee, Tucker, and Lambert, 1975) are the two children DDB and DA. DDB is older than DA, speaks perfect Italian and Bengali. DA, on the other hand, was considered monolingual (speaking only Bengali) for the study. In class, DA is often unable to understand the will of the teacher who speaks Italian, and DDB acts (without even being asked by the teacher) as an intermediary between Italian and Bengali.

Thus, the bilingualism studied in a kindergarten revealed that bilingual children could produce complex sentences in English before monolingual children, even though monolingual children could understand complex sentences.

6.2.10. Overcoming the limitations of the original project and the advantages of the adapted project

As mentioned in the general explanation of the project, the researcher did not apply *The adventures of Hocus and Lotus* developed by Professor Taeschner in all parts and in all ways. In fact, the researcher had personally noticed some potential downsides if the traditional project would have been used to analyse language learning in this kindergarten, with this audience. Actually, the initial worries of the researcher were later confirmed when the children's parents did not take part in the final questionnaire. Therefore, the original project was adapted to the present project's necessities.

The *Adventures of Hocus and Lotus* project initially envisages the child continuing their language acquisition at home with the family through stories, puppets and videos in addition to lessons in the classroom. But at P. Boranga Kindergarten has a turnout of foreign children and parents with a low economic profile, who have several difficulties with the Italian language. In the original project *The Adventures of Hocus and Lotus*, the school and the family are normally supposed to create a well-defined language routine for the children. After talking to the class teacher, the researcher concluded that the language routine at home could not be built up by the parents. Either because they really don't have the resources for it, or because there is a language problem. Faced with this problem, the researcher decided to readjust the activities and create a more sustainable language routine at school. In fact, the original project was based on one single lesson per week, whereas the adapted project was based on four lessons per week, removing the role of parents from the project. The researcher felt it was imperative to create a strong and repetitive language routine for the children, because although many of them now know Italian, they still make a lot of mistakes. In fact, it was seen in Chapter 5 how important routine is, especially for bilingual children, both at home (5.3.) and at school (5.4.4.).

To stress the English language time even more, for each day of the four days a week the researcher went to school for the project, children were greeted with "Hello!"

and left saying "Bye bye!". One of the children (NA), who the researcher must admit, was very curious and interested in English, asked one day after our 40 minutes of English language class how to say "maestra" in English. The researcher replied "Teacher". Since then, NA has always said "Bye bye teacher" every time the lessons ended. It also happened that many of the other bilingual children imitated the companion and greeted me with the same verbal expression. The monolingual children, on the other hand, probably had trouble understanding the connection between goodbye and the teacher and never addressed me with this new expression.

Another problem encountered with the original Hocus and Lotus project was the lack of efficient and modern tools for the teacher. In fact, the story told and seen should be a multi-sensory tool for the children (sight and hearing). If she hadn't decided to scan the story and project it onto the interactive whiteboard, 19 children would never have seen the pictures from the book because they were too small.

Of course, there were not exclusively disadvantages. Indeed, the method of *The Adventures of Hocus and Lotus* is very important with regard to the phenomena of critical period (2.4.), implicit memory (2.5.), vocal accommodation (4.5.), contagion (4.5.), input (5.4.3.) and multisensory teaching.

The Adventures of Hocus and Lotus is specifically aimed at children from birth to 11 years of age. This feature seems to be supported by the evidence related to the critical periods. As can be seen in 2.4., scientists confirm that children between the ages of 0 and 8 years (defined by Daloiso, 2009b), as the period of first childhood and second childhood) have an exceptional aptitude for language learning due to the peculiar property of brain plasticity in children. This first observation points to a positive orientation of the teaching method towards an age group that can certainly derive several benefits from it, such as learning a foreign language with little or no effort.

Regarding implicit memory (2.5.), it is important to remember that in the first decade of human life, the process of memorization is based on implicit memory. *The Adventures of Hocus and Lotus* seem to support this process as repetition is a key element of their teaching. Indeed, as the researcher observed, the classes propose identical input in the form of a story in four different approaches during a single lesson, plus the repetition of each story for 12 consecutive lessons (in the case of this project). Apparently, this method promotes the children's experience and practice through

intensive engagement with the same linguistic objects. Implicit memory also allows the automatic internalisation of linguistic routines (chunks), i.e., the set of linguistic acts associated with a frequent and repeated action within a specific communicative context. Therefore, the project encourages memorisation (Fabbro, 2004, Fabbro and Cargnelutti, 2018).

The phenomenon of vocal accommodation is understood as the child's tendency to approximate his own verbal expression to that of the interlocutor (4.5.) (Daloiso, 2009b). The phenomenon of contagion, on the other hand, allows the child to imitate behaviours of various kinds, first as an automatic reflex and then more consciously and voluntarily (4.5.). During the acting-out phase, a central emphasis is placed on the magic teacher's imitation (Daloiso, 2009b). In fact, the children are exposed to the vocal and body activity proposed by the magic teacher and must reproduce and imitate what they hear and see. This strategy appears to promote activation of both mirror neurons and echo-mirror neurons, which consequently activate the two language acquisition phenomena mentioned above.

As aforementioned, the English classes include repetition which allows the magic teacher to offer a high quantity of exposure to the same input. In 5.4.3. was seen that an input that favours language acquisition must use simple, child-like and repetitive language (caregiver language) (Santipolo, 2012). Certainly, the Hocus and Lotus methods respect these variables. As far as the input is concerned, it is not only linguistic but also physical in nature. We had actually talked about the importance of the TPR method (5.4.5.4.), which also favours the connection between speech and body (Balboni, 2019).

Another point that speaks in favour of the method is its multisensory nature. In fact, the different phases of the lesson offer the children different inputs involving different senses, such as auditory (narrative story and music), kinaesthetic (gestures and dance) and visual (book and video images).

The following table summarises the aspects highlighted above (Table 6.2.10.):

LIMITATIONS of the original project	Noticed ADVANTAGES
Absence of a routine: lack of the foreign language in routine home situations	*Critical periods*: The teaching method is particularly aimed at children aged 0 to 8 years, defined as first and second childhood. Language acquisition is easier in these phases.
Lack of efficient and modern tools for the teacher: inadequacy of the tools for an higher number of children	*Implicit memory*: Repetition as a key element of the Hocus and Lotus program enhances LS experience and practice; language input focuses on phonetic and morphosyntactic aspects.
	Vocal Accommodation and *Contagion*: Mimicry, a key element of the Hocus and Lotus program, promotes activation of mirror neurons and echo-mirror neurons.
	Input: high exposure to the same input quality of the input in terms of simplified language, repetition, simple sentences, gestures (*TPR* method) as a central support for verbal communication.
	Multisensoriality: presence of different inputs involving different senses

Table 6.2.10.: Limitations and advantages of the project

6.3. Conclusions

The aim of the project was the comparative analysis of language learning between monolinguals and bilinguals, in order to confirm the superiority of bilingual children in language acquisition.

The result of the project showed that bilingual children memorise language much faster than monolingual children and are able to form complex sentences in half the time of monolinguals. Still, by the end of the project, even monolingual children had perfectly learned the small words included in the *Hocus the Dinocroc* narrative format. The reason for this is the so-called critical periods.

In fact, looking at the distinctions proposed by Daloiso (2009b) showed in table 2.4., it can be seen that the first (0-3 years old) and second (4-8 years old) critical periods play a key role in the acquisition of one or more language codes as a mother tongue and thus represent the most fertile temporal windows for introducing children to languages. If one then analyses the linguistic competence (in Daloiso, 2009a) that a person can develop when exposed to two languages in the first, second or third phase, it becomes clear that progressive difficulties do not affect all language components. As Knudsen also confirmed, from the age of 9 language learners will have more difficulties at the phonetic and morphosyntactic level than at the lexical, semantic and pragmatic level.

The researcher thus confirms the language learning disposition of bilinguals, but given the young age of the test subjects (3-6 years), monolingual children were also able to keep up with their bilingual peers with greater difficulty.

As far as the answer to the second research question is concerned, if the project had not been adapted to the type of audience, a sustained language routine would have been impossible to accomplish at home. Furthermore, as the original project was outdated, some of the appropriate tools to entice the children's language learning (such as the story projected on the interactive whiteboard) were missing.

6.3.1. Limitations of the study

There are a number of limitations that influenced this study.

The major recognized weakness is the impossibility for the researcher to carry out the entire project of Professor Taeschner (six Narrative Formats, whereas this project is based on one Narrative Format).

In addition, proposing more emoticon activities to the children, maybe after each lesson and not only at the end of the project, would have increased the number of responses received and therefore improved the validity of the final results.

The too large number of children was observed as a further limitation of the project. In order to be able to give each of them the right amount of attention, the researcher even suggests a maximum of 10 children.

A final limitation was the low level of parental participation in the final satisfaction questionnaire. Instead of distributing the questionnaires, a class meeting

could have been held to allow parents with more severe language difficulties to ask questions and express their opinions directly to the researcher instead of filling out a questionnaire.

6.3.2. Future research

Future research is required to verify the results of this study and to expand the investigation into a broader context. The study could also serve as a pilot study for future research.

For example, future research could be conducted on children between the ages of 9 and 11. In fact, *The Adventures of Hocus and Lotus* didactic model is recognized and tested up to the age of 11. Furthermore, testing children between the ages of 9 and 11, who are already entering the third critical phase (Daloiso, 2009b), will show a greater difference between bilingual and monolingual language learning.

Lastly, all Narrative Formats, instead of only the first one, could be used to study learning differences between monolinguals and bilinguals.

CONCLUSION

Today at least half of the population is bilingual or multilingual. Essentially every nation in the world and the majority of people of all socioeconomic classes and ages speak more than one language. Monolingualism can be considered almost an anomaly in today's world of increasing migration flows and early foreign language learning (McLaughlin 1984).

This dissertation started with the task of analysing the condition of bilingualism. Many experts proposed different definitions of this multi-dimensional phenomenon. Looking at the different approaches to bilingualism and the possible many definitions, it becomes clear that bilingualism could simply be understood as the possession of two languages. If we apply the definitions of various scholars, we can have a bilingual with native language competence, a bilingual who identifies with his or her language but not with the country in which it is spoken, a bilingual who only knows a grammatical structure of the language proficient, a bilingual who speaks one language better than the other, or a bilingual who can read but not write in the second language. Everyone who finds himself or herself in this continuum could be considered bilingual, even if each has achieved a different level of bilingualism.

After a general analysis of the state of bilingualism, this work has attempted both to highlight the importance of childhood bilingualism for language acquisition through the implementation of a project in kindergarten, and to highlight the long-term benefits that bilingualism offers thanks to targeted questionnaires can adults who grew up speaking several languages.

To start with, investigating the false myths surrounding bilingualism is essential for understanding the real value of bilingualism. Fear of having an accent, fear of stuttering, fear of being the only bilingual in a world of monolinguals, fear of having limited brain space for language acquisition, fear of impairing brain functioning through bilingualism, fear of creating delays in the cognitive development of children, fear of making children forget their first language when teaching them a second one, fear of a split personality because of bilingualism, fear that knowing two languages and so on. It should be underlined that children are born predisposed to learn one or more languages naturally, without becoming confused and without showing linguistic and cognitive delays. The most important thing to keep in mind for parents is to ensure that their

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children have ample opportunity to hear and speak both languages (Garaffa, Sorace, Vender, 2020).

After the description of what the myths revolving around this phenomenon are, I tried to debunk them also by talking about what are the main advantages of bilingualism, not only in childhood but also lifetime advantages. In order to truly investigate lifetime advantages (individual, social, cultural, and economic advantages), I carried out a small research project based on questionnaires proposed to bilingual adults. Participants indicated that they believe there are benefits to being bilingual, in fact, all the participants confirmed the benefits indicated in the previous literature, some to a greater and some to a lesser degree.

In addition to individual, social, cultural, and economic advantages, bilingualism also appears to be important for cognitive and metalinguistic reasons. Among these benefits, experts underline the presence of a certain *cognitive flexibility* such as bilinguals' ability to *code-switch*: the continuous passage from one language to another during communication. Another advantage of bilingualism is *divergent thinking*: it implies that bilinguals are able to provide more creative and unusual resolutions to problems, and it allows them to concentrate on the meaning of words rather than their form. Among cognitive benefits, research identified bilinguals' capacity to *inhibit disturbing elements*, so as to limit interference and reinforce the executive control of languages. Bilingualism was also proved to be a *protective measure against degenerative diseases*, such as Alzheimer or senile dementia, because it seems to retard or avoid their appearance. Bilinguals also showed to have a better *metalinguistic competence* since they consider the language as a system to reflect on, and not only as a means for communicating. This allows them to manipulate it according to their communicative purposes.

What has also been investigated in this dissertation is the role of the family and the role of the school in the education of a bilingual child. Moretti and Antonini (1999) asked themselves exactly what positively influences the development of the bilingual child. It is definitely about creating opportunities and needs for the child's bilingualism. Above all, children need frequent opportunities for use through interpersonal relationships, but also through songs, nursery rhymes, games, readings, videos, and other materials that can not only be input but also an incentive for the child to speak the

language (Fabbro, 2013: 17). The school also plays an important role in the language education of the child. Even if the school is not a school for bilinguals, teachers should always accept the language of the child and support him/her. The school's aim is to give the children good input, to create a specific routine, and to create games to promote language learning such as handling, storytelling, songs, nursery rhymes, flashcards, drawing etc…

In order to provide proof that bilinguals are one step in front of monolinguals with language learning, I collected some data directly on-site. I observed bilingual and monolingual children from 3 to 6 years old for one month in a Kindergarten, so as to gather some information on their language learning.

The researcher devised the following research questions:

1. Are the linguistic outcomes of bilingual and monolingual children the same during the project and at the end of it? Are there differences in language learning?

2. Are there limitations in the original project? Are there advantages of the project?

According to the results I obtained during and after the project, analysing the data, I can confirm that bilingualism has many important advantages on the language learning process of the child. Monolinguals, too, showed some specific abilities, because also monolingual children at the end were able to learn the Narrative Format of the Hocus and Lotus project, but bilinguals demonstrated to be one step ahead for the following aspects:

- after the proposal of a first English game using flashcards, bilingual children have demonstrated to be more flexible than their monolingual peers in guessing English words connected to the image (*Appendix 2 - Vocabulary Test*);

- bilingual children resulted in more enthusiasm about the English language course compared to monolinguals: the class teacher explained that during the lunch break in the canteen, many of the older bilingual children were trying to converse in English. The teacher explained that:

"In un momento di conversazione spontanea i bambini ripetevano termini in inglese come *oh yes, me too, bye bye*";

- *acquisition time* has been identified to be the main difference between bilinguals and monolinguals. The bilingual children demonstrated that after just a few lessons they were able to form *complex sentences* in English, combining the meaning of several words into a complete sentence. This ability can be already present in children between 2 and 3 years old and it is defined as telegraphic language which consists of children's ability to memorise even quite long linguistic expressions and reuse them appropriately (Daloiso, 2009a). In fact, bilingual children have the ability to learn other languages much more easily than their monolingual peers. The human brain structures languages, and thus phonology, morphology, syntax, etc., in such a way that connections are made between them. These connections can, in turn, be an aid to the acquisition and use of new languages;

- it is also worth noting (not really for the purpose of this research on language learning, but for a future and possible research on the advantages of bilingualism) that many of the bilingual children talk to each other in their own language whenever possible and help each other, showing a greater communicative sensitivity.

As far as the second research question is concerned, the research carried out at Pierina Boranga school highlighted some limitations of the original project *The Adventures of Hocus and Lotus* of professor Taeschner, which I tried to overcome adapting the project to my audience:

- *absence of a routine*: lack of the foreign language in routine home situations;

- *lack of efficient and modern tools for the teacher*: inadequacy of the tools for a higher number of children.

The first limitation was overcome by creating a stronger school routine, composed of 4 classes of English per week instead of one single class in the original project. The second limitation was overcome by the creation of pdfs that could be used on the LIM.

As stated before, the aim of the project was the comparative analysis of language learning between monolinguals and bilinguals, in order to confirm the superiority of

bilingual children in language acquisition. The results of the project showed that bilingual children memorise language much faster than monolingual children and are able to form complex sentences in half the time of monolinguals. Still, by the end of the project, even monolingual children had perfectly learned the small words included in the *Hocus the Dinocroc* narrative format. The reason for this is the so-called critical periods. The researcher thus confirms the language learning disposition of bilinguals but given the young age of the test subjects (3-6 years), monolingual children were also able to keep up with their bilingual peers with greater difficulty.

Future research is needed to validate the results of this study and expand the investigation into a broader context. The study could also serve as a pilot study for future research. For example, future research could be conducted on children between the ages of 9 and 11. In fact, the didactic model *The Adventures of Hocus and Lotus* is recognized and tested up to this age of 11. In addition, the study of children between the ages of 9 and 11, who are already entering the third critical phase (Daloiso, 2009b), could show a larger difference between bilingual and monolingual language learning. Finally, all narrative formats, not just the first, could be used to study learning differences between monolinguals and bilinguals.

Based on these observations, I consider bilingualism to be one way among many to improve children's quality of life and guarantee a better future. This idea is supported by both the outcomes of the Questionnaires to bilingual adults in Chapter four and the outcomes of the project carried out at school. Surely, raising a bilingual child will be a challenge for both parents and children, but it is a challenge to take on because it can surely result in many benefits. I also believe that bilingualism could be an interesting topic for other future research to try to spread the idea that it could be a valuable resource and that it could bring many advantages to children, also for their future.

Appendix 1 – Questionnaires on on individual, social, cultural, and economic advantages of bilinguals

<div align="center">QUESTIONNAIRE 1</div>

Hello!

I'm Mariagiulia Vittore, student in the master's program in European and American Languages and Literature. I ask you to answer the following questions. These will only be used **anonymously** for the purposes of my master's thesis. The purpose of the following questionnaire is to determine in particular whether your bilingual status has brought you **individual, social, cultural, and economic benefits/advantages** at any time in your life. The suggested questions are based on existing literature.

Thank you in advance!

Age: 72

Profession: none

1. In which country were you born?

The Netherlands

2. In which country are you living now?

   The Netherlands

3. What languages do you speak as a bilingual?

   Dutch and English

   3.1.   When and with whom do you speak these languages

       English: with my family living abroad

       Dutch: in my daily life

4. What other languages do you know besides those in which you are bilingual? Please also indicate your level of knowledge (A1, A2, B1, B2, C1, C2)

   German (basic level – A2)

5. **When** did you learn the languages you know? (Example: My parents raised me bilingually)

My parents raised me bilingually (in the first years they mainly focussed on English). I learned German at school.

6. If your parents raised you bilingual, what is their first language? (e.g. mother speaks Italian and father speaks German)

Mother spoke English / father spoke Dutch

7. Do you think your bilingual status has given you **individual advantages** over a monolingual person? If yes, please explain with examples (Example: learning languages for you is easier, you have access to more information, you can express yourself more clearly).

When I was young, it was definitely an advantage that I could speak English, so that I could communicate easily with my family abroad. Next to this, it was more easy for me (compared to my classmates) to learn other foreign languages.

8. Do you think your bilingual status has given you **social advantages** over a monolingual person? If yes, please explain with examples (Example: greater communicative sensibility, greater social sensitivity etc.).

Yes, compared to monolinguals I am able to get in contact easier with people with different social backgrounds.

9. Do you think your bilingual status has given you **cultural advantages** over a monolingual person? If yes, please explain with examples (Example: be more open-minded and tolerant towards other cultures).

I don't know…

10. Do you think your bilingual status has given you **economic advantages** over a monolingual person? If yes, please explain with examples (Example: social mobility; greater possibility of finding employment).

Knowing many languages helps in the economic and working areas. For example, it helps getting better job offers or earning more money.

11. From your personal experience, do you think that bilingualism leads to other advantages besides individual, social, cultural and economic ones?

I did not experience any other advantages

12. Further comments:

In the time that I grew up, it was more special if you could speak more than one language.

QUESTIONNAIRE 2

Hello!

I'm Mariagiulia Vittore, student in the master's program in European and American Languages and

Literature. I ask you to answer the following questions. These will only be used anonymously for

the purposes of my master's thesis. The purpose of the following questionnaire is to determine in

particular whether your bilingual status has brought you individual, social, cultural, and economic

benefits/advantages at any time in your life. The suggested questions are based on existing

literature.

Thank you in advance!

Age: 23…….

Profession: Student ……………

1. In which country were you born?
Brazil

2. In which country are you living now?
Italy (I moved at 14 to attend Italian schools)

3. What languages do you speak as a bilingual?
3.1. When and with whom do you speak these languages?
I speak Italian and Portuguese; I only speak Portuguese with my family, and Italian with

friends/university etc

4. What other languages do you know besides those in which you are bilingual? Please also

indicate your level of knowledge (A1, A2, B1, B2, C1, C2)

Spanish (B1) and English (C2)

5. When did you learn the languages you know? (Example: My parents raised me bilingually)

I was born and raised in Brazil Portuguese was my mother language, but being half italian

my parents always thought it was important for me to learn Italian at a young age; I was

raised speaking both languages.

I also went to an English-speaking school in Brazil.

6. If your parents raised you bilingual, what is their first language? (e.g. mother speaks Italian

and father speaks German)

Both my parents spoke Portuguese to me at home but they also know Italian as their grandparents moved from Italy to Brazil.

7. Do you think your bilingual status has given you individual advantages over a monolingual person? If yes, please explain with examples (Example: learning languages for you is easier, you have access to more information, you can express yourself more clearly).

I think the most important advantage that I have in speaking 3 languages fluently is the fact

that it was always really easy for me to communicate with anyone and find sources for my

university essays and exams.

8. Do you think your bilingual status has given you social advantages over a monolingual person? If yes, please explain with examples (Example: greater communicative sensibility, greater social sensitivity etc.).

No

9. Do you think your bilingual status has given you cultural advantages over a monolingual person? If yes, please explain with examples (Example: be more open-minded and tolerant towards other cultures).

Yes, I personally traveled a lot given that I don't have any language barriers, and for me, this

is a great opportunity to learn about other cultures and be more open-minded.

10. Do you think your bilingual status has given you economic advantages over a monolingual person? If yes, please explain with examples (Example: social mobility; greater possibility of finding employment).

I feel that anytime I give my CV to someone I have an advantage over others CVs because of the languages I speak.

11. From your personal experience, do you think that bilingualism leads to other advantages besides individual, social, cultural and economic ones?

I don't know

12. Further comments

QUESTIONNAIRE 3

Hello!

I'm Mariagiulia Vittore, student in the master's program in European and American Languages and Literature. I ask you to answer the following questions. These will only be used **anonymously** for the purposes of my master's thesis. The purpose of the following questionnaire is to determine in particular whether your bilingual status has brought you **individual, social, cultural, and economic benefits/advantages** at any time in your life. The suggested questions are based on existing literature.

Thank you in advance!

Age: …21….

Profession: ……Student……

1. In which country were you born?

In the United States of America, new york

2. In which country are you living now?

In the United States of America, upper state New York (but until few years ago I was living in Italy)

3. What languages do you speak as a bilingual? Italian and English

   3.1. When and with whom do you speak these languages? I speak English with my mum and I speak Italian with all of my friends in Italy

4. What other languages do you know besides those in which you are bilingual? Please also indicate your level of knowledge (A1, A2, B1, B2, C1, C2)

I do not know any other language

5. **When** did you learn the languages you know? (Example: My parents raised me bilingually)

I do not recall when I learned them because I have been speaking them since I was born so my parents raised me bilingual.

6. If your parents raised you bilingual, what is their first language? (e.g. mother speaks Italian and father speaks German)

My mum first language is American and my dad first language is Italian.

7. Do you think your bilingual status has given you **individual advantages** over a monolingual person? If yes, please explain with examples (Example: learning languages for you is easier, you have access to more information, you can express yourself more clearly).

Yes, one hundred percent, I think that being bilingual helps you so much in the outside world. For sure I can express myself better.

8. Do you think your bilingual status has given you **social advantages** over a monolingual person? If yes, please explain with examples (Example: greater communicative sensibility, greater social sensitivity etc.).

Yes, bilingualism gives greater communicative sensibility, I can communicate with people and sometimes understand them better.

9. Do you think your bilingual status has given you **cultural advantages** over a monolingual person? If yes, please explain with examples (Example: be more open-minded and tolerant towards other cultures).

Yes, I think being bilingual gives me advantage over monolinguals, just simply because my mind is culturally more open compared to the mind of someone who speaks only one language.

10. Do you think your bilingual status has given you **economic advantages** over a monolingual person? If yes, please explain with examples (Example: social mobility; greater possibility of finding employment).

Being bilingual will give you the advantage under the work world so it will give you more job possibilities, which will help you get more money most likely.

11. From your personal experience, do you think that bilingualism leads to other advantages besides individual, social, cultural and economic ones?

Yes, I believe that being bilingual does give you other advantages, such as communication.

12. Further comments:

QUESTIONNAIRE 4

Hello!

I'm Mariagiulia Vittore, student in the master's program in European and American Languages and Literature. I ask you to answer the following questions. These will only be used **anonymously** for the purposes of my master's thesis. The purpose of the following questionnaire is to determine in particular whether your bilingual status has brought you **individual, social, cultural, and economic benefits/advantages** at any time in your life. The suggested questions are based on existing literature.

Thank you in advance!

Age: …25….

Profession: ……Research Analyst……………

1. In which country were you born?
Switzerland

2. In which country are you living now?
Germany

3. What languages do you speak as a bilingual? French and Italian
    3.1.   When and with whom do you speak these languages? I speak French with my family and friends, it's my main language so the one in which I think as well. I speak Italian with some family members and also some colleagues.
4. What other languages do you know besides those in which you are bilingual? Please also indicate your level of knowledge (A1, A2, B1, B2, C1, C2)
 German, level B2/C1, English level C2

5. **When** did you learn the languages you know? (Example: My parents raised me bilingually)

My parents only spoke to me in Italian when I was a child. Then I learnt French at school as I grew up in a French speaking country.

6. If your parents raised you bilingual, what is their first language? (e.g. mother speaks Italian and father speaks German)

My parents only spoke to me in Italian when I was a child as they really wanted me to learn italian. Then I learnt French at school as I grew up in a French speaking country and the languages switched naturally.

7. Do you think your bilingual status has given you **individual advantages** over a monolingual person? If yes, please explain with examples (Example: learning languages for you is easier, you have access to more information, you can express yourself more clearly).

   Yes, it does in many different ways. I think that it would be easier for me to learn a new language. Also, I have access to a lot of information such as movies, books, from different authors in different languages. Then, google searches/research on very specific topics are easier when speaking many languages.

8. Do you think your bilingual status has given you **social advantages** over a monolingual person? If yes, please explain with examples (Example: greater communicative sensibility, greater social sensitivity etc.).

   Yes, I believe it does. I think that the social circle with which one can socialise is larger when speaking multiple languages. For example, at an event it is easier for me to feel integrated into different groups as I speak more than one language.

9. Do you think your bilingual status has given you **cultural advantages** over a monolingual person? If yes, please explain with examples (Example: be more open-minded and tolerant towards other cultures).

   Yes definitely. I think it is easier to understand not only people, but also their culture. I also have the feeling that knowing multiple languages makes me travel more, which makes me understand cultural differences better and thus leads me to be more open minded.

10. Do you think your bilingual status has given you **economic advantages** over a monolingual person? If yes, please explain with examples (Example: social mobility; greater possibility of finding employment).

Yes, I think that the professional opportunities are greater when one speaks more languages. It is easier to be more mobile (move to another country) and find a job when speaking more than one language. In my case with my job in Germany.

11. From your personal experience, do you think that bilingualism leads to other advantages besides individual, social, cultural and economic ones?

Maybe cognitive advantages? I think the brain acts in a very specific way when trying to translate things/focus on one language only, and so on.

12. Further comments:

QUESTIONNAIRE 5

Hello!

I'm Mariagiulia Vittore, student in the master's program in European and American Languages and Literature. I ask you to answer the following questions. These will only be used **anonymously** for the purposes of my master's thesis. The purpose of the following questionnaire is to determine in particular whether your bilingual status has brought you **individual, social, cultural, and economic benefits/advantages** at any time in your life. The suggested questions are based on existing literature.

Thank you in advance!

Age: …30s….

Profession: ………English teacher…………

1. In which country were you born?
Vicenza, Italy

2. In which country are you living now?
Italy

3. What languages do you speak as a bilingual? Italian and English
    3.1. When and with whom do you speak these languages?

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I speak Italian and English with my peers at university, with my co-workers, and with my students I usually try to speak only English.

4. What other languages do you know besides those in which you are bilingual? Please also indicate your level of knowledge (A1, A2, B1, B2, C1, C2)

I can speak, read, write in Chinese (level B2+), and I can read French and Spanish newspapers (B1).

I took German a long time ago but I didn't use it for about 15 years…so I would say that I went from a B1+ to A2.

I can read Korean, but can only speak at an A1 level.

5. **When** did you learn the languages you know? (Example: My parents raised me bilingually)

I grew up speaking both English and Italian from the very beginning. My parents told me that from the start I knew to address my father in English and my mother in Italian. I was also told that I would address family members in Italy sometimes in English and vice versa with family members in the U.S.…i guess that is because as a bilingual child you assume most adults can comprehend you, no matter what language you speak. Then, you find out that isn't necessarily true.

6. If your parents raised you bilingual, what is their first language? (e.g. mother speaks Italian and father speaks German)

My father's first language is English, but he also lived in Canada as a teen for a few months and can speak Quebecois, he also studied and can speak French, German, and Italian.

My mother's first language is Italian. She also studied French in middle school and in high school, and took English courses in the 1970s.

7. Do you think your bilingual status has given you **individual advantages** over a monolingual person? If yes, please explain with examples (Example: learning languages for you is easier, you have access to more information, you can express yourself more clearly).

The individual advantages of being bilingual when compared to a monolingual person include

-learning languages easily because your brain is wired to so thanks to the environment you grew up in

-being able to recognize similar patterns in languages (for example, phonemes, grammatical structures, vocabulary)

-connecting to the meaning behind certain languages because of the similar linguistic root they share

-you develop an understanding of the importance of being clear in your communication otherwise you could be misunderstood

-you are forced to develop, although in the long-run it proves a benefit, a certain flexibility when dealing with people and communication

-you realize people and places have different expressions that change completely when said in another country (example to stir the pot US versus agitare le acque ITALY)

8. Do you think your bilingual status has given you **social advantages** over a monolingual person? If yes, please explain with examples (Example: greater communicative sensibility, greater social sensitivity etc.).

Personally, I think every person has gifts or natural skills that they possess. If we look at the social advantages of being bilingual compared to a monolingual, I would say that they include the ability to help people who are in need of communication or translation of an address, an email or just to clarify something, but it also helps to network and meet people from different backgrounds, to expand your knowledge of peoples' experiences of life, their hobbies, their dreams, fears, hopes. You appreciate the beauty in the differences among people and also what connects us as human beings.

9. Do you think your bilingual status has given you **cultural advantages** over a monolingual person? If yes, please explain with examples (Example: be more open-minded and tolerant towards other cultures).

This is an interesting question because it forces me to think about what is the definition of culture and second, it is sad to think that some cultures have an advantage compared to others. Ideally, this discrepancy wouldn't exist. The one thing that I think could be seen as a cultural advantage is that a bilingual person can see 'blind spots' or hidden cultural meanings that can be positive and negative in the languages they speak. Blind spots for me are hidden meanings contained in the language that hint at structures that have been passed down through generations, but require processing and a re-evaluation of the core values of that language and culture. In short, some cultural tendencies need to be questioned. (For example, the word matrigna in Italian has a slightly hinted negative perception connected to it, whereas in English the word step-mother sounds less harsh; also, in Italy there is a long-tradition of 'slow food' or stopping to have lunch, follower perhaps by a nice espresso before staring work again, whereas in the US people tend to have lunch following a 'grab and go' mentality, thereby sacrificing time to properly digest the food and heading back to work with more energy).

Personally, speaking I think one cultural advantage I've had was that I would travel to different countries to teach one of my languages. (Then, again, a monolingual person can also do that without any problems if they wanted to teach their language.)

10. Do you think your bilingual status has given you **economic advantages** over a monolingual person? If yes, please explain with examples (Example: social mobility; greater possibility of finding employment).

I think as an English lettrice it definitely helped in Italy and in other positions I taught as an English teacher, which would not have been given to monolingual teachers. However, because I wanted more security in my life from an economic standpoint, I decided to study for a magistrale in English so that I could teach Italian students as an English teacher rather than just a lettrice because this position gives you very little hours compared to a full time English teacher. While teaching as a lettrice in a secondary school, I was encouraged by a British teacher to go for my magistrale in English, as she had done the same to teach positions as an A24 English teacher.

11. From your personal experience, do you think that bilingualism leads to other advantages besides individual, social, cultural and economic ones?

I can only speak from my personal experience. I think bilingualism is a dimension that is far deeper than what people tend to think. People think it's just being able to speak 2 languages, but are deeper implications.

You get to experience the world with the four classifications you mentioned above, but you also occupy a 'third space' or a 'state of hybridity' that can help you help others if they are need, that can show you new ideas or ways of living that can go beyond physical geographical areas as the languages you speak create beyond those limits. You may fit in or you may not, and that is ok. You learn to navigate the world with different perspectives. This sometimes can be fun, but also a reason for people to be not so inclusive when it comes to your participation because they don't understand where you are coming from.

The bilingual person may also open a new space where other languages also come in. For example, say a bilingual person has children, they may choose to expand their child's linguistic repertoire and expose them to other 2 languages. In Singapore, this is being done: students who speak Chinese and English at home, get to learn also Hindi and Tamil or French at school….depending on the languages their school offers.

A bilingual person often understands when two people from very different backgrounds have episodes of miscommunication and how the differences of languages and cultures

can be meeting points that bring lives together through marriages, through joint ventures in business, through friendships.

Bilingualism is also a state of negotiation of who you are….your identity constantly deconstructs and reconstructs itself as you study, travel, work, etc…You learn early on that change, flexibility and open-mindedness are part of your life experience, they are tools that you improve as you grow.
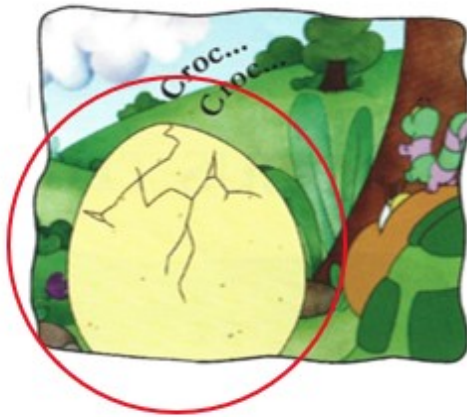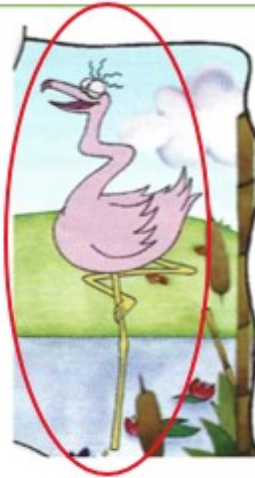
12. Further comments:

None, really 😊

Appendix 2 – Vocabulary test

SPOTS - TEETH - HANDS

TAIL - TALE - FEET

GREEN - EGG - BROWN

PINK - BIRD - LEG

HAPPY - SAD - ORANGE

DUCK - CHICKEN - BLUE

GREEN - FROG - WATER

EYES - EGG - MIRROR

TREE - PARK - STONE

EYES - EGG - MIRROR

Appendix 3 - the Acting Out transcription, the Story and the Song

Acting-Out transcription

Once Upon a time, there was an egg. The egg of a Dinocroc! And inside the egg was Hocus. Croc croc, croc croc croc…

Croc croc, croc croc croc… Ssss… listen:

What's that? What's that? What's that? Croc croc croc

Ssss… listen:

What's that? What's that? What's that? Croc, croc, oh!

Hello! Hello! Hello!

This is the story of Hocus the Dinocroc. Hocus was walking in the park. Tralala, tralala, tralalalala…

Oh, look! Nice!

Hello? Helloo, Hello!

Are you a bird?

Chirp, Chirp, chirp, oh yes, oh yes, oh yes, oh yes. Me too!

Que, Queack, queck!

You? A bird? No! You are not a bird! I am a bird. Bye bye! Bye bye bird.

Tralala, tralala, tralalalala… Oh, look! Nice!

Hello? Helloo, Hello!

Are you a duck?

Quack, quack, quack, oh yes, oh yes, oh yes, oh yes. Me too!

Que, Queck, quock!

You? A duck? No! You are not a duck! I am a duck. Bye bye! Bye bye duck.

Tralala, tralala, tralalalalla…

Oh, look! Nice! Hello? Hello! Are you a frog?

Croac, croac, croac, oh yes, oh yes, oh yes, oh yes. Me too!

Creing! Croag!

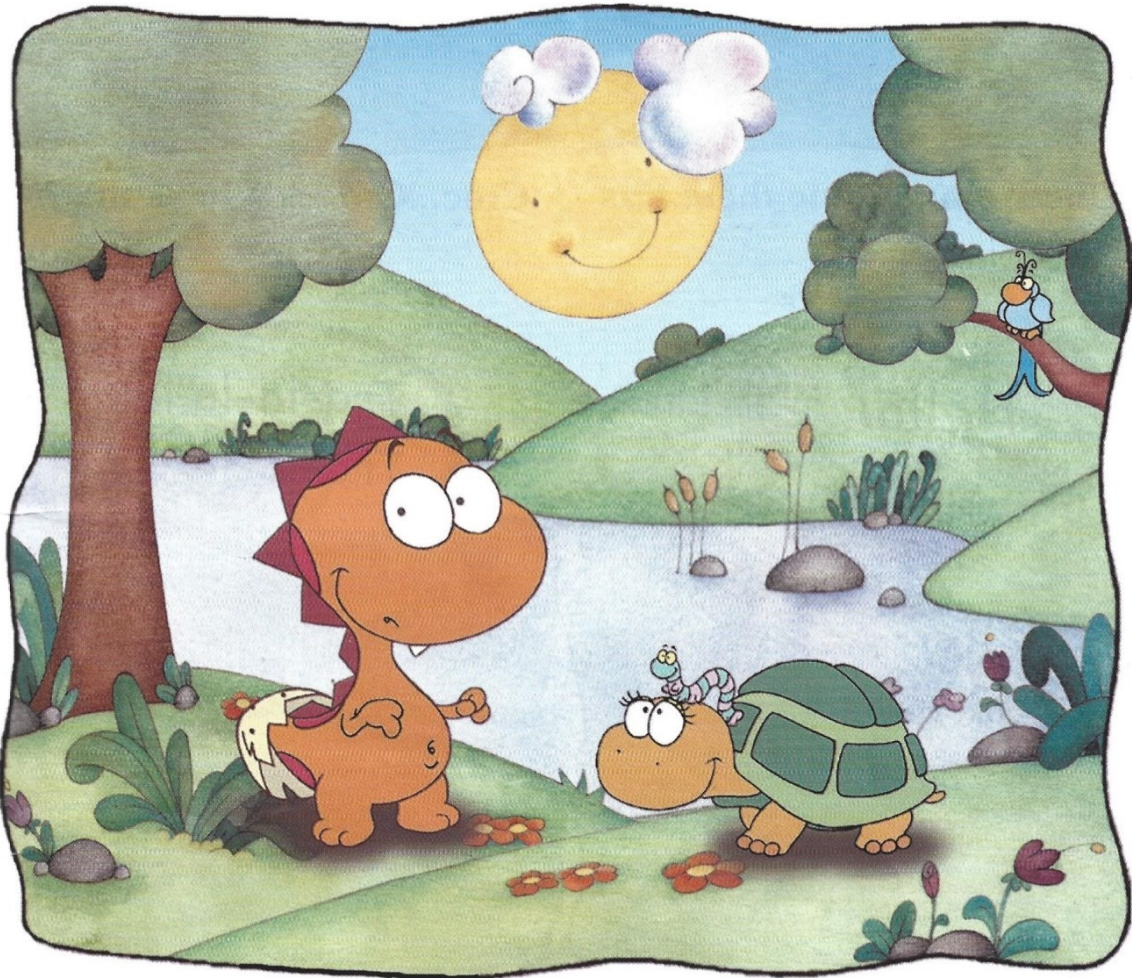You? A frog? No! You are not a frog! I am a frog. Bye bye! Splash! Bye bye frog.
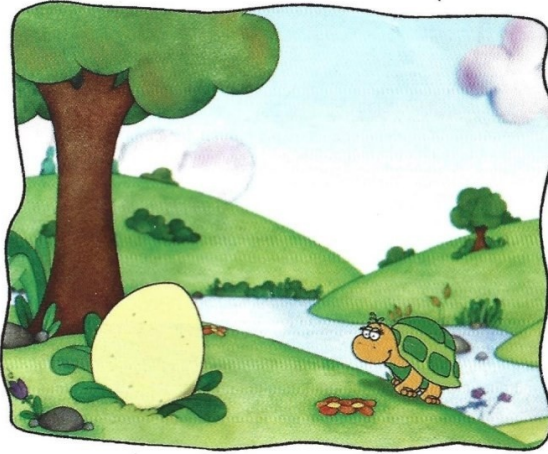
Tralala, tralala, tralalalala…

Oh, look! Nice! I have nice eyes! I have nice spots, and I have a cute tail! Who am I? I am Hocus, the Dinocroc! HURRAY!

1

HOCUS THE DINOCROC

three 3

Once upon a time there was an egg!
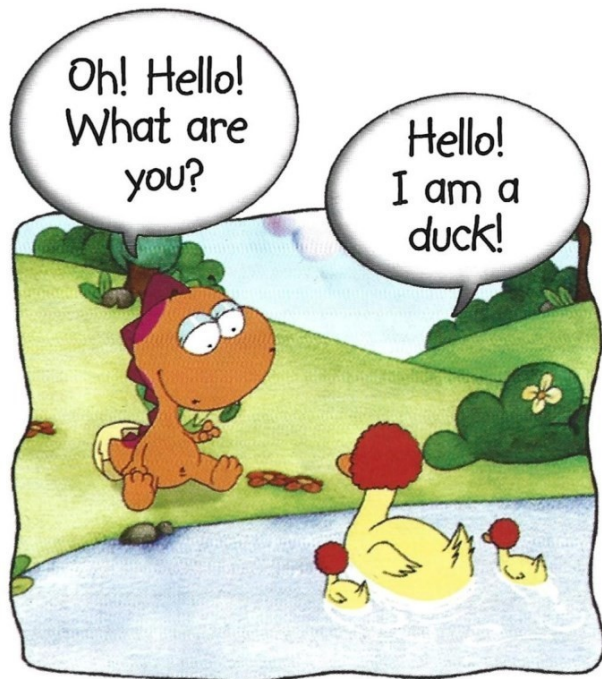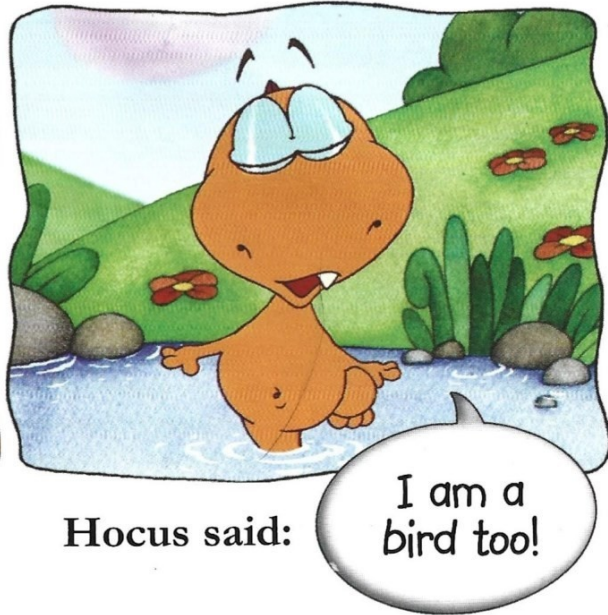
Croc...Croc... What's that?
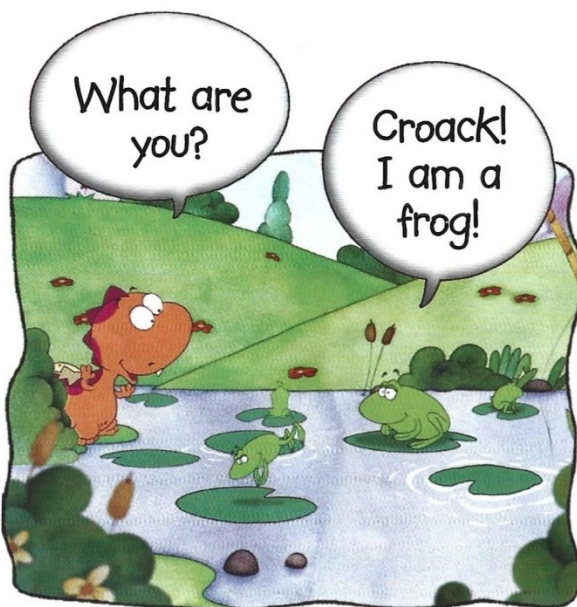
Inside the egg was Hocus!

Hocus was walking in the park.

4 four

Oh! Hello! What are you?

Hello! I am a bird!

Hocus said:

I am a bird too!

No, you are not a bird! Bye bye!

Oooh, Bye bye.

Oh! Hello! What are you?

Hello! I am a duck!

Me too!

Quack? No, you are not a duck!

Oh, O.K. Bye bye!

Bye bye!

Hocus was very sad.

What are you?

Croack! I am a frog!

Me too! Me too! I am a frog too.
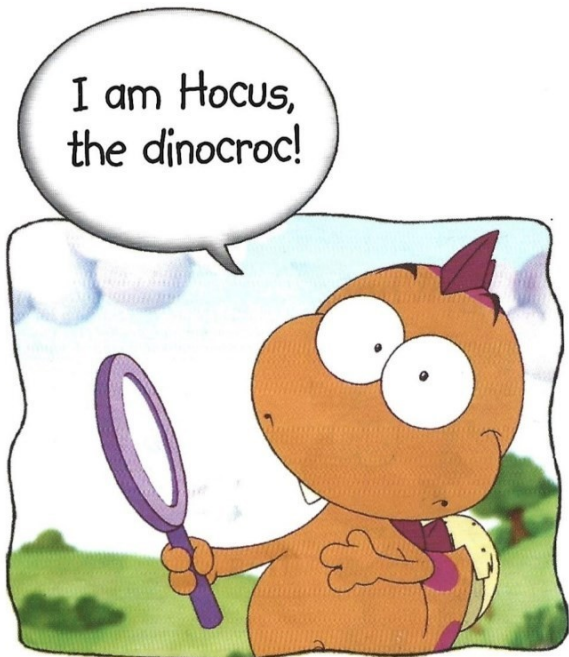
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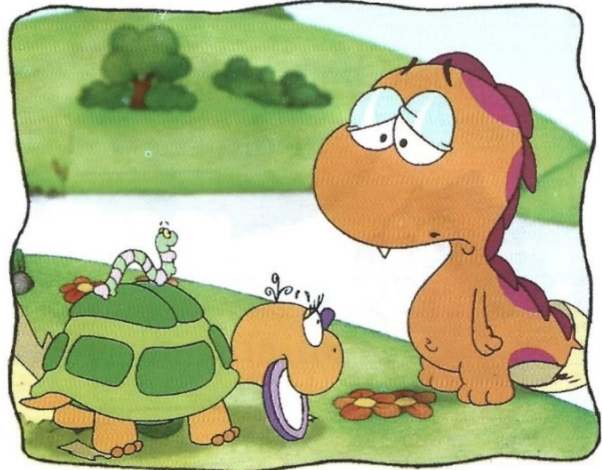
Hocus was very sad.

Hocus looked in the mirror.

Hurray!

The song

HOCUS THE DINOCROC

Once upon a time there was an egg.
Once upon a time there was an egg.
Once upon a time there was an egg.
The egg of a dinocroc.

Croc croc, croc croc croc.
And inside the egg was Hocus.

Sss... listen: rat tat tat!
Hey, what's that? Rat tat tat!
Hey, what's that? What's that? Rat tat!
What's that? Rat tat. What's that?
What's that? What's that?

Croc croc, croc croc croc. Croc croc, croc croc croc. Oh! The egg is breaking!

3

Oh! Hello! Who are you?
Hocus! Who are you? Hocus!
Hurrah! Hurrah! Hurrah!
This is the story of Hocus the dinocroc.
Hocus was walking in the park:
tralala, tralala, tralalalala!

There was a bird: chirp chirp chirp!
There was a bird: chirp chirp chirp!
Hello! Hello! Hello! Hello!
Are you a bird? Chirp chirp chirp!
Are you a bird? Chirp chirp chirp!
Oh yes! Oh yes! Oh yes! Oh yes!
Me too! Que... No! Queack, queck...
No, you are not a bird!

4
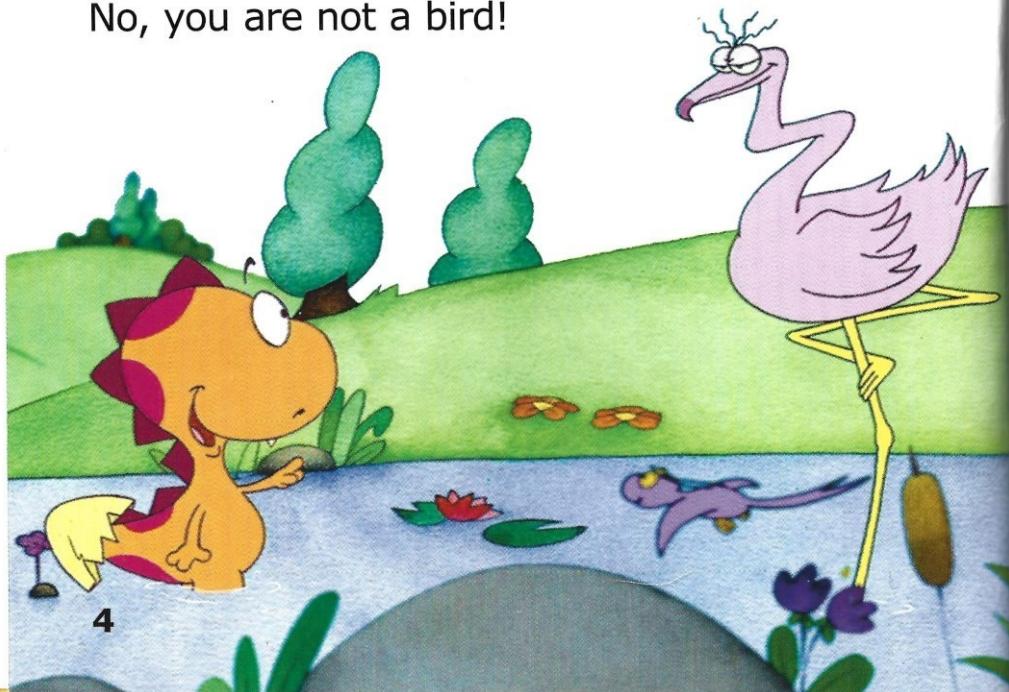
Tralala, tralala, tralalalala!
There was a duck: quack quack quack.
There was a duck: quack quack quack.
Hello! Hello! Hello! Hello!
Are you a duck? Quack quack quack.
Are you a duck? Quack quack quack.
Oh yes! Oh yes! Oh yes! Oh yes!
Me too! Queck. No! Quock.
You are not a duck!
Tralala, tralala,
tralalalala!

There was a frog:
Cra cra cra.

5

There was a frog: cra cra cra...
Hello, hello, hello, hello!
Are you a frog? Cra cra cra! Are you a frog?
Cra cra cra! Oh yes! Oh yes! Oh yes! Oh yes!
Me too! Creeing. No! Croag.
No, you are not a frog! Bye bye!
Bye bye frog! SPLASH!

Hocus was walking in the park:
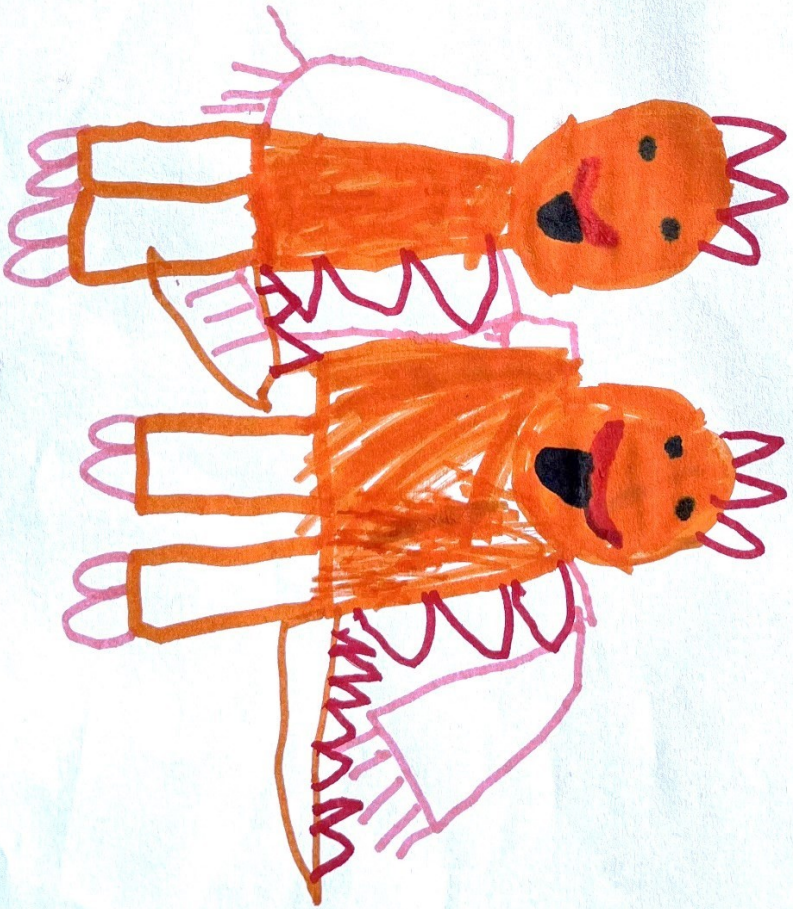tralala, tralala, tralalalala!
Hocus looked in the mirror and said:
I have nice eyes! Yes!
I have nice spots! Yes!
And I have a cute tail! Yes!
Who am I?
I am Hocus!
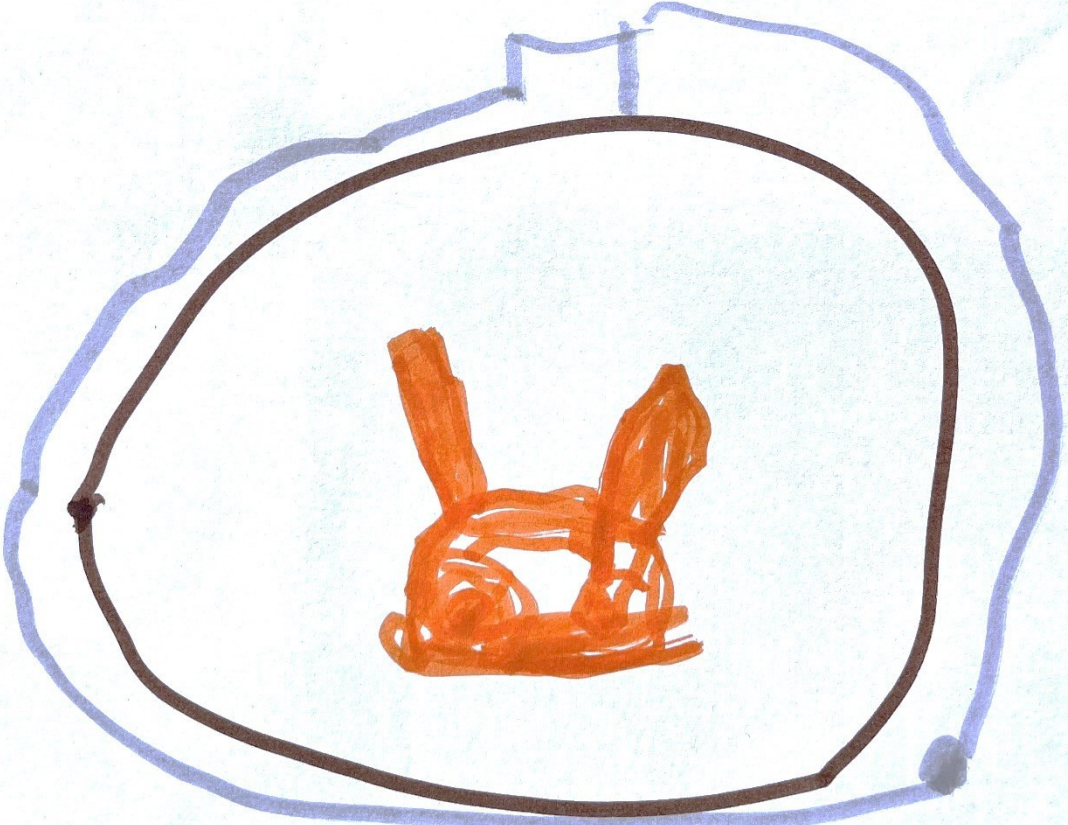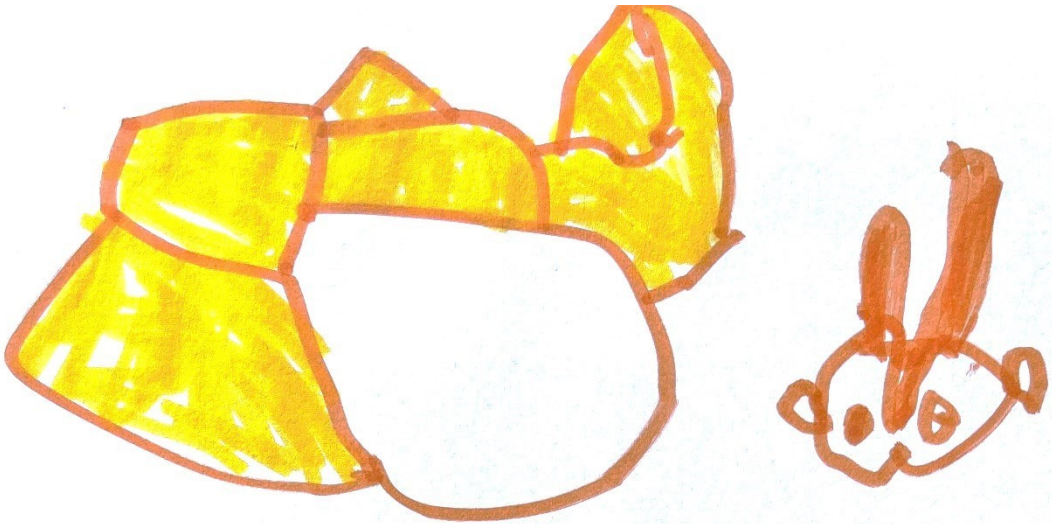
6

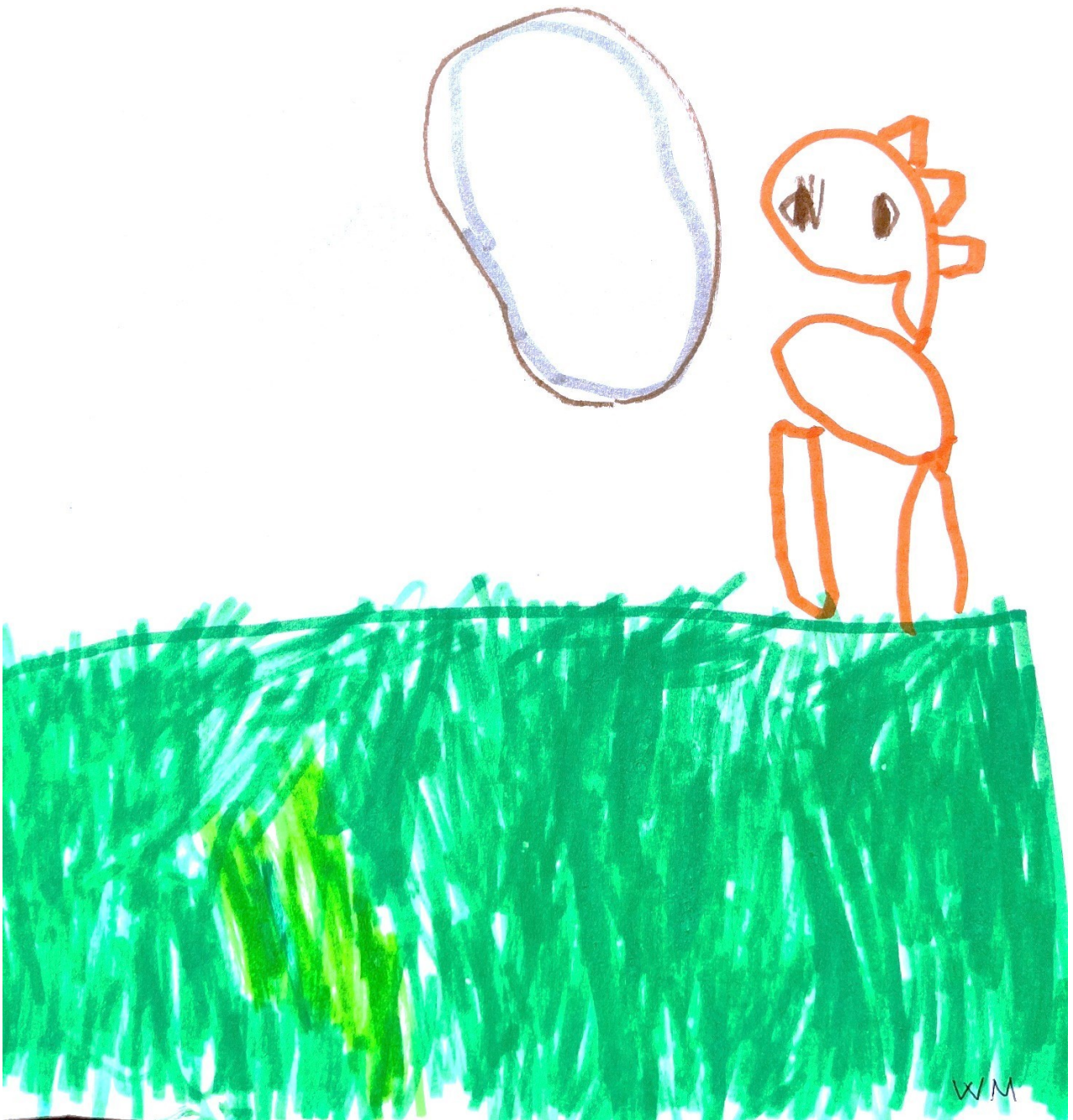**Appendix 4 – Children drawing activity**

NA
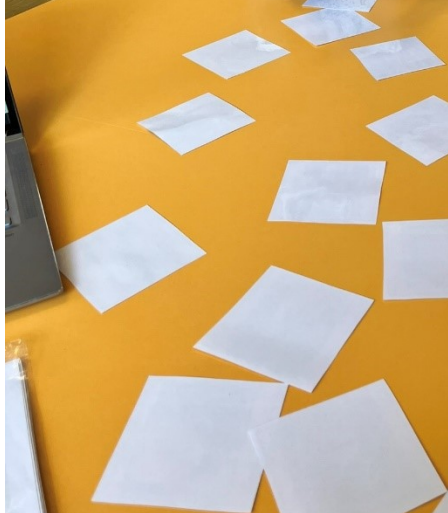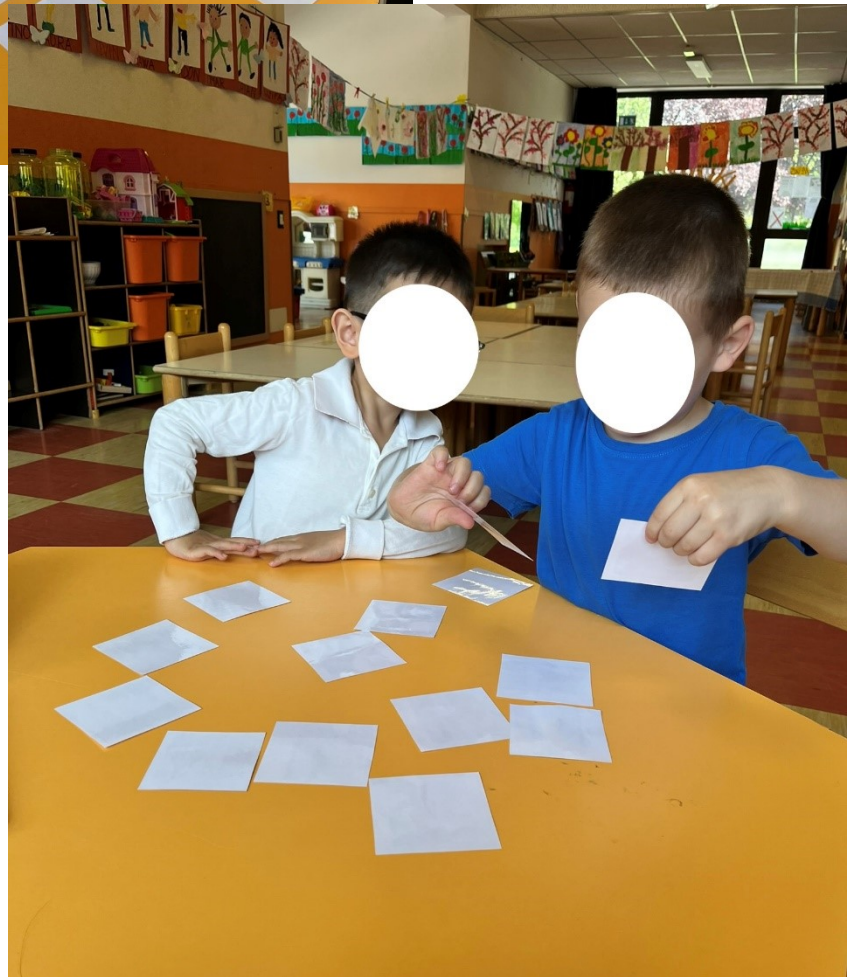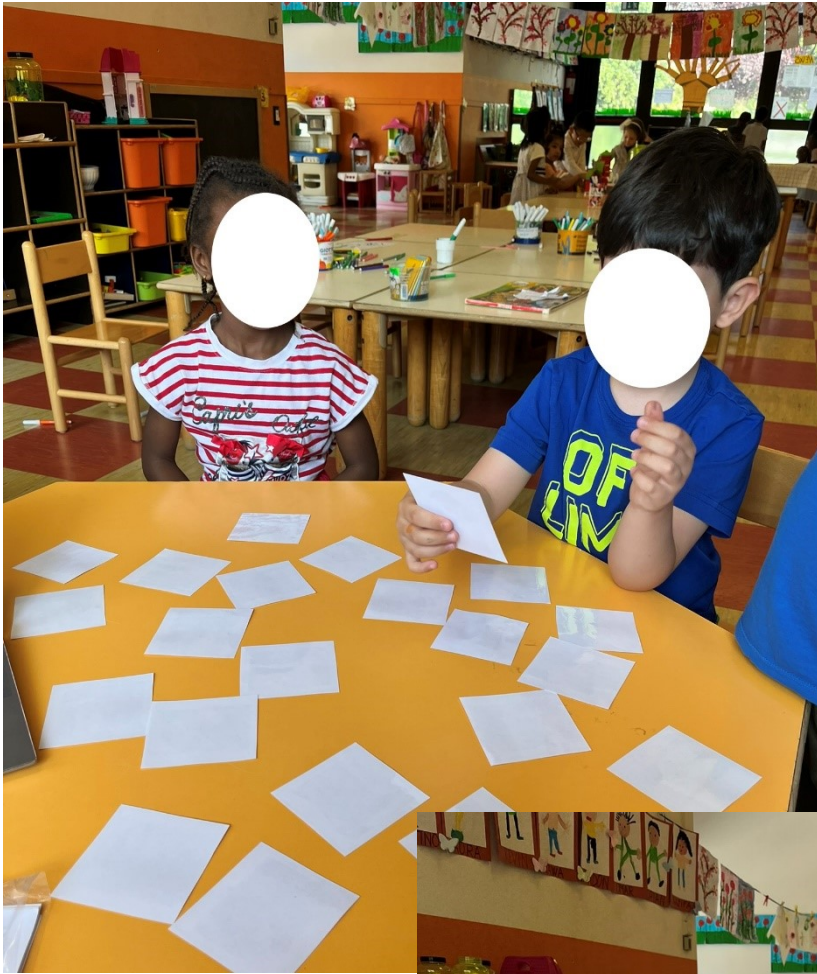
HOUSE

HJM

HOCUS

209

MLM

SP

EGM

216

SVG

218

BE

Appendix 5 – Memory game

Appendix 6 - Children's enjoyment index

Appendix 7 – Hocus the Dinocroc Diploma

Appendix 8 – Parents' Questionnaire

Italiano

Gentili genitori,

Sono Mariagiulia Vittore, studentessa del Corso Magistrale Lingue e Letterature Europee e Americane. Nel mese di maggio ho svolto il Progetto *Hocus & Lotus* per la stesura della mia tesi di laurea magistrale nella classe dei vostri bambini. L'obbiettivo era avvicinarli alla lingua inglese e studiare i possibili vantaggi del bilinguismo, dato che mostri dei vostri figli conoscono più lingue.
Vi chiedo gentilmente di rispondere alle seguenti domande (a risposta chiusa o aperta) che verranno usate esclusivamente ai fini del progetto per la mia tesi magistrale sull'importanza del bilinguismo e delle lingue imparate fin da piccoli. La compilazione del questionario richiederà solo qualche minuto.
Vi ricordo inoltre che i vostri nomi e i nomi dei vostri bambini rimarranno assolutamente anonimi e che i dati raccolti verranno usati unicamente per la ricerca.
Vi ringrazio in anticipo per il vostro tempo e per la vostra collaborazione!

Un cordiale saluto,
Mariagiulia Vittore

English

Dear parents,
I am Mariagiulia Vittore, a student in the Master's Degree Course in European and American Languages and Literature. In May, I carried out the *Hocus & Lotus* Project for my Master's thesis in your children's class. The aim was to bring them closer to the English language and to study the possible advantages of bilingualism, as monsters of your children know several languages.
I kindly ask you to answer the following questions (closed or open-ended) which will be used exclusively for the purposes of my Master's thesis project on the importance of bilingualism and languages learned from an early age. Completing the questionnaire will only take a few minutes.
I would also like to remind you that your names and the names of your children will remain absolutely anonymous and that the data collected will only be used for research purposes.
Thank you in advance for your time and cooperation!
Kind regards,

Mariagiulia Vittore

QUESTIONARIO

Nome del genitore: …………………………………………………………………….

Nome di tuo/a figlio/a: …………………………………………………………….

Che lingua parli a casa con tuo/a figlio/a? …………………………………………

1. Era la prima volta che tuo/a figlio/a prendeva parte a un progetto in lingua straniera?

SI	NO	NON LO SO

2. A casa, tuo/a figlio/a ti ha mai parlato delle lezioni di inglese con Hocus e Lotus? (segna con una crocetta)

SI	NO	NON LO SO

3. Se hai risposto SI, ne ha parlato in modo positivo o in modo negativo? (segna con una crocetta)

IN MODO POSITIVO	IN MODO NEGATIVO

4. Che cosa ti racconta del mondo di Hocus e Lotus?

…………………………………………………………………………………

…………………………………………………………………………………

……………………………

5. Come valuti l'esperienza che tuo figlio ha vissuto con Hocus e Lotus? (segna con una crocetta):

ESTREMAMENTE NEGATIVA	NEGATIVA	NEUTRA	POSITIVA	ESTREMAMENTE POSITIVA

6. Hai notato un atteggiamento differente di tuo/a figlio/a verso la lingua inglese?

SI	NO	NON LO SO

7. In che modo è cambiato?

………………………………………………………………………………………………

………………………………………………………………………………………………

……………………………

8. Eventuali ulteriori commenti a proposito del progetto in lingua inglese Hocus e Lotus:

…………………………………………………………………………………………

…………………………………………………………………………………………

……………………………

QUESTIONNAIRE

Parent's name: ....

Name of your child: ....

What language do you speak at home with your child? ....

1. Was this the first time your child took part in a foreign language project?

YES	NO	I DON'T KNOW

2. Has your child ever told you about the English lessons with Hocus and Lotus at home? (mark with a cross)

YES	NO	I DON'T KNOW

3. If you answered YES, did he/she speak positively or negatively about it? (mark with a cross)

POSITIVELY	NEGATIVELY

4. What does your child tell you about the world of Hocus and Lotus?

…………………………………………………………………………………………

…………………………………………………………………………………………

……………………………

5. How do you rate your child's experience with Hocus and Lotus? (mark with a cross):

EXTREMLY	NEGATIVE	NEUTRAL	POSITIVE	EXTREMLY

NEGATIVE				POSITIVE

6. Have you noticed a different attitude of your child towards the English language?

YES	NO	I DON'T KNOW

7. In what way has it changed?

……………………………………………………………………………………

……………………………………………………………………………………

……………………………

8. Possible further comments on the English language project Hocus and Lotus:

……………………………………………………………………………………

……………………………………………………………………………………

……………………………

QUESTIONNAIRE 1

Nome del genitore: ………………/…………………….

Nome di tuo/a figlio/a: ………………MLM………………………….

Che lingua parli a casa con tuo/a figlio/a? ……Romeno e italiano……………………

1. Era la prima volta che tuo/a figlio/a prendeva parte a un progetto in lingua straniera?

SI	NO	NON LO SO

2. A casa, tuo/a figlio/a ti ha mai parlato delle lezioni di inglese con Hocus e Lotus? (segna con una crocetta)

SI	NO	NON LO SO

3. Se hai risposto SI, ne ha parlato in modo positivo o in modo negativo? (segna con una crocetta)

IN MODO POSITIVO	IN MODO NEGATIVO

4. Che cosa ti racconta del mondo di Hocus e Lotus?

………Dice delle parole in inglese e dice che i piace parlare inglese…………………

5. Come valuti l'esperienza che tuo figlio ha vissuto con Hocus e Lotus? (segna con una crocetta):

ESTREMAMENTE NEGATIVA	NEGATIVA	NEUTRA	**POSITIVA**	ESTREMAMENTE POSITIVA

6. Hai notato un atteggiamento differente di tuo/a figlio/a verso la lingua inglese?

SI	NO	NON LO SO

7. In che modo è cambiato?

………Parla in inglese dice delle parole………………………………………………………………

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8. Eventuali ulteriori commenti a proposito del progetto in lingua inglese Hocus e Lotus:

………piace parlare in inglese, dice tante parole e saluta in inglese………………

QUESTIONNAIRE 2

Nome del genitore: ………/………………………………………….

Nome di tuo/a figlio/a: ………………SVG………………………………….

Che lingua parli a casa con tuo/a figlio/a? …………Romeno italiano………………….

1. Era la prima volta che tuo/a figlio/a prendeva parte a un progetto in lingua straniera?

SI	NO	NON LO SO

2. A casa, tuo/a figlio/a ti ha mai parlato delle lezioni di inglese con Hocus e Lotus? (segna con una crocetta)

SI	NO	NON LO SO

3. Se hai risposto SI, ne ha parlato in modo positivo o in modo negativo? (segna con una crocetta)

IN MODO POSITIVO	IN MODO NEGATIVO

4. Che cosa ti racconta del mondo di Hocus e Lotus?

………La storia di due dinosauri che fanno amicizia e passeggiano, Hocus non sa chi è e vuole un amico…………

5. Come valuti l'esperienza che tuo figlio ha vissuto con Hocus e Lotus? (segna con una crocetta):

ESTREMAMENTE NEGATIVA	NEGATIVA	NEUTRA	**POSITIVA**	ESTREMAMENTE POSITIVA

6. Hai notato un atteggiamento differente di tuo/a figlio/a verso la lingua inglese?

SI	NO	NON LO SO

7. In che modo è cambiato?

…………………A casa dice parole e frasi in inglese …………………………………………………………

8. Eventuali ulteriori commenti a proposito del progetto in lingua inglese Hocus e Lotus:

…………………………………………………………………………………

…………………………………………………………………………………

QUESTIONNAIRE 3

Nome del genitore: …………/…………………………………………….

Nome di tuo/a figlio/a: ………………DDB………………………………….

Che lingua parli a casa con tuo/a figlio/a? ………Bengalese…………………

1. Era la prima volta che tuo/a figlio/a prendeva parte a un progetto in lingua straniera?

SI	NO	NON LO SO

2. A casa, tuo/a figlio/a ti ha mai parlato delle lezioni di inglese con Hocus e Lotus? (segna con una crocetta)

SI	NO	NON LO SO

3. Se hai risposto SI, ne ha parlato in modo positivo o in modo negativo? (segna con una crocetta)

IN MODO POSITIVO	IN MODO NEGATIVO

4. Che cosa ti racconta del mondo di Hocus e Lotus?

………………………ha imparato tante cose e ha trovato molto bene col progetto……………………………………

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5. Come valuti l'esperienza che tuo figlio ha vissuto con Hocus e Lotus? (segna con una crocetta):

ESTREMAMENTE NEGATIVA	NEGATIVA	NEUTRA	POSITIVA	**ESTREMAMENTE POSITIVA**

6. Hai notato un atteggiamento differente di tuo/a figlio/a verso la lingua inglese?

SI	NO	NON LO SO

7. In che modo è cambiato?

………………………Gli piace parlare la lingua inglese………………

8. Eventuali ulteriori commenti a proposito del progetto in lingua inglese Hocus e Lotus:

……Ringraziamo per il progetto…………………………………

QUESTIONNAIRE 4

Nome del genitore: ……………/…………………………………….

Nome di tuo/a figlio/a: …………JV………………………………….

Che lingua parli a casa con tuo/a figlio/a? ……………italiano e inglese………………

1. Era la prima volta che tuo/a figlio/a prendeva parte a un progetto in lingua straniera?

SI	NO	NON LO SO

2. A casa, tuo/a figlio/a ti ha mai parlato delle lezioni di inglese con Hocus e Lotus? (segna con una crocetta)

SI	NO	NON LO SO

3. Se hai risposto SI, ne ha parlato in modo positivo o in modo negativo? (segna con una crocetta)

IN MODO POSITIVO	IN MODO NEGATIVO

4. Che cosa ti racconta del mondo di Hocus e Lotus?

…………………….Ne ha parlato bene …………………………………

5. Come valuti l'esperienza che tuo figlio ha vissuto con Hocus e Lotus? (segna con una crocetta):

ESTREMAMENTE NEGATIVA	NEGATIVA	NEUTRA	**POSITIVA**	ESTREMAMENTE POSITIVA

6. Hai notato un atteggiamento differente di tuo/a figlio/a verso la lingua inglese?

SI	NO	NON LO SO

7. In che modo è cambiato?

……………………………………………………………………………………

……………………………………………………………………………………

8. Eventuali ulteriori commenti a proposito del progetto in lingua inglese Hocus e Lotus:

…………………….Io penso che è felice del progetto…………………

QUESTIONNAIRE 5

Parent's name: ..../...

Name of your child: ....BE..

What language do you speak at home with your child? ....Italiano moldavo..................

1. Was this the first time your child took part in a foreign language project?

YES	NO	I DON'T KNOW

2. Has your child ever told you about the English lessons with Hocus and Lotus at home? (mark with a cross)

YES	NO	I DON'T KNOW

3. If you answered YES, did he/she speak positively or negatively about it? (mark with a cross)

POSITIVELY	NEGATIVELY

4. What does your child tell you about the world of Hocus and Lotus?

………………she was happy when she did the english lessons…………

5. How do you rate your child's experience with Hocus and Lotus? (mark with a cross):

EXTREMLY NEGATIVE	NEGATIVE	NEUTRAL	POSITIVE	**EXTREMLY POSITIVE**

6. Have you noticed a different attitude of your child towards the English language?

YES	NO	I DON'T KNOW

7. In what way has it changed?

……………………she repeats many english words……………………

8. Possible further comments on the English language project Hocus and Lotus:

…………………useful to enrich english vocabulary………………………

QUESTIONNAIRE 6

Nome del genitore: …………/…………………………………….

Nome di tuo/a figlio/a: ………………KO…………………………….

Che lingua parli a casa con tuo/a figlio/a? …………Bengalese……………………

1. Era la prima volta che tuo/a figlio/a prendeva parte a un progetto in lingua straniera?

SI	**NO**	NON LO SO

2. A casa, tuo/a figlio/a ti ha mai parlato delle lezioni di inglese con Hocus e Lotus? (segna con una crocetta)

SI	NO	NON LO SO

3. Se hai risposto SI, ne ha parlato in modo positivo o in modo negativo? (segna con una crocetta)

IN MODO POSITIVO	IN MODO NEGATIVO

4. Che cosa ti racconta del mondo di Hocus e Lotus?

……………………Non so…………………………………………

5. Come valuti l'esperienza che tuo figlio ha vissuto con Hocus e Lotus? (segna con una crocetta):

ESTREMAMENTE NEGATIVA	NEGATIVA	**NEUTRA**	POSITIVA	ESTREMAMENTE POSITIVA

6. Hai notato un atteggiamento differente di tuo/a figlio/a verso la lingua inglese?

SI	NO	**NON LO SO**

7. In che modo è cambiato?

………………………………….Non

so…………………………………………

8. Eventuali ulteriori commenti a proposito del progetto in lingua inglese Hocus e Lotus:

………………………………………………………………………………………

………………………………………………………………………………

QUESTIONNAIRE 7

Nome del genitore: ………………/……………………………………….

Nome di tuo/a figlio/a: ………………………BM……………………….

Che lingua parli a casa con tuo/a figlio/a? ……Moldavo………………………

1. Era la prima volta che tuo/a figlio/a prendeva parte a un progetto in lingua straniera?

SI	NO	NON LO SO

2. A casa, tuo/a figlio/a ti ha mai parlato delle lezioni di inglese con Hocus e Lotus? (segna con una crocetta)

SI	NO	NON LO SO

3. Se hai risposto SI, ne ha parlato in modo positivo o in modo negativo? (segna con una crocetta)

IN MODO POSITIVO	IN MODO NEGATIVO

4. Che cosa ti racconta del mondo di Hocus e Lotus?

……………………………………………………………………………………

……………………………………………………………………………………

5. Come valuti l'esperienza che tuo figlio ha vissuto con Hocus e Lotus? (segna con una crocetta):

ESTREMAMENTE NEGATIVA	NEGATIVA	NEUTRA	**POSITIVA**	ESTREMAMENTE POSITIVA

6. Hai notato un atteggiamento differente di tuo/a figlio/a verso la lingua inglese?

SI	NO	**NON LO SO**

7. In che modo è cambiato?

……………………………………………………………………………………

……………………………………………………………………………………

8. Eventuali ulteriori commenti a proposito del progetto in lingua inglese Hocus e Lotus:

……………………………………………………………………………………………

……………………………………………………………………………………………

QUESTIONNAIRE 8

Parent's name: ..../.....................................

Name of your child: ....EGM....................................

What language do you speak at home with your child? ....

1. Was this the first time your child took part in a foreign language project?

YES	NO	I DON'T KNOW

2. Has your child ever told you about the English lessons with Hocus and Lotus at home? (mark with a cross)

YES	NO	I DON'T KNOW

3. If you answered YES, did he/she speak positively or negatively about it? (mark with a cross)

POSITIVELY	NEGATIVELY

4. What does your child tell you about the world of Hocus and Lotus?

………………………………………………………………………………

5. How do you rate your child's experience with Hocus and Lotus? (mark with a cross):

EXTREMLY NEGATIVE	NEGATIVE	NEUTRAL	POSITIVE	EXTREMLY POSITIVE

6. Have you noticed a different attitude of your child towards the English language?

YES	**NO**	I DON'T KNOW

7. In what way has it changed?

………………………………………………………………………………

………………………………………………………………………………

……………………………

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8. Possible further comments on the English language project Hocus and Lotus:

………………………………………………………………………………………

………………………………………………………………………………………

QUESTIONNAIRE 9

Nome del genitore: ……………/……………………….

Nome di tuo/a figlio/a: …………………MF……………………………….

Che lingua parli a casa con tuo/a figlio/a? ………………italiano…………

1. Era la prima volta che tuo/a figlio/a prendeva parte a un progetto in lingua straniera?

SI	NO	NON LO SO

2. A casa, tuo/a figlio/a ti ha mai parlato delle lezioni di inglese con Hocus e Lotus? (segna con una crocetta)

SI	NO	NON LO SO

3. Se hai risposto SI, ne ha parlato in modo positivo o in modo negativo? (segna con una crocetta)

IN MODO POSITIVO	IN MODO NEGATIVO

4. Che cosa ti racconta del mondo di Hocus e Lotus?

……………Di un dinosauro che incontra altri animali …………………

5. Come valuti l'esperienza che tuo figlio ha vissuto con Hocus e Lotus? (segna con una crocetta):

ESTREMAMENTE NEGATIVA	NEGATIVA	NEUTRA	POSITIVA	ESTREMAMENTE POSITIVA

6. Hai notato un atteggiamento differente di tuo/a figlio/a verso la lingua inglese?

SI	NO	NON LO SO

7. In che modo è cambiato?

…………………………………………………………………………………

…………………………………………………………………………………

8. Eventuali ulteriori commenti a proposito del progetto in lingua inglese Hocus e
    Lotus:

    …………………………………………………………………………………

    …………………………………………………………………………………

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Italian summary

La seguente tesi si basa sull'ipotesi che il bilinguismo porti notevoli vantaggi in molti aspetti della vita. Partendo da alcune idee generali su questo fenomeno, mi è sembrato importante raccogliere anche alcuni dati concreti per sostenere la mia ipotesi e fornire alcune prove pratiche. L'obiettivo di questo lavoro è anche quello di sfatare tutti i falsi miti che circondano il bilinguismo, purtroppo ancora molto presenti in Italia e nel mondo. Questo elaborato non solo offre una descrizione dettagliata dei falsi miti radicati sull'argomento, ma anche una descrizione dei principali benefici di questo fenomeno, sperando di convincere le persone e i neogenitori dei vantaggi di conoscere e parlare più di una lingua.

Oggi almeno la metà della popolazione è bilingue o multilingue. Essenzialmente ogni nazione del mondo e la maggioranza delle persone di tutte le classi socioeconomiche e di tutte le età parlano più di una lingua. Il monolinguismo può essere considerato quasi un'anomalia nel mondo di oggi, caratterizzato dall'aumento dei flussi migratori e dall'apprendimento precoce delle lingue straniere (McLaughlin 1984).

Molti esperti hanno proposto definizioni diverse di questo fenomeno multidimensionale: Skutnabb-Kangas (1981) afferma che possiamo distinguere tra quattro diversi tipi di definizioni, a seconda dell'aspetto del bilinguismo che utilizziamo come criterio. Le definizioni di bilinguismo possono basarsi sull'origine dei bilingui, sulla competenza linguistica di un bilingue, sulla funzione che la lingua svolge per l'individuo o in una comunità e sull'atteggiamento verso il bilinguismo.

Le definizioni basate sulla competenza sono numerose e varie. Una delle definizioni più note di bilinguismo appartiene a Leonard Bloomfield, il quale sostiene che un bilingue possiede "un controllo simile a quello di un nativo di due o più lingue" (1974: 64). Tuttavia, questa definizione escluderebbe tutti coloro che parlano due lingue ma non hanno la competenza linguistica di un madrelingua. Un'altra definizione altrettanto accurata è quella data da Maximilian Braun (1937: 115), che definisce il bilinguismo come "la padronanza attiva e completamente uguale di due o più lingue". A differenza di Bloomfield e delle altre due definizioni rigorose di bilinguismo, John Macnamara (1967) elenca le quattro aree della capacità linguistica: comprendere, parlare, leggere e scrivere, e divide ogni area in quattro livelli, fonemi/grafemi, lessico,

sintassi e semantica. Secondo Macnamara sono bilingui le persone che possiedono almeno una delle abilità linguistiche sopra elencate nella loro seconda lingua. A questo proposito, si può citare anche John V. Edwards, che sostiene che "tutti sono bilingui", in quanto qualsiasi persona al mondo conosce qualche parola in una lingua diversa dalla propria lingua madre (citato in Bathia, Ritchie, 2004: 7).

In seguito, si è cominciato a considerare anche l'importanza della quantificazione. Gli studiosi hanno iniziato a rivolgere la loro attenzione alla funzione delle due lingue per il parlante bilingue e in una società bilingue. Possiamo inoltre fare una distinzione tra funzione interna e funzione esterna. Per funzione interna si intende la funzione verso sé stessi (i mezzi per la riflessione e la coscienza), mentre per funzione esterna si intende la funzione verso gli altri. Il linguista polacco-americano Uriel Weinreich (1979:1) nella sua opera *Languages in Contact* afferma che "la pratica di usare alternativamente due lingue sarà chiamata bilinguismo, e la persona coinvolta, bilingue". Infine, Renzo Titone (Titone 1972) ha affermato che il bilinguismo consiste nella capacità di esprimersi in una lingua rispettandone i concetti e le strutture, invece di parafrasare la nostra prima lingua. Un'altra definizione che prende in considerazione l'uso regolare delle due lingue e non il grado di padronanza è quella data da Grosjean (2015), che afferma che i bilingui usano due o più lingue nella loro vita quotidiana.

Il bilinguismo può essere esaminato anche con un approccio basato sull'atteggiamento. Skutnabb-Kangas (1981: 88) afferma che l'atteggiamento ha a che fare con l'identificazione. Più precisamente un'identificazione interna e una esterna. L'identificazione interna significa che il parlante si identifica come bilingue e/o appartenente a due culture (o parti di esse). L'identificazione esterna significa che il parlante è identificato dagli altri come bilingue.

Malmberg (1977, citato in Skutnabb-Kangas, 1981: 88) afferma che un vero bilingue/plurilingue deve essere accettato come madrelingua. In seguito, modifica leggermente la sua idea, dichiarando che una persona bilingue dovrebbe essere in grado di agire in entrambi i gruppi linguistici senza evidenti problemi. Considerando i diversi approcci al bilinguismo e le diverse definizioni, il bilinguismo può essere inteso semplicemente come il possesso di due lingue. Se applichiamo le definizioni dei vari studiosi, possiamo avere un bilingue con competenza linguistica nativa, un bilingue che si identifica con la propria lingua ma non con il Paese in cui viene parlata, un bilingue

che conosce bene solo una struttura grammaticale della lingua (ad esempio la fonologia), un bilingue che parla una lingua meglio dell'altra o un bilingue che sa leggere ma non scrivere nella seconda lingua. I soggetti che si trovano su questo continuum possono essere considerati bilingui, ma ognuno di loro ha raggiunto livelli diversi di bilinguismo.

Poiché la definizione di bilinguismo è così ampia, mi è sembrato necessario classificare questo fenomeno in diversi tipi, in base a fattori di sviluppo, cognitivi, linguistici e sociali come l'età, la competenza linguistica, il prestigio della lingua, l'uso della lingua e così via. Tra tutti questi, mi sono concentrata sul fattore età, in quanto è un prerequisito fondamentale per l'acquisizione ottimale di qualsiasi lingua.

In base all'età di inizio dell'acquisizione delle lingue, si può parlare di bilinguismo precoce (da 0 a 3 anni) o tardivo (dopo la pubertà). Il bilinguismo precoce può essere simultaneo, se il bambino acquisisce naturalmente due codici linguistici in modo concomitante fin dalla nascita, o sequenziale, se il bambino impara la seconda lingua dopo i 3 anni di età. In questa tesi mi sono concentrata sul bilinguismo precoce simultaneo soprattutto perché prima è meglio e perché tutti i bambini bilingui della scuola, dove si è svolto il progetto di questa tesi, sono cresciuti fin dalla nascita utilizzando due lingue, tranne una bambina, arrivata in Italia l'anno scorso. Inoltre, la maggior parte dei ricercatori concorda sul fatto che l'infanzia è il periodo migliore della vita per acquisire una seconda lingua, perché i bambini lo fanno in modo naturale e senza sforzo. In particolare, emerge che il primo e il secondo periodo critico (Daloiso, 2009b) giocano un ruolo chiave nell'acquisizione di uno o più codici linguistici come lingua madre, e costituiscono quindi le finestre temporali più fertili per introdurre i bambini al bilinguismo o al multilinguismo. Analizzando poi la competenza linguistica (in Daloiso, 2009a) che un individuo può sviluppare quando è esposto a due lingue durante il primo, il secondo o il terzo periodo, diventa chiaro che le difficoltà progressive non riguardano tutte le componenti linguistiche. Gli studenti di lingue dopo i 9 anni incontreranno maggiori difficoltà sul fronte fonetico e morfosintattico, piuttosto che su quello lessicale, semantico e pragmatico.

Indagare sui falsi miti che circondano il bilinguismo è essenziale per comprenderne il reale valore. La paura di avere un accento, la paura di balbettare, la paura di essere l'unico bilingue in un mondo di monolingui, la paura di avere uno spazio

cerebrale limitato per l'acquisizione delle lingue, la paura di compromettere il funzionamento del cervello attraverso il bilinguismo, la paura di creare ritardi nello sviluppo cognitivo dei bambini, la paura di far dimenticare ai bambini la loro prima lingua quando ne imparano una seconda, la paura di uno sdoppiamento della personalità a causa del bilinguismo, la paura che la conoscenza di due lingue possa influenzare la comprensione e così via. Va sottolineato che i bambini nascono predisposti ad apprendere una o più lingue in modo naturale, senza confondersi e senza mostrare ritardi linguistici e cognitivi.

Come già detto, è importante che i genitori si assicurino che i loro figli abbiano ampie opportunità di ascoltare e parlare entrambe le lingue (Garaffa, Sorace, Vender, 2020).

Dopo aver descritto quali sono i miti che ruotano intorno a questo fenomeno, ho cercato di sfatarli anche parlando di quali sono i principali vantaggi del bilinguismo, non solo nell'infanzia ma anche nell'arco della vita. Per indagare realmente i vantaggi nell'arco della vita (vantaggi individuali, sociali, culturali ed economici), ho realizzato un piccolo progetto di ricerca basato su questionari proposti a adulti bilingui. I partecipanti hanno dichiarato di ritenere che l'essere bilingue comporti dei vantaggi. Tre partecipanti su cinque hanno dichiarato di aver sperimentato tutti e quattro i vantaggi (individuali, sociali, culturali ed economici). Un partecipante su cinque ha dichiarato di aver sperimentato i benefici individuali, culturali ed economici del bilinguismo. Infine, una partecipante su cinque ha dichiarato di aver sperimentato i benefici individuali, sociali ed economici del bilinguismo. Tutti i partecipanti hanno quindi confermato i benefici indicati nella letteratura precedente, alcuni in misura maggiore e altri in misura minore.

Secondo i partecipanti, il bilinguismo porta a un arricchimento individuale (Moretti, Antonini, 1999). In effetti, il bilinguismo arricchisce sicuramente la personalità. Poiché i bilingui conoscono due lingue hanno accesso a un maggior numero di informazioni: possono leggere libri e giornali in diverse lingue, consultare diversi siti web, leggere opere letterarie in lingua originale e guardare film in lingua originale (Abdelilah-Bauer, 2013:23). I bilingui hanno un vocabolario più ampio e per loro è più facile imparare un'altra lingua. Conoscere due lingue permette ai bilingui o ai plurilingui di comunicare con persone di diversa provenienza (Grosjean, 2015). Conoscere due

lingue può dare ai bambini una maggiore sensibilità sociale e comunicativa. Uno dei vantaggi culturali dell'essere bilingue è quello di avere un atteggiamento più tollerante nei confronti di altre lingue e culture. Apparentemente, i bilingui ricevono anche più offerte di lavoro e godono di una maggiore mobilità sociale (Grosjean, 2015).

Il bilinguismo sembra essere importante anche per ragioni cognitive e metalinguistiche. Tra questi benefici, gli esperti sottolineano la presenza di una certa flessibilità cognitiva che permette ai bilingui di analizzare le lingue come sistemi astratti e di comprendere che i nomi sono associati arbitrariamente a oggetti ed eventi, rendendoli intercambiabili. La flessibilità mentale deriva anche dalla capacità dei bilingui di passare da una lingua all'altra: il continuo passaggio da una lingua all'altra durante la comunicazione permette loro di accrescere l'esperienza con i diversi codici. Un altro vantaggio del bilinguismo è il pensiero divergente: implica che i bilingui sono in grado di fornire soluzioni più creative e insolite ai problemi, e permette loro di concentrarsi sul significato delle parole piuttosto che sulla loro forma. Tra i benefici cognitivi, la ricerca ha individuato la capacità dei bilingui di inibire gli elementi di disturbo, come il linguaggio inadeguato durante la conversazione, in modo da limitare le interferenze e rafforzare il controllo esecutivo delle lingue. È stato inoltre dimostrato che il bilinguismo è una misura protettiva contro le malattie degenerative, come l'Alzheimer o la demenza senile, perché sembra ritardare o evitare la loro comparsa.

I bilingui hanno anche dimostrato di avere una migliore competenza metalinguistica, poiché considerano la lingua come un sistema su cui riflettere e non solo come un mezzo per comunicare. Questo permette loro di manipolarla in base ai loro scopi comunicativi.

In questa tesi è stato indagato anche il ruolo della famiglia e della scuola nell'educazione di un bambino bilingue. Il prototipo di famiglia di maggior successo per la crescita di un bambino bilingue sarebbe caratterizzato dalle seguenti caratteristiche (Susanne Mahlstedt, 1996, in Moretti e Antonini, 1999:104):

1.   ll padre e la madre praticano consapevolmente l'educazione bilingue, utilizzando ad esempio il principio "una persona-una lingua";
2.   la seconda lingua ha un alto prestigio;
3.   ll partner, che è la figura debole, ha un forte legame con la sua origine e la sua lingua.

Moretti e Antonini (1999) si sono chiesti cosa influisca positivamente sullo sviluppo del bambino bilingue. Si tratta sicuramente di creare opportunità e bisogni per il bilinguismo del bambino. Soprattutto, i bambini hanno bisogno di frequenti occasioni di utilizzo attraverso le relazioni interpersonali, ma anche attraverso canzoni, filastrocche, giochi, letture, video e altri materiali che possano essere non solo un input ma anche uno stimolo per il bambino a parlare la lingua (Fabbro, 2013: 17).

Anche la scuola svolge un ruolo importante nell'educazione linguistica del bambino. Anche se la scuola non è una scuola per bilingui, gli insegnanti devono sempre accettare la lingua del bambino e sostenerlo. L'obiettivo della scuola è dare ai bambini un buon input, creare una routine specifica e creare giochi che favoriscano l'apprendimento della lingua, come la manipolazione, la narrazione di storie, le canzoni, le filastrocche, le flashcards, il disegno, ecc.

Per dimostrare che i bilingui sono un passo avanti rispetto ai monolingui nell'apprendimento del linguaggio, ho raccolto alcuni dati direttamente sul posto. Ho osservato per un mese bambini bilingui e monolingui dai 3 ai 6 anni in una scuola materna, per raccogliere informazioni sul loro apprendimento linguistico.

Il ricercatore ha elaborato le seguenti domande di ricerca:

1.   I risultati linguistici dei bambini bilingui e monolingui sono gli stessi durante il progetto e al termine dello stesso? Ci sono differenze nell'apprendimento della lingua?

2.   Ci sono limitazioni nel progetto originale? Ci sono vantaggi nel progetto?

In base ai risultati ottenuti durante e dopo il progetto, analizzando i dati, posso confermare che il bilinguismo ha molti vantaggi importanti sul processo di apprendimento linguistico del bambino. Anche i monolingui hanno mostrato alcune abilità specifiche, perché anche i bambini monolingui alla fine sono stati in grado di imparare il formato narrativo del progetto *Le Avventure di Hocus e Lotus*, ma i bilingui hanno dimostrato di essere un passo avanti per i seguenti aspetti:

-    dopo la proposta di un primo gioco in inglese con le flashcards, i bambini bilingui hanno dimostrato di essere più flessibili dei loro coetanei monolingui nell'indovinare le parole inglesi collegate all'immagine (Appendice 2 – Vocabulary test).

- i bambini bilingui si sono dimostrati più entusiasti del corso di inglese rispetto ai monolingui: l'insegnante di classe ha spiegato che durante la pausa pranzo in mensa, molti dei bambini bilingui più grandi cercavano di conversare in inglese. L'insegnante ha espresso che: "In un momento di conversazione spontanea i bambini ripetevano termini in inglese come oh yes, me too, bye bye".

- il tempo di acquisizione è stato identificato come la principale differenza tra bilingui e monolingui. I bambini bilingui hanno dimostrato che dopo poche lezioni erano in grado di formare frasi complesse in inglese, combinando il significato di diverse parole in una frase completa. Questa capacità può essere già presente nei bambini tra i 2 e i 3 anni e viene definita linguaggio telegrafico, che consiste nella capacità dei bambini di memorizzare espressioni linguistiche anche piuttosto lunghe e di riutilizzarle in modo appropriato (Daloiso, 2009a). In effetti, i bambini bilingui hanno la capacità di imparare altre lingue molto più facilmente dei loro coetanei monolingui. Il cervello umano struttura le lingue, e quindi la fonologia, la morfologia, la sintassi, ecc. in modo tale da creare connessioni tra di esse. Queste connessioni possono, a loro volta, essere un aiuto per l'acquisizione e l'uso di nuove lingue.

- vale anche la pena di notare (non proprio ai fini di questa ricerca sull'apprendimento delle lingue, ma per una futura ed eventuale ricerca sui vantaggi del bilinguismo) che molti dei bambini bilingui parlano tra loro nella propria lingua ogni volta che è possibile e si aiutano a vicenda, dimostrando una maggiore sensibilità comunicativa.

La ricerca condotta presso la scuola Pierina Boranga ha evidenziato alcuni limiti del progetto originale *Le Avventure di Hocus e Lotus* della professoressa Taeschner, che ho cercato di superare adattando il progetto al mio pubblico:

- assenza di una routine: mancanza della lingua straniera in situazioni domestiche di routine.

- mancanza di strumenti efficienti e moderni per l'insegnante: inadeguatezza degli strumenti per un numero maggiore di bambini.

Per quanto riguarda la risposta alla seconda domanda di ricerca, la prima limitazione è stata superata creando una routine scolastica più forte, composta da 4 lezioni di inglese

a settimana. Il secondo limite è stato superato con la creazione di pdf da utilizzare sulla LIM.

Come già detto, l'obiettivo del progetto era l'analisi comparativa dell'apprendimento linguistico tra monolingui e bilingui, al fine di confermare la superiorità dei bambini bilingui nell'acquisizione linguistica. Il risultato del progetto ha dimostrato che i bambini bilingui memorizzano il linguaggio molto più velocemente dei bambini monolingui e sono in grado di formare frasi complesse nella metà del tempo dei monolingui. Tuttavia, alla fine del progetto, anche i bambini monolingui avevano imparato perfettamente le piccole parole incluse nel formato narrativo di Hocus the Dinocroc. Il motivo è da ricercare nei cosiddetti periodi critici. Il ricercatore conferma quindi la predisposizione all'apprendimento linguistico dei bilingui, ma data la giovane età dei soggetti del test (3-6 anni), anche i bambini monolingui sono stati in grado di tenere il passo dei loro coetanei bilingui con maggiore difficoltà.

Sono necessarie ricerche future per convalidare i risultati di questo studio ed estendere l'indagine a un contesto più ampio. Lo studio potrebbe anche servire come studio pilota per ricerche future. Ad esempio, una ricerca futura potrebbe essere condotta su bambini di età compresa tra i 9 e gli 11 anni. Infatti, il modello didattico *Le Avventure di Hocus e Lotus* è riconosciuto e testato fino a questa età di 11 anni. Inoltre, lo studio dei bambini tra i 9 e gli 11 anni, che stanno già entrando nella terza fase critica (Daloiso, 2009b), mostra una maggiore differenza tra l'apprendimento bilingue e monolingue. Infine, tutti i formati narrativi, non solo il primo, potrebbero essere utilizzati per studiare le differenze di apprendimento tra monolingui e bilingui.

Sulla base di queste osservazioni, ritengo che il bilinguismo sia un modo tra i tanti per migliorare la qualità della vita dei bambini e garantire loro un futuro migliore. Questa idea è supportata sia dai risultati dei questionari rivolti agli adulti bilingui nel quarto capitolo, sia dai risultati del progetto svolto a scuola nel sesto capitolo. Sicuramente crescere un bambino bilingue sarà una sfida sia per i genitori che per i figli, ma è una sfida da accogliere perché può sicuramente portare a molti benefici. Credo inoltre che il bilinguismo possa essere un argomento interessante per altre ricerche future, per cercare di diffondere l'idea che possa essere una risorsa preziosa e che possa portare molti vantaggi ai bambini, anche per il loro futuro.