EARLY FOREIGN LANGUAGE TEACHING

Michele Daloiso
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Carmel Mary Coonan

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Introduction

The present volume is a reflection of the increasing interest being shown in the early learning of foreign/second languages in formal contexts. The increased interest is a reflection of the concern, felt at a national and international level, of the importance of a multilingual/multicultural competence not merely for its instrumental value but, above all, for its formative value. A multilingual and intercultural individual not only embodies, ideally, the multilingual and multicultural heritage of Europe, but also is one who is better able to respond to the many different challenges the global world is presenting us with, day after day. One of the solutions advanced as a means to reaching the ambitious goal of forming multilingual individuals is to anticipate contact with another language as early as possible. This implies introducing a foreign language into the primary school curriculum or, with ever more frequency, into the infant school.

Unlike other major countries in Europe, Italy has been at the forefront in facing this challenge. The law reform of 1985 well attests this – it introduced compulsory foreign language learning into the third class of the primary school. More recent legislation has anticipated this introduction even further - to the first class.

Important projects – as Daloiso in this volume mentions – have been conducted to ascertain the specific nature of early foreign language learning in formal environments, many of which involved members of the Venetian group of Language Teaching Methodology, e.g., Janua Linguarum, Bam.Bi, LESI.

As such research projects testify, the early teaching of foreign languages raises many new, and fundamental, issues – all of which are related to the fact that it is a young child, and not an adolescent or an adult, who is learning. It is only by focusing on the child – on his psychological, neurological and cognitive characteristics and the way his maturation develops – that understanding can be acquired about early foreign language learning and, thus, teaching solutions be devised.

To this end, Daloiso consults the neurosciences, cognitive sciences, psychological sciences, the linguistic sciences and educational sciences in order to develop an epistemological interdisciplinary model of early language teaching made up of three interrelated dimensions:
the acquisitional dimension, the linguistic-cultural dimension and the methodological dimension. Within his tripartite model, he highlights the implications for early language learning of numerous concepts and constructs belonging to the above sciences (e.g., cerebral laterality, cerebral plasticity, motivation, attention, memory) and in this sense his model is a further development of preceding ones in that he has been able to incorporate new insights (e.g., neurosciences). His reflections confirm the pivotal role of the child, positing that for learning to be effective, and for the process itself to be a positive one, there must be the engagement of the child’s emotions and of his senses and any methodological choice must take this into account. The development of teaching methods and approaches throughout the 20th century however have not purposefully targeted young learners as such. Hence the danger of transferring existing practices that are designed for more adult learners to young learners. Not even the communicative approach - the main teaching paradigm in Europe in the last decades of the 20th century - can be said to satisfy the special needs of these young learners. In line with the Venice group’s already established focus, Daloiso identifies the ‘Humanistic-affective approach’ as that which seems the most suited for effective foreign language teaching and goes on to illustrate suitable teaching strategies and techniques to use with the young learners. An interesting aspect that appears in the discussion is the mention made of the need to tie in the teaching/learning of the foreign language with the child’s cognitive development. Indeed the learning of the foreign language is seen as an important contributor in this sense. It is obvious that all these new perspectives have repercussions on the curriculum and especially on the syllabus and methodology to be adopted.

Mary Carmel Coonan
1. Epistemology of the Early Language Teaching Methodology

In this chapter we will delineate the concept of Early Language Teaching Methodology (ELTM), according to the Venetian perspective, by defining its epistemological limits and resultant research areas.

1.1 Birth and evolution of the Early Language Teaching Methodology in Italy

With the expression “early language teaching methodology” we mean a branch of the language teaching methodology (LTM) applied to the study of language acquisition process (LA)\(^1\) in the child. The purpose, hereto, is to highlight operative approaches, methods and strategies, for the teaching of languages to infants.

The first theoretical and methodological publications on the subject date back to the early ‘80s, that were, in turn, the fruit of LTM studies in the second half of the ‘70s and which gave a decisive impulse to scholastic experimentations on a national and regional scale.\(^2\)

In Italy, the birth of research devoted specifically to ELTM can be situated within the historical and social context of that time. In those years:

- a tradition of teaching English and French to children already existed in many Italian schools (and had done so since the ‘60s);
- a certain interest in the issue of early bilingualism was widespread, although the fear of negative repercussions of a second language on the overall growth of the child and on his mother tongue acquisition still persisted among some psychologists, teachers and parents;

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\(^1\) For the moment we maintain a generic definition, leaving until later the task of specifying the concept of acquisition and the categories of languages (foreign, second, etc.) that are part-and-parcel of such a definition.

\(^2\) For instance, the projects ILSSE (foreign language teaching in primary school) and *Ianua Linguarum* (elaborated respectively by the founding fathers of the Venetian school, Renzo Titone and Giovanni Freddi), have contributed to a generalizated experimentation with English in primary schools.
c. inserting foreign languages (FL) in the curriculum of primary schools was already under consideration by the Italian State and in 1985 became part of the national curriculum.

Titone, Freddi and their students in the Venetian school and elsewhere in Italy (B. Cambiaghi, G. Porcelli, G. Mazzotta) interpreted the educational needs of that period by engaging in a methodological study that gave rise to operative proposals that were widely implemented throughout the ’70s and ’80s. These implementations were enormously important, because they:

a. contributed concrete responses to new social and educational needs;
b. allowed a gradual introduction of FLs into primary schools through a series of pilot studies that were submitted to experimental verification;
c. created a meeting point, at a scientific level, between educational practice and LTM research, a connection that later represented one of the characteristic features of the Venetian school.

Between the late ’80s and the early ’90s the research within ELTM was significantly influenced by the results of these experimentations and by numerous scientific publications (Freddi 1987, 1988, 1990a, 1990b; Titone 1978, 1990; Porcelli and Balboni 1992; Porcelli 1993) that discussed, a playful methodology for early language teaching (cf. the third Document of this series, Caon 2006), the formalization of operative models specifically for infancy, and, the role of a FL in the overall growth of the pupil.

Interestingly, in the second half of the ’90s, scientific research came to a standstill due largely to a paucity of progressive and forward-looking publications. The reasons for this paucity are in part owed to the strengthening of methodological routines regarding FLs in primary schools, and to the emergence of new, extremely urgent needs that the Italian LTM was called upon to respond to (e.g., teaching Italian to immigrants, teaching languages to adults for professional purposes).

However, the ELTM received a further impulse in the first years of the
current millennium when new linguistic needs emerged, augmented by solicitations from the Council of Europe concerning the importance of learning languages in early childhood. Experimentations, (headed by two prominent figures of the Venetian group, Paolo E. Balboni and Carmel M. Coonan, together with like-thinking scholars, e.g., Federica Ricci Garotti), such as Progetto Lingue 2000, and Bam.Bi and LESI³ in Trento, involved infant schools and led to the first systematic study of the didactics of languages with respect to infancy.

In recent years the interest in teaching languages to preschool children is on the rise, therefore the ELTM, in its turn, is called upon to address these contemporary needs of society.

1.2 Delimiting the field of investigation

An epistemological delimitation of ELTM’s field of investigation requires we begin with its object of study: the acquisition of languages at an early age. Accordingly, the following is an analysis of the individual components of this expression.

a. acquisition...

In Krashen’s well known, Second Language Acquisition Theory, language acquisition (in contrast to learning) is a process, for the most part unconscious, that leads to a stable linguistic competence by language elaboration becoming automatic. In light of the hypotheses about critical periods, and on the bases of the current knowledge concerning the neuropsychological processes governing LA, it is reasonable to assume that the acquisition of a linguistic input is possible in a child systematically exposed to it. Therefore, ELTM favours languages becoming interiorised by the child in a permanent, unconscious and automatic way (the implications of Krashen’s theory have been amply discussed

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³ Bam.Bi. is a project of bilingual education, Italian-Ladino, practiced in the kindergartens within the Trento Province; LESI (European languages in infant school) is an experimentation (English and German) in the infant schools in Trento. The results of both projects are reported respectively in Balboni (1999) and Balboni, Coonan, Ricci, Garotti (2001).
by many Venetian studies; among the recent ones to be recommended are, Cardona 2001; Balboni 2002; and Coonan 2002).

*b. ...of languages...*
As ELTM’s object of study is the LA process in the child, it is therefore necessary, with respect to the acquisition of foreign languages, to include the acquisition of the mother, second and ethnic languages in the vision of a more general linguistic education.\

*c. ...in early age*
Because the term “early” is somewhat fleeting and indefinite, specialized literature has often ran the risk of unconsciously identifying the early LA with that of teaching languages to primary school children. Conversely, the latest researches in the neurosciences afford us a much more precise definition of the term, beginning with the recognition that there are critical periods and sensitive periods in LA (Aglioti and Fabbro 2006), and that they are determined by specific neurodevelopmental phenomena (myelin formation, decrease of the metabolic activity, and a decrease in synaptic genesis):

**Critical periods in LA:** it is possible to acquire one or more languages with equal competences to those of the mother tongue within one of the following temporal windows (cf. 2.2):

− 0-3 years: acquisition of perfect pronunciation and excellent development of linguistic abilities;
− 4-8 years: acquisition of perfect pronunciation, excellent linguistic development, but with a greater degree of energy required to activate the cerebral regions wherein languages are represented.

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4 The concept of *linguistic education* is the main Italian contribution to international studies in education. It made a name in the ‘70s as the result of the Italian pedagogic tradition and it implies that teaching languages (maternal, second, foreign, classic, etc.) is not only oriented toward the pupil reaching specific LTM aims, but has to be framed also inside more general educational aims, such as culturalization, socialization and self-promotion; this implies that language teaching contributes to the overall growth of the pupil (cf. the first *Document* of this series).
Sensitive periods in LA: once beyond these temporal windows, there is a sensitive period (8-22 years) during which the pupil still has strong neurological potentialities that allow him to develop a good linguistic competence, but it becomes increasingly difficult for this competence to equal that of the mother tongue. A more or less strong foreign accent, in fact, penetrates – the morphologic-syntactic competence can still be well developed, although with more work – while there are no particular difficulties in the lexical acquisition of open class words.

Lifelong Language Learning: having passed the sensitive period, the profound acquisition of a language is much more difficult and is influenced by factors that are contextual (natural or institutional context, quantity and quality of the input, prestige of the studied language) and personal (intelligence, learning style, psychological distance from the studied language).

In the light of a more precise analysis of the LTM research on language teaching for children, we can delimit its field of investigation to the first decade of the child’s life. The current conception of critical period, however, imposes a fundamental distinction among the acquisition in early infancy (0-3 years, corresponding to the first critical period), in middle infancy (4-7 years), and in late infancy (8-12 years, corresponding to the second critical period and the first phase of the sensitive period). This means that the approach to the FL in infant school has to occur in accordance with theoretical and methodological principles that are specific to the age bracket of the recipients, and not simply adopted from methodologies conceived for children of any age.

1.3 An epistemological model

In order to address society’s linguistic needs with effective educational proposals, the ELTM is grounded in a strong epistemological model that delineates the theoretical criteria within which the research operates. Because the ELTM is a particular part of the bed-rock of a broader discipline (the general LTM), the starting point must be the theoretical model on which such a science is based. The model we will use is one
that was initially theorized and developed in the ’70s and the ’80s (Freddi, Titone, Balboni) and described in the first Document of this series. This model delineates the LTM as a discipline:

a. of a theoretical-practical character, that elaborates linguistic education theories for operative purposes, rather than simply for knowledge;

b. with an inter-disciplinary background, comprised of four disciplines (language and communication sciences, sciences of neuropsychology, cultural and social sciences, educational sciences) described below;

c. founded, not merely on the application of the knowledge derived from the above disciplines, but also on the mediation of its implications.

The complexity of the object of study makes necessary an inter-disciplinary approach to the problem, (note “b” above) that takes into account all the potential factors intervening in the LA process, a process that is substantially multidimensional because it involves the following aspects:

a. linguistic and communicative: language teaching is developed within an very particular communication process between teacher and pupils, given that language is both the means and the purpose of this process. Learning a FL also involves learning to use a verbal code that allows one to enter into a relationship with other people, in specific communicative situations that individually have their own rules of behaviour. The LTM must take into account some of the linguistic and communicative aspects that characterize infancy: the child has not yet fully developed his linguistic competence, and he privileges only certain communicative functions (most notably, the imaginative function); moreover, according to his age, the more practiced communicative functions also change (cf. 3.4);

b. neuropsychological and cognitive: the LA is determined by factors such as, the pupil’s motivation, emotional state, attentiveness, and memory processes. Moreover, every pupil forms his own cognitive style that allows him to develop personal learning strategies;
furthermore, language refers to concepts and content, thus the linguistic development proceeds in parallel to the cognitive one. In the ELTM these aspects assume their own specificity (cf. 2) according to the different growing phases of the child, who privileges certain neurological processes, activates memory systems that are specific to learning, and, is motivated to discover the language by incentives that are very different from those that motivate the adolescent or adult;

c. cultural: language and culture are two sides of a coin; the underlying concepts of language are culturally determined, as are the language formulas and the behaviours commonly approved in a communication situation. Also in this case the ELTM needs to acknowledge the cultural dimension of LA in a specific way because, on the one hand, the child often ignores the existence of cultures different from his own, and on the other, multicultural situations are increasingly frequent. The primary task of the ELTM is therefore to educate the pupil about cultural difference through the discovery of linguistic multiplicity (cf. 4.1);

d. educative: the acquisition of a language in a natural and spontaneous context depends on factors like the quality of the received input, the degree of exposure to the language, and the contexts and the possibilities to use the language. This acquisition in a formal and institutional context is all the more influenced by educational factors such as the didactical methodology, the used materials, the relationship between teacher and pupil, and the relations inherent to the group/class.

At the moment, specific epistemological studies about the ELTM are not readily available. However, we believe that the foundational principles herein enunciated (which the Venetian school has employed over the past decades) permit us to trace a theoretical model within which the contemporary ELTM can operate. Returning to the above stated aspects: in our view the research about language teaching in early age should be oriented towards three macro-areas, represented in the following diagram, whose interaction and integration with each other can lead to the definition of specific and effective LTM models.
1.3.1 The acquisitional dimension

The first area of investigation concerns the who and how of acquisition; the first step in defining ELTM is comprehending the mechanisms subtending the linguistic acquisition and the overall growth of the infant (cf. 2). Therefore, it is essential to know the child's peculiarities at the level of:

a. neurodevelopment: critical and sensitive periods, degree of neuropsychological maturation, neural basis of development, etc;
b. psychodevelopment: motivation and emotion, identity development, character features, learning strategies and intellectual propensities;
c. neuro-psycholinguistic: relevance of neuropsychological data for LA comprehension in early infancy.
Thus, the disciplines the ELTM refers to are the developmental and cognitive neurosciences, the psychological sciences dealing with cognition, growth and learning, and, neurolinguistics and psycholinguistics.

1.3.2 The linguistic and cultural dimension

The second area of interest concerns what gets acquired (cf. 3), with particular reference to:

   a. the typological characteristic of the language under study, also its comparison with the mother tongue;
   b. the stages of linguistic and communicative development undertaken by the child (phonology and phonetics, morphology and syntax, communicative functions, pragmatics) with the purpose of individualizing joint paths of multilingual acquisition;
   c. the relationship between language and culture in the child, the development of his cultural identity and intercultural sensitivity;
   d. the role of the linguistic-cultural acquisition in the overall growth of the child (socio-relational, emotional, cognitive, motorial, semiotic) with the purpose of integrating the language teaching in a broader educational path designed to be in harmony with personal growth;
   e. the definition of a corpus of texts, that constitutes an input that is psychologically authentic for the child (nursery rhymes, counting-out rhymes, fables, stories, etc.).

Thus, the disciplines ELTM refers to are therefore, linguistics (typological and acquisitional), cultural and especially intercultural sciences, and developmental psychology.

1.3.3 The methodological dimension

The third area of investigation concerns how to teach languages to infants (cf. 4) and addresses the following fundamental matters:
a. *definition of competences* (pedagogical, methodological and didactical) that the language teacher, being first of all a teacher, must possess;
b. *choice of an approach*, that is, the choice of a basic philosophy concerning the early acquisition/teaching of languages, one that all the other didactic choices will depend upon;
c. *definition and re-elaboration of methods and methodologies* coherent with the approach and suited to the specific context; in this sphere are included all matters concerning the opportunity for a humanistic-affective LTM, for a constructivist methodology, and for cooperative learning;
d. *choice of LTM techniques* coherent with the approach and the methodology, and suited to early LA;
e. *classroom management*, and in particular, first, to be attentive to group dynamics generated when working with children, enacting specific strategies to manage often large groups, and second, be attentive to the individual student’s needs and specificities;
f. *selection of materials*, that are coherent with the approach and the methodology, at the same time as being suited to the child at the level of:
   – linguistic input;
   – cognitive load;
   – meaningfulness in comparison to his world.

On the basis of these criteria we can decide how to use fables and stories in the class, and which audio, video or multimedia materials are more effective for LA in infants.

The disciplines the ELTM refers to are basically the formation and education sciences. However, in light of over thirty years of research, the LTM has been maturing as an autonomous discipline employing its own theoretical and operative tools.

1.4 Synthesis

The following conceptual diagram summarizes the dimensions that constitute the ELTM.
In light of this epistemological proposal we believe that the elaboration of any approach and method for the linguistic education of the child must come from the interaction and integration of the acquisitive, linguistic-cultural and methodological dimensions. Accordingly, we will dedicate a chapter to each one of these three areas. Due to spatial constraints it is not possible to investigate exhaustively all the aspects of these areas, rather, we will instead only address the most important aspects, and respectfully suggest further readings for a deeper understanding of the matter.
2. The acquisitional dimension

One of the fundamental principles of the humanistic-affective approach, employed by the Venetian school, asserts the centrality of the pupil in the didactic process. It is therefore necessary to know the pupil, his characteristics and his linguistic, communicative, cognitive, socio-relational, and emotional needs. This especially applies to the elaboration of LTM models addressed to children. Referring to this complex acquisitional dimension, in this chapter we will concentrate on the germinal contributions that the most recent neuropsychological research offers to the comprehension of the mechanisms that subtend any type of acquisition in the child, highlighting the contribution of Italian research thereon.

2.1 The role of the neurosensory system in the growth of the infant

During the first years of life, acquisition in the child occurs through the integrated use of senses that allow him to explore the surrounding reality and to gain experience of it. The child’s sense organs are already perfectly functioning at birth. The one exception is the visual system, whose formation is completed only when he is about five years old, along with the increase of the eyeball diameter that sharpens the image perceived. What is missing at birth, and will be developed only through an interaction with the environment, is the integration of different sensorial modalities plus the attribution of a meaning and an appropriate response to the environmental input. This is possible only through the formation of stable synaptic connections: senses are the doors through which information from the environment enters, and the mechanism that associates stimulus with feeling and response is created. If the environmental engagement is positive and reiterated, stable synaptic connections are created. When the stimulus ceases, the connection, if stabilized, is not lost, but lies dormant and can be reactivated when the stimulus reappears at some future date. The neuro-sensorial experience, by consequence, assumes a fundamental
role for the child, who, due to an innate curiosity toward the surrounding world, instinctively looks for stimuli, experiments and manipulates things, and interacts with the environment. Therefore, on one hand, the child explores reality by seeing, touching, smelling, tasting, and hearing it; on the other hand, it is reality itself that offers-up sensorial stimulations for him to elaborate.

The formation of stable connections, however, requires time and experience, and the stabilization of certain channels occurs through stimuli reiteration. While it is easy to make the child learn something on a short term basis, it is much more complex to make this information permanent. For instance, certain habits that are established in the first years of life: the child adopts techniques of solicitation to strengthen the information coming from the environment. A case in point: the deliberate, provocative responses to parental prohibitions are not necessarily an indication of a problematic character but, more simply, are attempts by the child to internalise concepts, notions or rules of behaviour that are, from the neurological point of view, nothing other than nerve channels under formation.

Accordingly, an ELTM respectful of the pupil has the task of respecting and favouring the integration of information deriving from different sensory channels through LTM activities centred on neuro-sensorial stimulations that involve the senses simultaneously and that allow the child to associate the verbal stimulation in a FL to other stimuli of a different nature (cf. 4.4).

The importance of the sensorial development in early LA has previously been underlined (see, Freddi, 1990a, 1990b) and constitutes one of the cornerstone of the playful methodology (cf. the third Document of this series, Caon, 2006). On the neurological level, sensorial development represents a true support to learning only if it leads to the formation of stable and permanent nerve channels.

2.2 Cerebral plasticity, critical and sensitive periods

The neurological maturation of the child is characterized by the interaction among the following neurodevelopmental factors that determine cerebral plasticity (Fabbro 2004): the neuron density, or rather the
number of cerebral cells; the increase in length of those parts of the neurons receiving information from other neurons; the myelin formation, a process that makes more efficient the transmission of information; the formation of new connections between neurons (synaptogenesis); and the metabolic activity, that reaches maximum levels toward the fourth year of life. Every region of the brain, (though at different moments), follows the same maturation path, that is:

a. *a sudden increase in neuron density and in synaptogenesis* that depends partly on genetic factors and partly on the child’s interaction with the surrounding reality;

b. *a slow synaptic reorganization*, depending both on the frequency of the exposure to stimuli, and on the responses the child associates with the respective stimuli;

c. *the completion of cerebral maturation*, through the stabilization of nerve channels that become overlaid with myelin.

The full growth and functioning of a particular cerebral region only occurs when the neuron density, metabolic activity, and the length of the dendrites, reaches typical adult levels and the myelin formation is already completed. Given that every region generally has its own maturation rhythm, it may happen that a three or four year-old child, generally, has already developed complex visual and motor abilities because his visual-motor system is mature, yet he is still unable to develop complex cognitive tasks, to plan his own actions, and to keep under control his attention and concentration processes, because the area appointed to perform such operations, the frontal lobe, will only be fully developed after the seventh year.

On a methodological level this implies that FL teaching should constitute a series of brief didactic interventions (cf. 4.6), arranged at strategic hours of the day and based on a variety of language activities that retain the attention of the child (cf. 4.5).

The neurodevelopmental phenomena above mentioned seem to determine critical and sensitive periods for the LA (cf. 1.2), an hypothesis that is strengthened by studies of neuroimaging in bilingual subjects (Fabbro 2004), according to which, if a child acquires two languages between
the ages of zero and eight, the representation of both languages is located in the same cerebral regions. Alternatively, in children that acquire the second language between three and eight years of age, the two languages are represented only partially in the same regions, although the child’s competence on the second language is excellent. It has also been noted, in this case, that the second language generally occupies a wider region that, consequently, needs more energy and a greater cognitive effort to be activated. Finally, in subjects who learn another language after the eighth year, this language is represented in different and more extended regions than those of the mother tongue. These considerations highlight the opportunity to have an ELTM that, on a neurological level, relies on the cerebral plasticity of the child and on the potential of stable nerve paths to be associated with the FL (cf. 4.4).

2.3 Memory and language in infancy

During both early and late infancy, the mnemonic capacities of the child depend on the interaction between the maturation of memory systems and the development of memory strategies. The terms “maturation” and “development” are not synonymous: the first term denotes the entire physical, physiological and neurological phenomena that genetically determine growth, whereas the second term refers to all of the changes that reflect the interaction between maturation and learning in relation to the environment and the experiences (Sasso 2004). Two distinct memory systems are developed in childhood, implicit and explicit memory. While both are part of the long-term memory, they differ:

a. on the maturation level, because they mature at different stages and they involve different cerebral regions;

b. on the development level, because they are connected to mnemonics and cognitive strategies that the child (beginning with his relationship to the environment) learns, uses, and improves upon.
Although the first forms of memorization can be noted in the womb, (for example: the capacity to recognize and discriminate sounds), these abilities are still very elementary and they involve only subcortical structures (Oliviero Ferraris 1990). The memorization of more complex sequences and procedures is possible from the eighth month, at which time the implicit memory begins to mature and is characterised by:

a. *automatism*: knowledge is organized in procedures and action sequences that are increasingly automatic;

b. *casualness*: knowledge acquisition does not occur following a specific and premeditated learning sequence;

c. *unawareness*: the child does not realize he is learning, nor can he say what he has acquired;

d. *minimum attention levels*: acquisition does not occur through efforts to focus and be attentive, but rather, by “opening-up” and by “doing”;  
e. *transversality*: unconsciously appropriating new knowledge in one sphere while also carrying out activities in another.

This kind of memory is of a procedural type and leads to an improvement in knowledge, by virtue of practice and information storing/recovering becoming progressively automatic. The implicit memory reaches full maturation around the thirty-sixth month and has a central role in early infancy learning, and particularly in the LA, because it guarantees the acquisition of the phonologic and morphosyntactic aspects of the language in the form of unconscious automatisms (Fabbro 1996, 2004; Aglioti and Fabbro 2006). In activating these memory mechanisms the child adopts memory strategies connected to practice, such as:

a. decomposition of the acquired procedure into single actions;

b. repetition of actions, at first separated, then in blocks, and finally as a single automatic procedure.

In the second year the child begins to develop forms of voluntary and controlled learning. This is possible due to the initial maturation of the explicit memory (completed around the seventh year), whose characteristics can be summarized as follows:
a. **awareness:** the child knows he is learning and is able to verbally express the learning content;

b. **focusing the attention:** learning occurs through the capacity to concentrate on a given input, reducing to the minimum the possibilities of distraction;

c. **high attention levels:** the explicit memory requires a high degree of attention, therefore it depends on the maturation of the cerebral regions associated with attention and task planning capacities, (located in the frontal lobe and fully mature around the seventh year);

d. **multi-functionality:** the explicit memory (through the “episodic” memory) enables the memorization of episodes, events and scenes, and also enables the memorization (through the “semantic” memory) of theoretical knowledge, notions and concepts;

e. **will to learn:** the child learns only if he decides to do so.

While learning in early infancy is guaranteed expressly by the implicit memory, in late infancy, (coinciding approximately with the child’s admission to Primary School), the processes of explicit memorization and the development of more elaborate and conscious memory strategies play a much more important role. Moreover, in early infancy the child has the tendency to overestimate his mnemonic capacities and is not very conscious about how his memory actually functions; as a consequence he activates the explicit memory through strategies that are not yet perfect, for instance, pointing his finger at an object or staring at it for a long time to remember it (Daloiso 2006a). Furthermore, in the first years of his life the child resorts almost exclusively to the episodic memory using visual techniques for conscious memorization.

In contrast, between early and late infancy, the child starts to learn new explicit memory strategies, such as:

a. repetition of the input to fix it;

b. re-elaboration of the input;

c. enrichment by expansions, a redundancy based technique, that consists in using different criteria (phonetic, visual, semantic, etc.), in associating the item to be learned with other elements.
Such strategies implicate the activation of the semantic memory by the child and, therefore, the capacity to memorize by allotting a greater influence to the conceptual system over that of the iconic one. This applies especially to lexicon acquisition, because the explicit memory and the activation of strategies adequate for the context furnish the child with the tools to acquire the lexicon in both the mother tongue and the FL (Fabbro 2004; 2006).

2.4 Cerebral lateralization

Cerebral lateralization is a process (though not yet completed in three to five year old children) that situates the cognitive functions in specific regions of the cerebral hemispheres and enables the possibility to elaborate information both generally and analytically. Around the seventh year the following areas will mature:

a. *the secondary associative regions of the lobes*, including the ones associated with linguistic elaboration, that actually start to function after the thirty sixth month, but not in a stable and coordinated manner;
b. *the arcuate fasciculus fibres*, that link language regions to each other;
c. *the corpus callosum*, that links the right and left hemispheres, enabling the connection between phonologic and morphosyntactic elaboration regions (left hemisphere) and the lexicon storage and recovery regions (right hemisphere). This explains how children under six have a passive dictionary vastly superior to the active one; the reason for such imbalance lies in the missing link between the region where words are stored and the (Broca) region that enables words to be verbally produced.

Although the different degree of lateral formation between a three and a five year-old child causes differences in how information is elaborated, generally pupils of this age bracket can not at this point elaborate stimuli according to separate cerebral modalities (logical and analogical). They therefore privilege a unified and all-encompassing elaboration,
that simultaneously involves manifold cerebral structures. The concept of lateralization determines implications of extreme importance for a definition of infancy LTM paths and for the choice of an operative model that respects the child’s cerebral characteristics (cf. 4.6).

2.5 Synthesis

In this chapter we endeavoured to highlight several neuropsychological aspects potentially interesting for ELTM. The neurosciences offer considerable information concerning the mechanisms activated by the pupil during any type of acquisition. We noted that:

a. the neuro-sensory process (the integrated use of senses) has a central role during any form of acquisition, and therefore is also central to LA (cf. 2.1);
b. there are specific temporal windows and phenomena connected to cerebral plasticity giving indications of the optimum age at which to acquire further languages (cf. 2.2);
c. the child acquires languages by activating memory systems not entirely correspondent to the adult ones (cf. 2.3);
d. the cerebral elaboration of language in the child differs from the one in the adult due to a series of neurodevelopmental factors, among which the most important is that of cerebral lateralization (cf. 2.4).

The neurosciences offer descriptive models about cerebral functions that are not directly applicable to didactic practice. It is therefore necessary to make clear the possible LTM implications of such knowledge. Accordingly, in this chapter the discussion of each neuropsychological aspect was followed by brief methodological reflections that will be more systematically discussed in a latter chapter devoted to the methodological dimension of ELTM (cf. 4).
3. The linguistic dimension

The definition of language teaching approaches and methodologies specific for infancy are necessarily co-extensive to the knowledge of the object of study, that is:

a. language;
   b. culture associated with language;
   c. LA phases in the child.

Given that this Document deals with ELTM in general terms, we will concentrate on the third point (more precisely, the LA phases the child traverses) for the purpose of estimating the pupil’s level of maturity of linguistic competences in the mother tongue. We will deal with the LA specifically in its first two critical periods, highlighting certain important Italian researches on the subject.

Although we have chosen “c” as the point of our interest, we nonetheless recognize the importance of studies in typological linguistics that offer precise descriptions of the functioning mechanisms of the world’s diverse languages, and of studies in text linguistics that offer a detailed analysis of the linguistic peculiarities of both childhood texts and infant language.

When we speak of LA, we refer to the full range of partly independent and partly complementary abilities and repertoires: the lexical, phonologic, morphosyntactic and functional competences. Accordingly, we will describe the main LA stages in each of these areas, with the proviso that our comments will not be ascribed an absolute value. Which is to say that, the obvious typological diversity of the world’s languages mitigates against any easy generalization of LA. Thus, the objective of this chapter consists in highlighting the mother tongue competences the child possesses when he enters infant school, and in drawing the first implications for an approach to a FL, (implications that will be more systematically analysed in the next chapter).
3.1 Lexical development

As demonstrated by many studies in acquisitional linguistics, after the child’s eighteenth-month there is a considerable expansion of vocabulary:

a. receptive: although it is extremely difficult to register the receptive lexical competences of a two year-old, it is nonetheless estimated that the child understands over a thousand words;

b. productive: at a quantitative level a strong variation emerges in the lexical repertoire; there are children who at the age of three have a lexical reservoir of a hundred words, while others have over seven hundred.

It needs to be stressed that the variation in lexical development is solely of a quantitative nature. Moreover, the differences on a typological level are minimum: this means there is no difference among words classes that constitutes infancy vocabulary. In particular, when children enter infant school, (generally at the age of three), almost all of them have a lexical repertoire that comprehends:

a. social regulators: regards, permissions, prohibitions, requirements, courtesy formulas;

b. personal names;

c. concrete names, relative to objects in daily use: home, games and toys; if the child has already attended kindergarten (or other infant schools) it is probable that he has already developed lexical competences concerning the school environment (for instance, names of objects in the class);

d. denomination games: onomatopoeias – the substitution of an

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5 The majority of data herein proposed are the results of important Italian researches in acquisitional linguistics, based on MacArthur Communicative Development Inventory, an instrument (Italian version by Caselli and Casadio, 1990) that, utilizing the parents’ collaboration, registers the lexical and morphosyntactic competences of a sample of children. It is a questionnaire that has already been given to over (note: solely in Italy) 500 parents of 8 to 30 months-old children.
object’s proper name (for instance, car becomes brrm; cat becomes meow; dog becomes bow-bow, and so forth);
e. *closed class words*: articles, prepositions and pronouns;  
f. *verbs with a concrete meaning* referring to everyday actions and states (for instance, psychological verbs and verbs expressing daily actions in the family, at school, and playing games with companions, etc.);
g. *abstract names and verbs*, especially from the fourth-fifth year.

Therefore, notwithstanding individual differences, we can note that the child entering infant school already possesses a precise lexical repertoire, including both open class words, most of the time concrete and connected to daily use, and closed class words, like articles, pronouns and prepositions.

Finally, it is worth noting that there is a relationship between the verbal and the gestural lexicon: children with a very limited active vocabulary compensate for this lack with an abundant use of gestures; in contrast, children who possess a very rich vocabulary tend not to produce new gestures and moreover decrease the frequency of the ones in use. The relationship between lexicon and gesture is therefore to be considered inversely proportional. However, it needs to be underlined that the lack of an active vocabulary in the mother tongue does not jeopardize the communicative effectiveness of the child, who succeeds anyway in reaching his pragmatic purposes and in communicating with his peers and with adults by adopting strategies to compensate for his lexical deficiency by the employment of a mimic-gestural language.

In ELTM, knowing the lexical competences existing in the mother tongue can assist in the selection of a FL lexical corpus that refers to notions already acquired by the child and that is characterized with concreteness and meaningfulness (cf. 4.3.1). According to some psychological researches on bilingual mental representation, the child can form two distinct lexical systems for the two languages in question, yet link them directly to only one conceptual system (see Job’s model, in Freddi 1987, that synthesises previous international researches).
3.2 Phonologic and phonetic development

At birth, the child is potentially capable of distinguishing sounds from all languages but shows a preference towards those from his mother tongue, (of which he has already been exposed to while in the womb). This capacity starts to decrease in the first year of life. Reaching his second year, the child has developed a vast repertoire, although not yet stabilized, of mother tongue sounds – often produced with all their phonetic features.

An important stage of the phonologic development consists in changing the phonetic acquisition unit: in the first months of life the acquisition unit is the single sound (vocal combinations around the fifth-month followed by infantile prattle or “baby-talk”), from twelve to eighteen months it is the entire word, and only later will it become the syllable. It is probable that this vocabulary explosion is what induces the child to change his acquisition strategy by adopting a criterion more properly phonetic, more connected to the syllable.

The second to the fifth year is a very delicate period for phonologic development because it is during this phase that the child sharpens his ability to discriminate phonetically, as well as stabilizing his phonetic inventory. This phonetic stabilization is situated within a broader evolutionary process, one that consists in the creation of inter-connections among sounds, words, and concepts, relative to the mother tongue; this process similarly happens during the early exposure to a FL (Job, in Freddi 1987).

The clearest signals of progressive phonetic stabilization are precisely the errors the child begins to commit: not those that are mainly mispronunciations, but, rather, those that are connected to syllable restructuring, syllable doubling, cancelling not accented syllables, and reducing consonant groups (Bortolini, in Sabbadini 1995). These errors show that phonological acquisition is not only the correct production of isolated sounds, but, more importantly, is the production of sounds in syllabic contexts. Thus, the phonetic stabilization actually occurs only when the child is able to pronounce sounds correctly in all their phonetic features and in any phonetic context of his mother tongue.

The first methodological consequence of this knowledge concerns the importance that the phonologic and phonetic dimension assumes in the
acquisition of the FL. During this stabilization phase, the child still has the possibility of acquiring sounds that do not belong to the phonologic system of his mother tongue. Therefore, it follows that the FL input has to be highly qualitative in order that wrong phonetic forms do not become fossilized (cf. 4.3.2).

3.3 Morphosyntactic development

At the level of comprehension, (in the first months of his life), the child manifests a sensibility to the syntactic order of words and is preferentially attentive to phrasal constructions that match with a provided image. At the level of production, several Italian studies (see Chilosi and Cipriani 1993; De Vescovi and Pizzuto, in Sabbadini 1995) indicate that:

a. the child starts to produce enunciations of at least two words, the meanings of which change according to their intonation or syntactic position;

b. before the third year, the sentences produced, even when maintaining a linear syntactic order, are often enriched with a verb and all the obligatory complements. Closed class words are, instead, systematically omitted;

c. during the third year, sentences lacking verbs decrease significantly, while the production of complete simple sentences progressively increases along with all the obligatory complements and some optional ones;

d. also in this period, the first closed class words are introduced and the child begins to produce more complex sentences, (coordinated and subordinated, explicit and implicit), even if they are not always complete or grammatically correct;

e. only between the fourth and the sixth year does the acquisition of rules of nominal, adjectival and verbal flexion, and the correct use of conjugations beyond the present tense, take place.

Similar to lexical development, with morphologic and syntactic development there are considerable individual differences of a quantitative type.
connected to the average length of the enunciations. These differences, however, concern the learning time, peculiar to every child, and not the stages of morphosyntactic development that are instead fairly constant. On a methodological level, the morphosyntactic development of the FL will follow the stages the child goes through in the mother tongue, and it can be supported by introducing linguistic chunks inside highly repetitive situations. These chunks the child initially acquires as single words, and then, by decomposing them, discovers the morphosyntactic variation of the language (cf. 4.3.3).

3.4 Functional development

As well as being a formal system, constituted by rules of lexical, phonologic, morphologic and syntactic combination, the language a child learns is also a functional system, composed of semantic rules that ensure a link among cognitive structures, linguistic forms and pragmatic rules on the use of language. Before developing specific pragmalinguistic competences, the child already possesses pragmatic competences (Camaioni 1980), because:

a. he knows how to express communicative intentionality;
b. he refers to persons and objects by using conventional signs, whether they be sounds or gestures;
c. he knows how to distinguish between new and already known information;
d. he adopts diversified communicative strategies to obtain different results.

The child utilizes this pragmatic fore-knowledge when passing from pre-linguistic to linguistic communication.

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6 The Average Sentence Length is an index at a quantitative level of morphosyntactic development, and is calculated using specific procedures (see Brown 1973 and Volterra 1986). To measure the ASL, divide the total number of words (or morphemes) by the total number of enunciations, (it is necessary to have many spontaneous language samples, say, at least one hundred enunciations).
The pragmalinguistic development entails a language use that is increasingly adequate to the communicative context and, moreover, entails the capacity to use the language to express different functions. By assembling data derived from different researches within functional linguistics, it is possible to conjecture that the child at an early age develops certain competences in different communicative functions. In particular, according to the applications of Halliday’s model proposed by Freddi (1990a) and Scaglioso (1990), at the age of three the child already learns functions that are:

a. **regulative-instrumental**: satisfying material needs and establishing games or behavioural rules, (“I want” and “let’s do as I say”);

b. **personal**: permitting the child to speak of himself and to express his world, (“here I am”);

c. **interpersonal**: language used to interact with others, (“you and I”).

Beginning from the fourth-year, functions emerge that are:

a. **imaginative**: permitting the child to share with others things like dreams, fantasies and symbolic games; (“let’s pretend that”);

b. **heuristic**: language used to explore the surrounding environment, (“tell me why”).

Finally, only later does the meta-linguistic function emerge, connected to the ability to reflect on language in all its dimensions (communicative, phonologic, lexical, morphologic, syntactic).

It is worth noting that, it does not appear possible to have a settled hierarchy of communicative functions, and this is confirmed by the discordant results deriving from the various researches on the subject. Halliday’s proposal, however, is acceptable in a general sense even if we presume that pragmalinguistic development strongly depends upon the child’s environment, and particularly upon his relationship with teachers and with other children; it is presumable, in fact, that the progressive development of different communicative functions changes

7 There are various proposals to define different function typologies, (see Freddi’s classification, 1990a, drawn from an integration of Bühler, Halliday and Jackobson models).
depending on the type of relationships and psychosocial equilibriums that the child establishes with others. These considerations indicate that, in ELTM, the child’s socio-pragmatic competence needs to be developed from the communicative functions already employed by him. Functions that vary according to his age and the development phases he is experiencing. These different functions need to be introduced, practiced and fixed by utilizing texts that insert the language associated with the functions in contexts that are authentic at a pragmatic level (cf. 4.2). Supporting this contention is the contribution made by text linguistics.

3.5 Synthesis

In this chapter, notwithstanding that the limited space has restricted our exploration to only a part of a vast linguistic dimension, we have highlighted how acquisitional linguistics can contribute to ELTM:

a. by indicating precise development stages of linguistic and communicative competence;
b. by offering suggestions, of a methodological nature, for selecting FL linguistic contents, more precisely, by defining a corpus of lexical elements, phonetic forms and morphosyntactic structures on which to base the early approach to the FL.

In the next chapter we will deepen our examination of the above implications by situating them within a methodological approach to early FL teaching.
4. The methodological dimension

The knowledge pertaining to acquisitional and linguistic dimensions permits the ELTM to draw certain methodological implications that can contribute to defining approaches, methods, and techniques, in an effective and scientifically based manner.

4.1 A formative approach to foreign language

The approach proposed here has its origins in a certain interpretation of LA. One that understands LA as a process resulting from the interaction of different evolutionary factors (cf. 2.), rather than as a self-standing process, totally independent from the overall growth of the child. In the first years of a child’s life he arrives at a progressively thorough knowledge of the language (or languages) that he is exposed to, simultaneously integrating it with other expressive modalities (gestural, mimic, physical). He also learns to analyse environmental stimuli, attributing to them an appropriate meaning and response, and he activates increasingly complex cognitive strategies. These abilities are sustained by the maturation of the cerebral structures associated with superior cognitive functions. Indeed, LA is supported by the maturation of specific cerebral regions: for instance, lexical acquisition can not occur until the maturation of the explicit memory (cf. 2.3). In the same fashion, the capacity to be attentive and the consequent development of strategies to maintain or shift the attention are consolidated only around the seventh-year, in correspondence with the maturation of the prefrontal regions (cf. 2.2).

LA is also restrained by cognitive development, that, in its turn, is dependent upon cerebral maturation. For instance, to attribute a meaning to facial expressions the child must first develop cognitive strategies for facial recognition, that, in turn, depend upon the maturation of the temporal-occipital region – a region wherein specialized neurons are developed that become activated only at the sight of a face. This means that the child can acquire, for example, the adjective “happy” and its association with a face only after having developed specific cognitive strategies that, in their turn, are dependent upon specific aspects of
cerebral maturation. LA in a three to five year-old child has therefore a close relationship with the cognitive dimension: on the one hand, language is acquired due to the support of knowledge and thought, and on the other hand, language itself contributes to the child’s cognitive development.

According to Freddi (1987, 1990a, 1990b, 1999), as a consequence of such considerations, in contemplating the ELTM it is advisable to keep in mind this interdependent relationship between language and cognition. Moreover, in his view the FL also contributes to the overall growth of the child at a level that is:

a. **cultural and intercultural**: because language mirrors and conveys culture it therefore offers the child the possibility of knowing that other cultures exist and, at the same time, of learning to appreciate his own;

b. **relational**: because language permits the child to enter into a relationship with the world, to interact and cooperate with his companions, and develop socio-pragmatic competences;

c. **semiotic**, because verbal language is only one of the expressive codes at the child’s disposal, he therefore has to learn to consciously integrate it.

The Venetian formative approach is generated precisely from this view that the FL (and language in general) is strongly interdependent with the overall growth of the child.

In these last decades, the communicative approach has been asserting its importance in LTM as an approach based on language as a communication instrument wherein socio-pragmatic correctness has precedence over a formal one. Coextensively to Krashen’s “natural method,” in this approach, the psychological and emotive dimension of LA is also significant.

Although the communicative approach has the merit of returning to language its own pragmatic value, (in contrast with the structural view), the Italian LTM has noted through studies that have become classics in their field (Freddi, Titone, Perini, Cambiaghi, Porcelli), that the instrumental function is not the only one performed by the FL in an educational sphere. It has, as well, a formative role, offering itself as
a further instrument to the pupil for his cognitive, cultural, relational, and semiotic development.

The formative dimension of the language gains importance the more we work with three to five year-old children. These children are still traversing the initial phases of cognitive, psychological and social development, and therefore their mental instruments, strategies, world knowledge and mother tongue competences are still incomplete (cf. 3). For instance, often in their fourth-year, children have not yet conceptualised colours in their mother tongue. How can we teach them the denominations of colours in the FL if we do not at first help them to develop the concept of colour? Also, four year-old children know summarily the hot/cold contrast, but they lack experience to distinguish tepid, and boiling/freezing. How can we teach them these words in the FL if they only have a partial experience, and thus conceptualisation, of hot and cold?

From these considerations we may reasonably deduce the necessity for a formative approach in any early encounters of a FL, that (Daloiso 2005):

a. comes from the observation that LA in infancy cannot be separated from the overall growth of the child;
b. consequently proposes a link between FL teaching and general education;
c. gives significant consideration to the emotive dimension of learning;
d. in any case, also preserves the instrumental view of the FL by respecting the child’s inclination to satisfy his pragmatic needs (playing, communicating, gaining experience of himself, of others and of the world), through language.

4.2 Defining LTM aims and objectives in a formative perspective

According to the formative perspective on EFLT, the early approach to a FL must first of all establish general educational aims, such as:

a. self-realisation: finding satisfaction in the use of the FL as a fur-
ther instrument with which to play, speak, and have meaningful experiences;

b. cognitive development: the use of the FL as a learning environment, as a further instrument with which to explore, manipulate, and conceptualise reality;

c. cultural development: discovering the existence of other cultures at the same time as making the child increasingly aware of his own culture;

d. socio-relational development: using the FL to express himself and to communicate with others, thus developing his social competences.

Additional to these general education aims are language education ones (specifically for infancy) connected to the linguistic and communicative dimension of the language. These traditionally recognized language education aims (Balboni 1998) concern:

a. communicative and meta-communicative competence;

b. mathetic competence, i.e. the development of a capacity to learn a language.

Regarding the communicative and meta-communicative competence of children going through the first two critical periods (cf. 2.2):

a. the abilities to be developed are of an oral nature and they involve both the receptive dimension, (knowing how to listen and to understand), and the productive one, (knowing how to speak – monologue and dialogue);

b. the socio-pragmatic competence needs to be developed starting from those communicative functions nearest to the child’s world (cf. 3.4), and therefore are of a primary importance to the child; functions, such as:

– personal: that permit the child to speak about himself;

– interpersonal: that contribute to socialization;

– imaginative: that permit the sharing of dreams, fantasies, and symbolic games;

– regulative: that permit the child to establish and to give shape to the rules governing games.
In contrast, meta-linguistic function is implicitly developed: the introduction to a FL will lead the child towards an awareness that the same meaning can correspond to different grapheme and phoneme elements in different languages and that phrasal structures change from language to language;

c. the communicative functions find their realisation in structured situations within the child’s reality (such as school routines) where language has a meaningful role, and in games where language is essential for arranging their rules and for the respective game’s enactment;

d. the development of linguistic abilities connected to communicative functions is closely linked to the development of a *textual competence*. For each language function textual genres can be employed that are close to the child’s interests and needs:

- *personal function*: confidence (to express mental and physical states, emotions, preferences);
- *interpersonal function*: the phases of interpersonal regulation during a conversation;
- *imaginative function*: nursery rhymes, fables, fantasy stories, counting-out rhymes;
- *regulative function*: toy instructions, cooking recipes, rules of the game.

Coextensively to communicative aims, mathetic ones, connected to the awareness of the LA process, also need to be established. Glottomathetic competence is expressed in:

a. a *meta-cognitive competence*, that permits a conscious and voluntary practice of cognitive strategies that are effective for learning contents and abilities;

b. a *meta-mnemonic competence*, that permits an awareness of those strategies that store, fix, and recover information, and that check the processes influencing the mnemonic operations (concentration, self-control, an inhibition towards irrelevant stimuli);

c. a *meta-emotional competence*, that consists in knowing how to control emotions and feelings which can negatively influence the linguistic learning.
Noting the above point “b,” we can observe how the child, since early infancy, develops not only specific memory systems but also memory strategies connected to them, all of which he is only partially conscious of (cf. 2.3). In elaborating an educational curriculum we can, therefore, also provide for glottomathetic aims. For instance, those aims concerning the meta-mnemonic dimension of LA that recognize the existence of explicit mnemonic strategies favouring conscious memory; that recognize some of the mnemonic strategies used during activities; that recognise forgetfulness; and that recognise that learning can be influenced by external factors such as tiredness and inattentiveness.

In addressing FL teaching to primary school children, we need to plan a curriculum that takes into account both the operative dimension of the language, supported by the implicit memory, and the meta-linguistic and meta-communicative dimension, sustained by the explicit memory, or more colloquially, the “memory of knowing.” The teacher can individualize meta-mnemonic aims, such as: by reflecting on the strategies used during activities; by judging the effectiveness and usefulness of an adopted strategy; by consciously activating the attention; and by organizing the material to be learned in order to facilitate memorization (for instance, by dividing it into small parts, by using different colours to underline, by relying on extra-linguistic elements).

In a nutshell, the formative and methodological aims need to be translated into didactic objectives. It is not possible here to specify all the objectives, as this would mean listing the functional, lexical, morphosyntactic contents that comprise linguistic and communicative competence, as well as detailing the necessary processes to accomplish various abilities. We can instead note the typologies of some objectives that we think are worth pursuing at this moment. In so doing, we need to differentiate:

a. **formative objectives**, of a cognitive, relational, cultural-intercultural, and semiotic kind;

b. **linguistic and communicative objectives**, to be specified in terms of abilities and contents (functions, lexicon, morphology, syntax, textual genres, etc.).

In a formative view of FL, the above “a” objectives take priority over the “b” ones, in the sense that the latter need to be selected, beginning
with the notion that a language is both necessary and enables the child to experiment, manipulate and conceptualise reality, (that is to say, necessary and enabling for his education).

4.3 Selecting linguistic contents in a formative perspective

The formative approach also implies that the linguistic contents at a lexical, phonetic, morphological and syntactical level are selected in accord with the known growth phases that the child has already experienced in his mother tongue (cf. 3). The principle regulating the contents selection is twofold:

a. all language dimensions must be harmoniously developed – from phonology to morphology-syntax, from lexicon to communicative functions;

b. within these dimensions there are certain aspects that take priority over others because the pupil’s neuropsychological characteristics favour their early acquisition (see Daloiso 2006b).

4.3.1 The lexical dimension

The lexicon to be proposed for the FL must be chosen on the basis of at least two criteria:

a. concreteness;

b. meaningfulness: the degree of usefulness and familiarity to the child of certain lexical spheres.

Therefore, it is preferable to make use of lexical areas such as, nature, animals, food, school environment, family context, games, personal description, and the imaginary. These are lexical spheres that a three-year-old is already familiar with, notwithstanding the degree of quantitative development of his lexical repertoire in his mother tongue (cf. 3.1). Equally important is the acquisition of social regulators, personal pronouns and possessive adjectives in the FL that the child needs in
order to construct his identity and position himself in his social context (Molinari 2004). On a linguistic level, pronouns belong to closed class words (together with, for instance, articles and prepositions), that follow morphological, syntactical, and usage rules that differ from language to language and are increasingly hard to acquire with age. Neuroscientific data suggests that it is preferable, therefore, to devote particular attention to the acquisition in early infancy of closed class words (cf. 1.2 and 2.2); counter-wise, in the acquisition of open class words there are no critical periods, thus lexicon extension can occur without problems in the growth phases that follow.

4.3.2 The phonetic and phonologic dimension

On a phonological level, the child attending infant school is progressively stabilizing his phonetic inventory and is sharpening strategies of phonetic discrimination and oral production in his mother tongue (cf. 3.2). It is a very delicate phase that requires responsibility on the part of the educators, especially the language teacher. Encountering the FL can provide an occasion to enrich a yet to be stabilized phonetic inventory with characteristic sounds of the respective language. The child in early infancy is not yet strongly bonded to “cultural filters” deriving from the phonetic elements and the spelling peculiar to the mother tongue. Unlike the adult, the child has an phonologic plasticity sufficient to learn new sounds in all their phonetic features (Cigada, in Porcelli 1993). Conversely, an adult is already used to sounds and particular phonetic combinations that influence his perception of only some of the differences between the two languages, and therefore he tends to interpret foreign sounds according to their nearest pronunciation in his mother tongue.

Consequently, developing the phonological dimension in a FL is of primary importance, not least of all because once past the second critical period, (around the eighth-year), the foreign accent begins to penetrate and it becomes extremely difficult to acquire a pronunciation near to that of a native speaker (cf. 1.2 and 2.2). This leads us to note that it is necessary for the teacher to constantly aim at improving his phonetic competences in the FL in order to offer a high quality phonetic input.
A teacher that has difficulty in doing this is obliged to compensate for his deficiencies by utilizing authentic phonetic material (audiovisual, cassettes, CD-ROM) in order to avoid proposing a linguistic model containing incorrect phonetic forms, that once learned by the child are difficult to eradicate.

4.3.3 The morphosyntactic dimension

In analysing the morphologic-syntactic development in the mother tongue (cf. 3.3), it is necessary that the FL be presented inside situations that are familiar to the child and that have a high degree of repetitiveness: these situations (or formats, so-called in J. S. Bruner pedagogy theory) are forms of social interaction structured by the adult that permit the child to accomplish sequences of coordinated actions, initially by recognizing and associating language to situations, and later, by operating and reflecting upon it. Infant schools generally offer a variety of repetitive situations that are well suited to the linguistic routines of the FL. This suitability also has the advantage of immersing the language in a specific communicative situation, offering linguistic structures that are often simple or in any case, comprehensible through the context (cf. 4.2).

The operative modality with which to introduce a FL in routines frequently follows the logic of a Total Physical Response (TPR): children are given orders accompanied with gestures and mime. Because the situations are very familiar, the child is able to concentrate on the linguistic message and perform habitual actions by associating them with FL enunciations.

4.4 Realizing the formative approach through playful methodology

The formative approach fully realises itself in a method, in a coherent whole comprising methodological and didactic principles that translate into operative models, indicators, and materials for teaching (Balboni 2006). Referring to ELTM we often speak of playful methodology, although these terms are frequently confused with the simple presentation
of games. On the contrary, this methodology assigns to games and language a strategic value for the development of linguistic, cognitive, relational, and cultural abilities (Freddi 1990b; Caon and Rutka 2004; Caon 2006), and therefore, is able to respond to the complexity of infant development that in turn is promoted through linguistic and formative objectives.

This methodology constitutes a valid realization of the formative approach, with the condition that it respects and promotes the child’s natural LA mechanisms. The early approach to languages through playful methodology needs to:

a. rely on strategies of implicit linguistic acquisition that the child has already adopted in acquiring his mother tongue (cf. 2.3);
b. consequently propose paths of implicit acquisition, where the FL is an integral part of a learning environment in which the children can use it to have experiences meaningful to their growth, at the same time creating through practice certain linguistic automatisms;
c. give space to the operative dimension of language, using the FL to “do things,” for instance, building materials for a game, inventing a song or a nursery rhyme, and exploring and conceptualising activities;
d. promote the neuro-sensory development of the child, by favouring the stabilization of synaptic connections, through linguistic activities that involve simultaneously many sensorial modalities (cf. 2.1) and offer inputs that are:
   – constant, in a way that the reiteration of stimuli favours the formation and the stabilization of definite neural channels and guarantees fixing information in the implicit memory structures (cf. 2.3);
   – gradual, proportionate to the degree of maturation that the child has reached when the input is proposed to him;
   – ordered and coherent, because disordered information is difficult to integrate at the nerve level and therefore slows down the learning processes.

In light of these considerations, and providing the above mentioned
characteristics are ascribed to, adopting playful methodology in infant school is neurologically valid and therefore respects the child’s learning modalities.

4.5 Techniques for the early approach to language

To accomplish the formative approach, the playful methodology (cf. 4.4) proposes a series of LTM techniques based upon the game. Beginning with the most important classifications of playful techniques proposed by several Italian scholars (Freddi 1990b; Caon and Rutka 2004; Caon 2006), we in our turn, offer some considerations about LTM techniques that we hope may better accomplish an early approach to the FL.

4.5.1 Functional, symbolic and regulatory games

Games have a privileged role in playful methodology, because they already belong to the child’s world notwithstanding his educational environment. The FL approach in early infancy can especially rely upon:

<table>
<thead>
<tr>
<th>Type of game</th>
<th>Characteristics</th>
<th>LTM activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional</td>
<td>From the first months of his life, these games are well known to the child because it is through them that he started to acquire language and explore reality.</td>
<td>Repetitions, Linguistic compositions and decompositions, Word assemblage puzzles, Sequences, Set Theory</td>
</tr>
<tr>
<td>Symbolic</td>
<td>From the second year on these games appear and are connected to, the representative intelligence (ability to represent an absent object), the capacity to mimic, and semiotic development.</td>
<td>Expressive, rhythmical and musical activities, Nursery rhymes, Trans-codification exercises, Mnemonic games, Dramatization, Simulation, Role-play</td>
</tr>
</tbody>
</table>
Because these games require collaboration and respect for rules they can be introduced starting from the fifth-year. The difficulty in proposing this type of game to 3 to 4 year-old children is that they are required to activate the reflective intelligence (maturing only towards the seventh-year), and social-relational competences (that children only begin to master around the fifth-year).

Schematic games (Snakes and Ladders, Bingo, Naval Battles, Three Cards of a Kind, associated with language exercises)
Outdoor games (hide-and-seek, blind-man, Grab the Handkerchief, associated with language exercises)

4.5.2 Activities based on Total Physical Response (TPR)

Activities based on the TPR method – a humanistic-affective communicative approach that considers the LA a slow process, one based on receptive experiences and easily stopped by events that are frustrating and cause anxiety, and also based on the involvement of the person’s total experiential modalities – can also be considered playful. The basic TPR method consists in giving pupils a verbal input comprising orders, to which they must respond by implementing them. Underpinning this is an awareness that oral comprehension abilities are central to language teaching, especially at the beginning of the learning path. In this LA phase the child, although he is starting to understand the new language he is exposed to, still feels unable to use it. According to the playful methodology elaborated by the Venetian school, TPR activities:

a. respect infant psychology, by not forcing the pupils to speak before they are ready;
b. respect the neuro-sensory system, because they are based on linguistic input, accompanied and supported by gesture, mime, and the use of objects (cf. 2.1 and 4.4);
c. *take into account the relationship between language and gesture*, essential in the child’s linguistic development (cf. 3.1);  
d. *offer the teacher an immediate feedback* on message comprehension, which allows the teacher to constantly regulate the input based on the specific learning rhythms of the pupils;  
e. *can be gradual*, and therefore introduce a progressively complex input, beginning with simple orders like “open the door”, and eventually reaching extended action sequences.

### 4.5.3 Techniques for oral comprehension

The development of FL comprehension must occur within situations and contexts familiar to the child (cf. 4.2), beginning with his favourite textual genres, such as fables and fantasy stories. It is not recommended, however, that the teacher limit himself to reading a fable in FL, because it would be unlikely to be understood as the language used in these stories is often difficult for foreigners to access because of its frequent diminutives, forms of endearment, pejoratives, abundant use of adjectives and of fixed formulas that are typical of this genre. Given this, the text needs to be presented within a comprehension path that includes:

a. *pre-listening* phase, realized in didactic activities that introduce the characters names in the FL and highlight the story’s keywords; these activities are useful oral exercises for word-image matching or true-false questions – where the teacher shows the image of a character and says “This is...”; the children have to answer simply yes/no, thus demonstrating if they have understood the name of the character;  
b. *listening* phase, of a simplified version of the fable, that can initially consist in short phrases in the FL that summarize the plot and are accompanied by relevant images. As the pupil’s level of comprehension increases it is possible to make the text more articulated by introducing, for instance, dialogues among the characters;  
c. *post-listening* phase, where we propose activities that verify the
comprehension; the teacher can, for instance, re-read some phrases changing one or more words in order to completely modify their meaning; children would have to recognize if the altered words are right or wrong and eventually correct them. We also propose exercises that rearrange the plot sequences using images. If the verbal competence of children permits it, it is possible to develop activities that move from dramatization to that of role-playing, whereby pupils autonomously utter more or less short dialogues that can also alter the contents and the end of the fable. It is worthy of note that, traditional fables, in their narrative form, generally are not ideally suited to dramatization because they have a limited number of characters, thereby excluding many children in the class. Strategic solutions need therefore to be adopted that will involve the whole class, for example by enriching the story with more characters or by seeing that the same character is interpreted by different children at different moments.

4.5.4 Activities for “educational experiences”

In infant schools the child’s growth is promoted through a series of learning paths, during which the child experiences reality by discovering it, manipulating it, and finally by conceptualising it. Therefore, educational experiences are learning paths whose aims, for instance, are for the children to conceptualise colours and geometric forms, to discover sound, rhythm, their own body and the surrounding environment, and to interiorise cultural aspects (conceptions of time and space, food, and national and foreign cooking).

Although it is not expressly part of the LTM tradition, co-planning educational experiences with one’s colleagues can also be useful for the FL teacher. In a FL formative perspective and not only in an instrumental one, giving a role to the FL in the overall growth of the child means also to plan together with other teachers common educational experiences that lead to formative objectives through activities in both the mother tongue and the FL, under the condition that the latter is useful in carrying out these activities and constitutes the vehicle
through which the formative objectives may be reached (cf. 4.1 and 4.2). On an organizing level this means that the intervention of the FL teacher must not interrupt the ongoing educational path, rather, it must become part of it and integrate naturally; for this to happen, a common educational plan among teachers is essential and a necessary condition for a formative approach to ELTM.

4.6 The Acquisition Unit: as an operative model tailored for children

Many operative models offered by contemporary LTM are based on an interpretation of LA as a process involving the whole brain, initially activating the right hemisphere for a general elaboration of the message, then the left for an analytical elaboration, and finally both hemispheres for the synthetic re-elaboration of the language\(^8\) (Danesi 1988; 1998). This conception reflects the LA modalities for adolescents and adults, but not for children because the alternation between the general and the analytical elaboration of the message is possible only after cerebral lateralization. A formation that enables cognitive functions to settle in specific regions of the cerebral hemispheres and the information to be generally and analytically elaborated (cf. 2.4). This process becomes completed only around the seventh-eighth year of age, approximately at the end of the critical period (cf. 1.2 and 2.2).

Because of incomplete lateralization in early infancy, the child, rather than elaborating stimuli according to distinct cerebral modalities, privileges instead a singular and general elaboration that simultaneously involves manifold cerebral structures. The analytical abilities of the child increase with the progression of lateral formation, thus a five year old displays clear differences in cerebral elaboration to that of a three year-old. Therefore, three year-old children should only be presented with activities that involve them totally and that encourage

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\(^8\) More precisely, the left hemisphere is activated to comprehend and to elaborate literal language on a syntactic and phonetic level; while the right hemisphere elaborates lexical aspects and the emotional content of the message.
them to reflect upon without interrupting their experience of the world; conversely, with five year-olds it is possible to propose short reflective moments, to be understood by them as the natural result of their first-hand experiences.

The LTM tradition offers two models that are distinct with respect to purpose and structure (Balboni 2002):

a. *the module*, born out of contemporary society’s need for continuous development, is not suitable for ELTM because its certification and accreditation system places the accent on the acquired *product*. ELTM, on the other hand, focuses on the LA *process*, and on the positive consequences that an experience in an early approach to the FL can have for the overall growth of the pupil;

b. *the Teaching Unit*, that has its roots in the Gestalt theory of the 1930s, proposes a view of human perception characterized by three separate moments: global perception, analysis and synthesis (see *Document 4* in this series). From the ‘60s and ‘70s on, this model was also proposed for language teaching – studies in neurophysiology confirmed its validity for adolescent and adult pupils. The Teaching Unit requires highly structured and planned paths that can last up to 6-8 hours. The traditional sequences in the Teaching Unit should not be applied to children under seven or even eight because:

- *on the neurological level* it would require the alternating and separating activity of cerebral elaboration modalities that are logical and analogical, and typical of the lateralized adult brain;

- *on the psychological level* the rigid structure of the Teaching Unit is in contrast to the didactic flexibility that is necessary for childhood education.

The inadequacy of the traditional models imposes the necessity for an operating model that is tailored for children and proposes acquisition paths that are:

a. *short*, maximum duration of a couple of hours;

b. *flexible*, that integrate with general educational lessons (cf. 4.5.4)
and conform to the contingent necessities characterising infant education;
c. *respectful of the LA natural sequence* (cf. 3);
d. *respectful of the neuropsychological dimension* of infant acquisition (cf. 2).

In these last years considerable interest has been aroused by the concept of the *Learning Unit* elaborated by the Venetian school (Balboni 2002, 2006; Mezzadri 2003), that refers to a set of short paths of discovering, fixing, and interiorising one or more linguistic, communicative or cultural elements, and that traverse again the phases of the Teaching Unit. The Learning Unit, as a whole, therefore constitutes the traditional Teaching Unit. This new concept appears to be adequate for the ELTM because it proposes acquisition paths that are shorter than those of the Teaching Unit and therefore are easier for the teacher to manage, the teacher can modify them according to the learning rhythms and the cognitive styles of the pupils. On the other hand, the traditional acquisition sequences (global perception, analysis, synthesis) need to be partially revised and adapted to childhood psychology and neurology. If tailored specifically for children up to eight years of age, the Learning Unit actually becomes an *Acquisition Unit* because the recipients are traversing the LA second critical period (cf. 1.2 and 2.2) and therefore, they can still activate the same implicit strategies they used to acquire the mother tongue when in turn they acquire the FL (cf. 2.3).

Cognizant of the neurological processes that govern infancy LA, it is possible to adapt the traditional scanning of the Teaching Unit by enlarging the phases that respect the child’s learning modalities and by re-conceptualising the ones that require elaboration modalities not possessed by the child. After the motivation phase – assumed to be fairly rapid considering the intrinsic motivation driving the child to approach the language phenomenon and considering the motivational drive that some textual genres have on him (songs, fables, nursery rhymes) – the Acquisition Unit must be constructed during the following moments:
a. Approaching
the child is guided to a complete comprehension of the text though, for instance, multi-sensory stimuli (images and/or objects to see, touch, and smell, etc.). Various useful techniques, (with priority being given to the oral form), can be:

− **language-image matching**, that leads to a complete comprehension by working on the keywords or meaningful elements of a text, without requiring any utterances on the part of the child;

− **language-object matching**, a variation of the above technique, with the added advantage that the object connected to the word is situated within the classroom and thus can be explored first-hand; the relevant word has therefore a higher probability of being memorized because of its association with several neuro-sensory stimulations (cf. 2.1);

− **image rearrangement**, a part of meshing or merging techniques that enables the verification of the extent to which the pupil has comprehended the narrative order of the events and actions described in the text;

− **yes/no or true/false questioning**, where the teacher can re-iterate keywords, nodal points or the names of characters, and, in so doing, verify their comprehension; this technique is more effective by resorting to mime, more effective depending on the type of questions asked and the objects used, and is more involving if the class is divided into small teams. An important advantage of this technique is the minimum verbalization required from the children;

− **set theory games**, comprehending exclusion, inclusion, and sequence games.

Many of the techniques cited here promote cognitive strategies connected to the explicit memory in its growing phase during the early years of life (cf. 2.3). Set theory games, for instance (sequence, inclusion, exclusion), require a concentration on groups of words and a consideration of their formal or semantic characteristics; these techniques can also be adapted for kindergarten children by replacing written words with images and objects. Similarly, matching techniques require an explicit association of a linguistic element with a non-linguistic one, by activating memory strategies connected to perceptive analysis (see Daloiso 2006a).
In a formative perspective, the approaching phase can also be interpreted as approaching a phenomenon of reality that is already the object of educational activities in the mother tongue; the FL teacher, together with his colleagues, can plan an educative experience that, following an Acquisition Unit scanning, contributes to discovering reality and making it cognizant through FL activities (cf. 4.5.4).

**b. Focusing**
even if the teacher can not elicit from pupils an analytical elaboration of the text, nor elicit a conscious reflection on the language they are acquiring, he can select some structures of the text (lexical, syntactic, functional) and propose activities for their memorization. In a formative perspective, this phase can be dedicated to fixing the lexicon and structures that are needed in order for children to conceptualise a certain phenomenon in the FL.

When children are ready to speak, the following techniques can be selected:

- **chain dialogue**, where a pupil starts a mini-dialogue with a classmate who responds and who, in turn, then asks the question to another class-mate, and so on;
- **songs, nursery-rhymes and poems**, that can be repeated by children strophe by strophe; because the words and/or structures in these genres are often repeated, their fixation is readily facilitated;
- **phonic exercises**, such as regressive or segmented repetition and the “ti-ti-tà-tì” technique that focus the attention on phonetics and intonation. These exercises do not require autonomous production, but only fixation of the intonation pattern through repetition;
- **functional games** and for older children, **structured interviews**; these activities permit the fixing of structures and lexicon and also require teacher-assisted utterances on the part of the pupil;
- **memory games**, useful to fix the lexicon of the text.

When pupils traverse the so-called, “silent period,” linguistic focalisation can also occur through activities that target those structures of the text that do not require verbalization. This way the child receives a targeted input and he concentrates on the linguistic structure. In this case, techniques employing TPR logic are useful, for instance:
trans-codification exercises, enabling children to mime or draw those sequences in the text that contain the structures desirous of focusing the child’s attention upon;

“listen and point at,” “listen and mime,” “listen and connect,” “listen and do,” activities, possibly with little or no miming and/or gesturing so as to avoid the respective activity becoming a complete comprehension exercise;

memory exercises (visual memory or visual bingo) to fix the receptive lexicon, wherein the teacher names the images while the pupil only has to turn face-down the corresponding image he is holding.

The techniques that can be included in this phase mainly promote the explicit memory by requiring the pupil to voluntarily focus on a language aspect selected by the teacher (cf. 2.3). For instance, functional games (repetitions, linguistic compositions and decompositions, assemblage puzzles) require a concentration especially on the phonological, morphological, and syntactical characteristics of the input; conversely, memory games rely on the visual channel to develop visual-spatial memory strategies.

c. Re-use

requires the pupil to re-employ the structure that has been initially fixed by teacher-assisted activities, but later becomes progressively more autonomous. In a FL formative view, during this phase planned activities can enrich the on-going educational experience at the same time as permitting the pupil to re-use fixed lexicon or structures.

LTM techniques that are useful at this phase, are:

– dramatization, that consists in reciting dialogues in the text; it is a technique readily accepted by children, although it is restrictive by definition; in infant school this and other activities of simulation need to be calibrated according to the memory abilities of the pupils, because it is not possible to count on graphic support;

– role-taking, role-playing, role-making;

– composing songs and nursery-rhymes beginning with the texts and structures employed during the Acquisition Unit;
symbolic games, such as constructing a story with certain linguistic elements already fixed in the preceding phase of the Acquisition Unit; these stories can then inspire an increase in the autonomy of dramatization and simulation activities;

communicative games, based on a missing information exchange; by cutting out and gluing figures from magazines and newspapers pupils can create a new image connected to the theme of the Acquisition Unit, (for instance, by working on the lexicon concerning house objects, children can “furnish” the image of a bedroom with their favourite objects); then in pairs children can re-use their memory structures to ask questions of a class-mate and then try to guess what image he has constructed;

schematic games, such as the Goose Game and Snakes and Ladders, to be proposed especially to children over five (cf. 4.5.1); this form of game is based on a graphic grid containing images – divided into teams, the children must pass a test that is allotted to every square of the grid. The purpose of these tests is for the children to re-use the acquired structures, for instance, by them giving instructions to their team-mates who will have to carry them out within the framework of the TPR logic, or by repeating a counting rhyme and/or nursery-rhyme that was included in the Acquisition Unit, or by naming and describing objects that recall the learned lexicon, or by guessing the action, the object, or the animal being mimed by a class-mate.

The techniques of this phase stimulate mainly the implicit memory because they are based on the operative dimension of the language, and in particular on the idea of associating the FL to activities, experiences, or games that the child habitually performs in his mother tongue. The pupil’s primary objective is to complete the game, while the acquisition of the linked linguistic forms takes place transversally and implicitly. For instance, symbolic games (composing stories and tales using a limited number of words/images) primarily encourage the child to be co-operative, imaginative, inventive, and open to accepting the FL as a rule of the game and something he can pleasurably use for other purposes. In the same way, in role-playing, (although requiring a certain concentration on the language to produce enunciations that are grammatically correct and pragmatically effective), the attention
towards the language is always subordinate to the desire to play with classmates, to inventing a role, to changing identity, and to building materials for the scene. This acquisition path needs to be flexibly interpreted because the established duration for every phase depends on the ages of the children; with five-year olds it is possible to protract the focusing phase and introduce activities of meta-linguistic reflection during the re-using process.

4.7. Synthesis

In this chapter we dealt with the methodological dimension of ELTM, and sought to highlight how knowledge about the acquisitional and linguistic dimension (cf. 2, and cf. 3, respectively) has certain repercussions in defining the early acquisition paths of the FL. In particular, we:

a. outlined an approach that begins with a conception of LA that is connected to the overall growth of the pupil and that specifies the contribution that the FL makes in the cognitive, cultural, relational, and semiotic education of the child (cf. 4.1);

b. established certain criteria for defining educational, linguistic aims, and for selecting linguistic contents for the FL early approach, highlighting how these decisions need to begin with and be informed by an understanding of the pupil’s neuropsychological characteristics and linguistic and communicative competences that have already matured in his mother tongue (cf. 4.2 and 4.3);

c. discussed the opportunity of a playful methodology based on a respect for infant neuropsychology by using neuro-sensorial stimulation, operativeness, and implicit acquisition (cf. 4.4);

d. developed some considerations about LTM techniques that better realize the early teaching of the FL, also noting the fact that certain commonly used techniques can promote different memory systems (cf. 4.5 and 4.6);

e. proposed an operative model, the Acquisition Unit, that responds to the limits and neurological potentialities of the pupil along
a path that sets linguistic and formative objectives and that therefore leads towards the joint development of linguistic (in FL) and cognitive abilities (cf. 4.6).
References

Because this Document is intended primarily for experts in the field, it therefore is not considered necessary to cite the world-renowned and familiar work of Chomsky, Bruner, and Krashen. Accordingly, this bibliography is divided into two sections: in the first part, with the hope of offering some useful references on the subject at hand, we list the significant work emanating from, or in collaboration with, the LTM Venetian school. In the second part, we list several of the important international researches carried out by Italian scholars on neuropsychology and acquisitional linguistics, and that constitute one of the bases of this volume.

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