INTRODUCTION

For the last three decades a considerable attention has been given to the teaching and learning of foreign languages from the kindergarten and/or the first grades of primary education. The Education Abstract on Second Language Teaching published by the UNESCO gives us interesting statistics about the countries which started to introduce an early teaching of foreign languages in the sixties (UNESCO, 1961, pp. 5-52):

<table>
<thead>
<tr>
<th>Country or region</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Nauru</td>
</tr>
<tr>
<td>Canada</td>
<td>French and English</td>
</tr>
<tr>
<td>Denmark</td>
<td>English</td>
</tr>
<tr>
<td>Finland</td>
<td>Swedish</td>
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<tr>
<td>Netherlands</td>
<td>French, German, English</td>
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<tr>
<td>Spain</td>
<td>French, English</td>
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<tr>
<td>Sweden</td>
<td>English</td>
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<td>U.S.S.R.</td>
<td>Russian</td>
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</table>

Traditionally, four basic reasons have been given to introduce an L2 in the first years of the pre-school or school curriculum: educational, sociological, neurological and psychological (see Stern, 1963).

Educational advantages

Under the educational point of view, there are studies which prove that the addition of an FL/L2 to the curricular subjects has a positive effect on the general pupil's achievement rather than a negative effect (e.g. Greigle, 1957; Lopanto, 1963; Leino and Haak, 1963; Flores, Johnson and Elison, 1963).
There is also evidence that children, at the age of 5-6, are capable of achieving a considerable number of instructional objectives (Madrid, 1980:46):

- Understanding and using 70%-80% of the vocabulary presented, orally, in each teaching unit: that is, around 150 words a year, carefully illustrated and connected with the child's interests (e.g.: home, school, food, parks, etc.).
- Oral comprehension and memorisation of short dialogues consisting of six-eight colloquial expressions, and acting them out in an intelligible way.
- Understanding and expressing some basic communicative functions (e.g. asking for and giving personal data, greeting people, describing animals and objects, expressing possession, commands, identification, location, etc.).
- Identifying and differentiating certain basic cultural aspects of Spain and Great Britain or America.
- Asking and answering basic questions and interact with peers by using very simple language.

Under the educational point of view, it has been noticed that those pupils who begin the L2 in the kindergarten or in the first phase of Primary Education normally obtain better results in later stages and overcome those who start in the obligatory phase (grade 3, age 8).

Social reasons

Several studies have also supported the early start of an FL/L2 for sociological reasons (see Donohue, 1968:8-11). In multicultural and multiethnic communities, social integration and the promotion of equal opportunities can be encouraged through the study of the L2 which allows a natural communication among their members. Donohue (1968:8) assumes this advantage when she says that bilingual communities can promote and maintain desirable empathy for ethnic groups through the mutual study of their languages.

Socially sensitive teachers can focus the language studied in relation to the variety of people in the micro- or macro-community and help children better understand individuals in other countries. They learn that foreigners are not so different as the people in their local community since they have the same basic needs and problems. As Thompson and Hamalainen (1958:12) pointed out many years ago, language programmes may contribute to a broader understanding of people and to a development of democratic social attitudes early in a child's experience.

Given that certain antipathies are also developed as reactions to "foreigners" in monolingual communities, we believe that the study of an FL/L2 can help children in monolingual areas develop a positive attitude toward the people who speak other languages and may hinder the formation of such prejudices. By learning an FL/L2, pupils also experience part of the FL culture and assimilate part of it. They have to cross a sort of intellectual border from monolingualism to the beginning of bi- or plurilingualism and multiculturalism which will contribute to a broader concept of society and intercommunication with people.
This close connection between the FL/L2 and its culture may help pupils to identify, respect and tolerate the people who speak the language they are learning and expand their social perspectives, since language is a social phenomenon and its use implies increasing socialization. This cultural understanding also help pupils to accept differences between people. They begin to identify with the other speakers and to understand that cultural differences are not necessarily inferior or odd. These social effects of teaching and learning an FL/L2 contribute to the future social integration of the students in other communities.

The study of other languages may also produce important changes in the pupils attitudes and values. Riestra and Johnson (1964) have reported that children develop a positive attitude toward the FL they are studying and the people who speak it as a native or second language.

**Psychological reasons**

Several studies have proved that pupils have sufficient command of the basic oral skills of their L1 to be able to handle an FL/L2 without problems. Donoghue confirms this fact when she writes: "there is little danger to the child, who has had five or six years in which he has learned to speak English, to confuse a second language with his mother tongue" (1968:13).

Children, at the end of their pre-operational stage, still have a syncretic thought and perception. That is, objects are recognised and perceived globally, as general forms, which are as much constructed by them as given by elements of the perceived object (Piaget, 1955/1963:144). This syncretistic perception excludes analysis, consequently, they use the L2 and engage in language exchange without feeling and need to analyse what they are saying.

During the first years of schooling, children, children usually have few inhibitions and little fear of making mistakes. They tend to accept language behaviour as a natural classroom activity. Under a psychological point of view they are prone to accept game-like activities enthusiastically, so they often welcome songs, dances, stories and physical response activities. They are also skilful at imitating models and patterns, which often help them learn the L2 and adapt themselves easily to new situations and different language environments (see also Dunn, 1984, 1984ª; Bestard, 1985).

Donoghue also recommends the teaching and learning an FL/L2 for other psychological reasons:
- The children's capacity for learning by imitation is very high and this favours the teaching and learning of an FL/L2.
- Children show curiosity for the L2 and the people who speak it.
- They memorise easily and learn quickly.
- Teaching and learning an FL/L2 may have a positive transfer effect on other curricular areas.
In the cognitive development of children, Andersson (1955:492) distinguishes two kinds of learning, an *imitative learning* of skills, which is very common when children acquire an L2 in natural settings and an analytical kind of learning, which is more active when the stage of formal operations starts (Piaget, 1973). In a subsequent paper, Andersson (1961) writes about *conditioned* learning and *enculturation*, when the child learns the language of his environment as a process of enculturation. Following Penfield and Roberts' findings, he established the dividing line between *imitative* or conditioned learning and the analytical or *conceptual* one at the age of ten, as illustrated below (Andersson, 1960:303):

![Diagram showing the critical period between birth and age 10 with conditioned or imitative learning at its peak at birth and declines with time, while conceptual or analytical learning is at its lowest point at birth and increases with age.]

Conditioned or *imitative* learning is at its peak at birth and declines with time. *Conceptual* and analytical learning is at its lowest point at birth and increases with age. As we can see, in the previous figure, from the age of 10, analytical learning begins to be more powerful and effective. According to this principle, the teaching and learning of an FL/L2 in the kindergarten stage must be spontaneous, informal, imitative, conditioned and intuitive. It is at the end of the Primary Education stage when a more analytical and formal approach can be introduced.

**Neurological reasons**

As early as 1953, Penfield (1953) and Penfield and Roberts (1959) pleaded the urgency of an early start on an L1 or L2 for neurological reasons arguing that physiological evolution causes the brain to specialise in the learning of language before the ages of 10 to 14. After that, gradually and inevitably, it seems to become rigid, slow, less receptive. That span of life is called the *critical period* and it is usually defined as lasting from 3 years of age to puberty.

Influenced by these ideas, Donoghue (1968:11) says that the ideal age for beginning an FL/L2 is at birth, but in school contexts, the optimum age is from 4 to 8 years of age. Again she emphasises the brain's plasticity and its specialised capacity for speech at an early age. Before the age of 10, immigrants to the USA usually learn to speak English without an accent, but those who arrive later, in the adolescence or childhood generally speak with an accent, which is more marked the older they arrive. This argument in favour of a specific period of time for language learning has given place to what is called the *critical period hypothesis* (CPH).

**The critical period hypothesis**
As we have pointed out, it was Penfield and Roberts (1959) who noted that children acquire languages with ease before the age of 8 or 9, because their brain at that age is plastic and after adolescence it becomes more and more rigid and set. They noted that children who have damaged their dominant left hemisphere are able to use their opposite one to relearn language skills, whereas this rarely happens with adults. So they concluded that the brain has an extraordinary plasticity in childhood, up to the age of 9, that it gradually loses with age.

The CPH was later reinforced by Lenneberg (1964, 1967), who also argued that natural language acquisition by mere exposure can take place only during the critical period, that is from 2 to puberty. His biological argument was based on several facts:

a) Lateralization of language function.
Before the age of 2, the brain has not developed the capacities it needs for language acquisition and after puberty it has lost plasticity because cerebral dominance and lateralization have been completed. This means that, after the adolescence, a more conceptual learning may be necessary since a mere exposure is not as efficient as in the early years and the development of a foreign accent may be inevitable (see also McLaughlin, 1984).

b) Functional localization.
Lenneberg also bases his biological argument on the functional localization of our brains, which has developed lateralization and specialisation for verbal functions in the dominant hemisphere in the early years. Once this development process is over, the brain loses the cerebral plasticity.

Nevertheless, other studies have shown that though verbal abilities are primarily localized in the dominant hemisphere, the minor hemisphere is also capable of carrying out certain functions (Moscovitch, 1973), so it seems that there is not an absolute and strict lateralization that restricts all language functions to the dominant hemisphere.

In the light of some more recent studies (e.g. Ekstrand, 1979; Kinsbourne, 1981) McLaughlin (1984) concludes that the brain has more plasticity with respect to language functions after childhood than Penfield or Lennerberg have admitted and that the brain during childhood does not diminish the ability to learn languages, because there is no period of life span so critical to such acquisition.

c) Speed, ease and efficiency in childhood SLA
According to the CPH children acquire languages easily and quickly, quite often better and more efficiently than adults. There is evidence that that has happened in SLA contexts, when the L2 is acquired in full contact with natives and in a naturalistic environment, when the L2 is used for communication in the community where the language is being learned.

Nevertheless, this principle has been criticised for several reasons. On one hand, children have many more hours of exposure than adults, so it is difficult to compare their proficiency. On the other, it seems that some aspects of language take time to
develop and are not fully developed till the age of 18 or so. So again the comparison between children and adults cannot be established. Another argument to compare the results obtained by children and adults is motivation. As McLaughlin has indicated, for the child, learning to communicate with peers in their natural environment is a "life-and death" affair, but for their parents that is not always the case and they tend to learn enough to get by in their professional circle and in their relation with a restricted social group.

d) Mastering the L2 without an accent.

Scovel (1969) linked the appearance of the foreign accent to the complete cerebral lateralization at the puberty stage. According to the CPH, the ability to master an L2 without an accent before the age of 12-13 is associated with the fact that lateralization has not yet finished and is not permanent yet. As the adult has lost the cerebral plasticity of the child, they develop a marked accent that, on biological grounds, cannot be eradicated.

For Brown and Gonzo (1995), there is a clear and strong relationship between age of arrival in the USA and performance: those who began acquiring English at an earlier age obtained higher scores than those who began later (p. 92-93). So they conclude that "there appear to be a strong linear relationship between age of experience to the language and ultimate performance in that language, up to adulthood" (1995:94).

In sum, the conclusions reached about the influence of maturational state in the acquisition of English as a second language are the following (Johnson and Newport, 1995:104-112):

- In relation to the age of acquisition and ultimate performance, research studies clearly support the principle that children have an advantage over adults in acquiring a second language (such superiority is not implied in foreign learning contexts). The overall correlation between age of arrival in the USA and performance on grammar was .77, and for those arriving before puberty was .87. There was a significant correlation between age of arrival and performance.
- Subjects who arrived in the USA before the age of 7 reached native performance. For arrivals after that age, there was a linear decline in performance up through puberty. Those who arrived after puberty performed more poorly than those who arrived earlier.
- It seems clear that the age of immersion in L2 contexts is a better measure than attitudinal variables considered alone to predict ultimate performance. Nevertheless, certain attitudinal factors such as self-consciousness and American identification also make a significant contribution (p. 100).
- The differences in the quality of the input received by children and adults have not had a significant effect on the final competence. It has been proved that both adult and child language learners received comparable input and exposure in terms of syntactic complexity, so it cannot be said that adults or children learn more easily due to the quality of the exposure they receive (p. 106).
There is an effect of age of acquisition on rule type, but some rules of English grammar are more deeply affected by age of acquisition than others. For example, word order and the present continuous form is often acquired by all learners (p. 107) whereas other aspects of English syntax and morphology seem to give more difficulty (see Krashen, 1982).

Another interesting conclusion about the nature of adult performance is that any language is learnable to a fair degree at any age. While children are quite uniformly successful in acquiring an L2 to a high degree of proficiency, adults show much greater individual variation (p. 11) (see also Patkowski, 1980).

A final and global conclusion on the CPH is that the critical period is applicable both to the L1 and L2. The initial hypothesis established by Penfield (1953), Penfield and Roberts (1959) y Lenneberg (1967) have proved to be consistent in other studies carried out many years later as Johson and Newport have pointed out (1995:112): "the traditional view of critical period effects in language learning has been that there is maturational change in a specific language acquisition device (Lenneberg, 1967, Chomsky, 1981). Such a view ... is consistent with our results ... some type of critical period account for language acquisition is necessary ... the proper account of a critical period will include both first and second language in its effects".

Though the conclusions about the optimum age for SLA are somehow contradictory and controversial, there seems to be enough evidence as to recommend an early teaching and learning for the following reasons (Madrid, 1980:15):

- Pupils in the kindergarten have an extraordinary plasticity in their brain which help them to acquire the L2, with ease (Penfield and Roberts, 1959, 1968; Lenneberg, 1967; Johnson and Newport, 1995).
- Infants have an excellent capacity for imitation and a great adaptability which are fundamental to experience the SLA process (Donoghue, 1968).
- As we have shown in other studies (Madrid, 1980), infants have developed enough cognitive development as to assimilate certain instructional objectives and carry out a variety of tasks from the kindergarten phase up to the Primary Stage and adolescence.
- The content-based approach (Brinton, Snow and Wesche, 1989; Madrid, 2000) can be already started in the infant education stage and the pupils can start thinking in the L2 and learn basic contents from the other curricular areas. Immersion programmes have proved to be very efficient, especially in bilingual contexts (Swain, 1979).
- Pupils have more spontaneity and fewer inhibitions than adolescents when using the L2 as a new system of communication (Curran, 1972; Guiora, 1972). In the kindergarten and Primary Education, pupils show a great disposition for learning in communicative situations which encourage sociability and integration response and game-like activities.
- Children are normally eager to know about other people and show a great curiosity for other cultures (McAulay, 1961; Finnochiaro, 1964).
- Pupils are better “acquirers” than adults and accept natural and communicative situations with ease (Anderson, 1960; Rosansky, 1975; Brumfit, Moon and Tongue, 1991).
- If mastering an L2 is a question of time (Carroll, 1969; 1975), the earlier they start the better, providing that they do not interrupt their learning process later.

**GENERAL FRAMEWORK FOR TEACHING FOREIGN LANGUAGES IN INFANT EDUCATION**

From the abundant literature on the teaching and learning of EFL in the early years we can draw enough information to set up a framework that helps those who feel attracted to explore this field in infant education.

**Hypothesis forming and testing**

According to the creative construction theory (Dulay and Burt, 1977; McLaughlin, 1987; Ellis, 1985; Valcárcel, Coyle and Verdú, 1996), second language learners are thought to construct internal representations of the second language system as a result of natural language processing strategies and their exposure to the second language in communicative situations. This means that learners make hypothesis about language works and try out their new hypothesis. Consequently, it is important that children to take risks and experiment with language even though, initially, they will make mistakes, but they will learn, progressively from them.

**Connection between L1 and L2**

The literature on the successive acquisition of two languages (see McLaughlin, 1984) suggests that the developmental stages taking place in L1 learners and any other target language (TL) learners are similar. Following this direction, Tough (1991) also recommends to design experiences that allow children learn a second language in much the same way as they learn their first language. Teachers should provide children with conditions similar to those through which the first language develops (1991:226). There are sometimes interferences, but some errors-analysis studies indicate that interference is not the main cause of error except in formal settings, where children learn the LT in the school and it is not used outside the classroom with family and peers, which is the most common situation in the European countries. Dulay and Burt’s study (1974) shows that children with different first languages all made the same types of mistakes when acquiring English as a second language. This suggests that interaction between L1 and TL is a minor factor in SLA. Other studies have shown an important connection between the learners L1 and his/her performance in the TL and have found a clear interference especially at a later age (Prator, 1969; Ervin-Tripp, 1974; Madrid, 1999).

As far as how both the L1 and any other TL are learned, several authors have found that there are important similarities between the way learners pick up a language in a natural learning environment with no lessons (e.g. Pica, 1985; Ellis, 1985;
Williams, 1991). Other authors have also emphasize the benefit of L1 development on the TL given that the child has already developed skills and strategies that can be drawn on to aid learning the L2.

Under the pedagogical point of view, specialists in this field suggest a set of basic principles that should be taken into account and applied in classroom situations (see Scott and Ytreberg, 1990; Cant and Superfien, 1997; Williams, 1991; Mur, 1998):

- Young children learn by doing, by being actively involved in their learning. So an activity-based learning is essential.
- It seems that the topic approach with cross-curricular orientation is the most suitable one in infant education (see Hoderness, 1991; Cant-superfine, 1997; Scot and Ytreberg, 1990). In this way, children explore a theme across the curriculum and use the theme to develop other curricular areas in a global and integrative way.
- The emphasis on topic in meaning situations leads us to the content-based approach (see Madrid, 2000). Within the content-based approach, the purpose is learning other things, other than language, through tasks and meaningful activities.
- Another key factor is motivation (see next chapter). Motivation—wanting to learn—is a sine qua non condition for learning to take place. We all have noticed that lack of interest and motivation produces poor achievement and results.

In the next chapter, we will provide a more specific and practical information which will orient the reader on the objectives, methodology and didactic resources recommended in infant education.

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