Young learners and foreign language learning :The words they hear and the words they learn.

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Abstract

This dissertation describes and analyzes the learning environment of the low-level EFL classroom, in the Italian primary sector, mainly focusing on the lexical exposure available to learners from course books and teacher speech, as well as on the relationship between what children hear in class and what they actually learn. It is axiomatic that language learners will rely on language input in order to provide the material for learning but a recurrent methodological weakness of previous studies of classrooms as lexical environments is the *polarized* types of investigations they have produced – they have either taken into account the *spoken* input produced by the teacher, in class, or they have focused on the vocabulary available to learners from course books. In truth we have rather more information about the vocabulary of textbooks and very little knowledge about the language of the teacher and what this brings to the learning process.

The data reported in this thesis allow for a comprehensive picture of the *total* vocabulary exposure, of the low-level class, to be drawn. This dissertation offers an insight into the interaction between *written* and *spoken* input. It suggests that teaching materials seem to comprise less than 50% of the total lexical exposure available to learners in the low-level class. On the other hand, they also seem to work as important guidelines for teacher speech - which appears to strictly meet the requirements of the primary syllabus. The data seem to suggest that the words that are more salient in the thematic contents of course books are likely to be better acquired by learners of different proficiency levels. Similarly, young learners seem to favour the acquisition of more imageable words to lexical items which do not allow for a mental image to be easily aroused. Variations in learning strategies, adopted by children of different proficiency levels, have been identified. Pupils with no previous exposure to the language seemed to rely more heavily on teacher speech while more advanced graders appeared to distinguish between parts of speech, with nouns being easier to learn than verbs. Finally, frequency of occurrence in the classroom micro-environment is likely to have an impact on learnability of vocabulary; nevertheless, this does not seem to apply equally to learners of all levels of proficiency. In consideration of the lexical gap that seems to exist between the input available from course books and the language produced by the teacher, in class, implications for teaching have been evaluated - with particular reference to the degree of lexical autonomy and general linguistic skills expected from teachers, in the light of the current regulations for recruitment of language teaching staff in primary education, in Italy.

Declarations and Statements

DECLARATION

This work has not previously been submitted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed ..... **(candidate)**

Date ..... 11/06/2010 .....

STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated.

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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STATEMENT 2

I hereby give my consent for my thesis, if accepted, to be available for photocopying and for interlibrary loan, and for the title and summary to be made available to outside organizations.

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To

Perseveranza e passione,

due amiche preziose.

List of Contents

List of Tables and Diagrams

List of Figures

List of Appendices

Chapter 1

Introduction

An embryonic idea for the present research was generated, a few years ago, by an ongoing debate in Italian nurseries and primary schools, on whether the teaching of foreign languages should be assigned to NS (or near native-speaker) or NNS teachers. The former category was typically represented by graduates in the target language (TL) with no formal qualifications in teaching young learners. The latter would normally comprise qualified educationalists and, most likely, class-teachers themselves, willing to attend few-hundred hour courses in the TL which typically resulted in a rather *scattered* linguistic competence. Nevertheless, despite a generally lower level of proficiency in the TL, educationalists' advantage over the linguists was thought to lay in a possibly enhanced relationship between class-teachers and pupils. A class-teacher typically sees her children six days a week, for 4 to 6 hours a day (the exact duration of the school day may vary from school to school). On the other hand, a foreign language *specialist* who teaches in a number of primary schools would only meet each class-group for an average of two hours a week.

The studies carried out in this direction which attempted to analyze the learning environment of the low-level class, in the Italian pre-school and primary sectors, mainly adopted a qualitative approach to the investigation of instructional settings and focused on learners' attitudes towards the learning situation and particularly on variables like learning strategies and motivation (Cornoldi, 1995; Cangià, 1997, 1998; Sisti, 2003).

On an international scenario, more than 80% of primary school children in Europe begin to study a foreign language as early as the age of eight and they receive an average of 70 hours of formal instruction, per academic year (that is about 2 hours per week). For the large majority of these learners, there are few opportunities – if any at all – to interact in the target language outside the classroom, which often represents the main source of L2 input. However, despite the general consensus on the centrality of input in order for acquisition to take place, to date, we still have little idea of the

lexical environment which characterizes the foreign language classroom, and particularly of the *amount* of input typically produced by teachers in class. The scarce number of studies which have attempted to address this issue (Milton and Benn, 1933; Scholfield, 1991; Vassiliu, 2001) have limited their investigations to the analysis of the vocabulary load of course books used in EFL instruction.

Nevertheless, investigating the lexical environment of the classroom by focusing on written materials and textbooks only – particularly when dealing with young learners, who are likely to be in the process of learning the orthographical identity of words in their L1 – I believe it is like watching a film, with shortened subtitles and the volume set to zero. Written words, for children of this age group, have no *voice* on their own; no sound; they cannot be *called by name.* They need to be brought to life, by the teacher, placed into meaningful contexts, and linked together in spoken discourse.

The studies reported in this thesis are an attempt to shed light on this area of research. This dissertation aims at quantifying the lexical environment of the foreign language classroom; it compares the lexical exposure available to learners of different proficiency levels from teacher speech, against the vocabulary load of course books. In doing so it adopts a substantially quantitative approach but it also takes into account - while interpreting the data - the physical space of the classroom; with its noise; with learners' difficulty to catch teacher's utterances; with people knocking on the door. It finally offers some indications of the relationship between input and uptake, and it attempts to evaluate intra-lexical as well as inter-lexical factors affecting vocabulary acquisition.

Chapter 2

Literature Review

2.1. Introduction

Vocabulary is now an area with a substantial literature. To bring order to this volume of work, and to provide the setting from which this dissertation has grown, this review has been divided into five broad areas. The first three are in the area of definition since in a dissertation which attempts to understand the words which are taught and learned in low levels classrooms, it is essential to have appropriate constructs by which to measure and chart knowledge. These sections will explain the current thinking in what we think a word is from the point of view of learning, it will consider how these words can be counted, and it will consider too what knowing a word really means. A fourth section will address in more detail how vocabulary knowledge can be assessed and will consider not just the qualities of good tests such as reliability and validity, but also how these ideas translate into tests of breadth and depth, and how the age of the learners in this study will need to be taken account of. A fifth section addresses the literature we have on the input which learners receive and how learners are able to master the vocabulary they are exposed to. Finally, a short section will attempt to pull together this material and highlight the questions which emerge from the review and which will be addressed in the studies which form the remainder of this dissertation.

2.2. What is a word?

Carter (1998: 4) states confidently, "Everyone knows what a *word* is". Should this be true, we should all agree on the number of words the following sentence contains:

The mouse ran to the cheese

I challenged my first year students on this and most of them thought the clause was made up of six words. Two students though – sitting next to each-other – timidly suggested that, although the sentence contained six occurrences, the word *the* was

repeated twice and therefore, the sentence contained in fact only five *different* words. Similarly, some words are easy to identify as units but others are not. For example, are words like *don't*, *it's*, *in place of*, *in fact*, etc. to be considered as single units or rather as combinations of two or more words (i.e. *do* + *not*, *it* + *is* or *has*, *in* + *place* + *of*, *in* + *fact*)?

Creating a definition for *word* is not an easy task. Carter (1998: 5) suggests regarding it as "the minimum meaningful unit". However, he acknowledges the limitations of such definition, particularly when dealing with words like *the*, *by*, *to*, etc. An often quoted definition of *word* is Bloomfield's (1933: 178), who stresses the importance for a word to be *self-standing*. He states, "A word is a *minimum free form*" (his italics). Most words have a morphological and semantic dimension on their own, nevertheless, this is not the case of idioms – like, to do something *against the clock* (to do something in a hurry); *that's not my piece of cake* (that's not my type of thing), etc. – where words cannot be separated without loss of meaning.

Words are spoken, they are read, they are merged together in a variety of ways and the colour of each modulates its tint as it mixes with others. Cruse said, "The meaning of a word is fully reflected in its contextual relation" (Cruse, 1986: 16). Let us start from here, *meaning*; after all our main purpose when *sawing* words together is that of making sense of them in order to establish connections with the outside world.

2.2.1 Grammatical word-forms and the meaning of words

The relationship between individual meanings and word-forms is often a complex one. For example, when I asked a three-year old to think of a nice word he came up with *ice cream*. Hence a question - is *ice cream* one word or two. It sounds like one individual item, denotes a single semantic entity but in fact appears as two units. Similarly, combinations of individual words such as *get rid of*, *make up* or *grassland*, *staircase* give birth to *unified* meanings and are therefore treated as single lexical units. The same happens with lexemes like *unbelievable*, that are composed of smaller identifiable grammatical units – *un* + *(believe)* + *able* - called morphemes, that although significantly contribute to the final meaning of the *core* word, they are not words in their own right. Therefore, words that are made of multiple individual components are regarded as single words only when they convey unified meanings.

Another distinction to be made within a semantic approach is that between *content* words (such as nouns, adjectives, and verbs) and *functional* words (such as pronouns, prepositions, conjunctions and determiners). When we speak or write, we use words as tools (Wittgenstein, 1953) and the way we operate with them contributes to determine the meaning they eventually acquire. For example, if I say 'I like your new *make up*' or 'I shall *make up* for yesterday', the phonological identity of the word *make up* is the same in the two sentences and so are their orthographic forms. Nevertheless, it is their roles within the clause to determine their grammatical identity - respectively as a noun and as a verb – and consequently to characterize their meanings. Having said that, some word-items - particularly high-imagery and concrete words - have an intrinsic semantic identity on their own that does not depend on context, *door* will only be understood as door, *school* as school and *tree* as tree. Therefore, as far as meaning is concerned, we can then categorize words into two major groups, words with very low information content (i.e. *the*, *with*, *after*, etc.) and words with high information content (i.e. *door*, *open*, *tree*, etc.) (Lewis, 1993). The latter, at times, partner up with the former in order to create different types of multi-word lexemes - among which, as already said, we find compounds, like *pencil-case*, *record-player*, *continuous assessment*, etc. and phrasal verbs, like *act up* (i.e. My car is *acting up* again.), *draw up* (i.e. Let's *draw* an agreement *up* before the end of this meeting.), *play up* (i.e. She *played up* her part surprisingly well). These multi-word lexemes are regarded as single semantic units and therefore as single word-items as they contribute to the creation of individual and independent blocks of meaning. With reference to the data collected for the present piece of research, this becomes particularly important as we try and qualify the input that young learners receive in their foreign language class. Analysing the *amount* of vocabulary they are exposed to by the teacher, we need to treat stimuli such as *grassland*, *pencil-sharpener*, *grasshopper*, etc. as single word-items. Therefore, sentences like the following, 'The grasshopper landed on a pencil-sharpener' would account for six words. It could be argued that retaining a word like *pencil-case*, in our mental lexicon, takes more effort than remembering something like *tree*. This would be true if our mind stored words disassembled – into morphemes or smaller units like *pencil* and *case* – but if *pencil-case* was in fact stored as a single word-item, then remembering either one or the other might not imply a great difference (Aitchison, 2003). Let us just think of taking

a picture of a pencil and another of some type of case and finally still another of a pencil-case. The latter shot would take the same memory space in our digital card as either of the other two, regardless of the amount of items contained in each frame.

2.2.2 The sound of words

Sometimes, it may have happened to tune the satellite TV onto some foreign channels that broadcast a language we do not understand and that maybe we have never heard before. Despite the clues we might get from the pictures and the body language of the people on screen, it is impossible to identify single word-items. Speech results in a continuous flow of inter-linked sounds; the boundary between one word and the next is not at all obvious. The only identifiable breaks are those needed by the speaker in order to take breath or to think. A native speaker child takes from six months to a year before being able to utter her first few words. By then she has already been able to identify a broad range of speech sounds as well as proper words in the language/s she is exposed to. Nevertheless, by the time they enter compulsory education, a high percentage of Italian children, for example, still make a variety of production errors, mostly related to segmentation problems in identifying the *word-boundary* between articles and nouns (for example, they would use *il lombretto* (the eye-shadow) instead of *l'ombretto*, or *l'assalivazione* (the salivation) instead of *la salivazione*, etc.) Understanding words in continuous speech involves two separate, although equally important, stages – initially it is necessary to isolate particular combinations of sounds from the speech stream; then you need to recognize those isolated strings of sounds as words and therefore access lexical knowledge related to them (Schmitt, 2000).

It must be said that learning a foreign language in a tailor-made classroom environment is completely different an issue from having to make sense of an endless stream of unknown sounds, in the big wide world. In the more formal environment of the classroom, the teacher helps the students to segment the FL into smaller units, single words and individual sounds. Learners soon get used to the intonation, the accent of a particular teacher (Cutler and Clifton, 1984) and they are often introduced to the phonological characteristics of words at the same time as to their orthographic identities and this links us naturally to our final section.

2.2.3 The written form of words

Identifying words in written passages is certainly a great deal easier than *capturing* them in spoken discourse. When I showed a three year old the orthographic form of the word *ice cream* - in order to investigate how many words he could count – "You see" he said "one and two". He could quite obviously spot two words.

In languages that use a logographic system (like Chinese) the smallest written units (grapheme) represent concepts; in Japanese on the other hand, the grapheme corresponds to a syllable, while in English, Italian and in most European languages, that use an alphabetic system, letters are combined together into a variety of sequences that represent words. The boundaries between words consist of blank spaces between groups of letters, so that if I read, "In the universities the discussions continued, the alliance with the working class became stronger" (Powell, 2006: 95) I count thirteen blank spaces and fourteen word-items. Nevertheless, as stated above, some words such as, for example, *working class*, although they are made of two distinct orthographic forms, they contribute to define one single concept and are therefore considered as single semantic units. Hence, it could be argued that the sentence quoted above is in fact made of thirteen, rather than fourteen, word-items. Similar difficulties in placing boundaries between words occur in the case of multi-word verbs (*to get rid of* someone/ something), phrasal verbs (*to get on/ off* the bus) and idioms (to act *against the clock*). Lexical items of this type retain their original meanings only when appearing in the exact word-combination. Hence, if a subject proved to know the expression *to get rid of*, how many points would he score, one – for knowing one lexical item – or four – for knowing in fact four different words? Things become even more complex when we need to count the number of words known by a native speaker or by a FL learner or, similarly, when we need to quantify the vocabulary of students - and particularly, as in our case, of young learners with only few hours of exposure to the foreign language. The answers given to questions like the followings could influence the data and need, therefore, to be addressed thoroughly – a child who knows the word *swimming-pool* but not *swim*, would he know twice the number of words of another child who is familiar with *swim* only? Also, students who know for example *chair, butterfly, fly* should they score equally to their peers who know *chair* and *chairs, butterfly* and *butterflies, fly* and *flies* or *flying*, as it happens if counting lemmas?

What we commonly address as *words* can be also named in a variety of ways - *tokens* or *running words*, *lemmas* and *word families*. Each of these categories applies specific criteria in the ways words are counted. The definition of such criteria become very important as we aim at investigating issues related to vocabulary size.

2.3 Counting words

How many words does an educated adult know? Do native speakers know more words than non-native speakers? What is the amount of vocabulary we expect our undergraduate students to have acquired by the end of their language courses? The only way to answer these questions is to construct tests to measure vocabulary knowledge and to administer these tests to populations of native speakers and learners.

Research shows that estimates of vocabulary size have been controversial over time (Nation and Waring, 1997; Schmitt, 2000; Aitchison, 2003). The cause for this can be found in two main factors, a) the problematic definition of what is meant by *word*, b) the difficulty of finding a reliable procedure for assessing vocabulary knowledge, particularly at low level classes (see section 2.5).

The philologist Max Müller (1823-1900) suggested that, in the nineteenth century, highly educated people could master 3,000 to 4,000 words, while other adults could only rely on something like 300 words (see Aitchison, 2003 for a detailed account). At the beginning of the last century, the French writer, Georges Simenon, suggested that the vast majority of the people in France knew no more than 600 words (Aitchison, 2003).

More recent estimates based their calculations on counts of total number of words in very large dictionaries, from which they selected samples of word-item on which subjects were then tested. Seashore and Eckerson (1940) indicated a figure of over 150,000 words for the vocabulary mastered by an average college student, native speaker of English. By *word* they considered any entries in the 1937 edition of Funk and Wagnall's *New Standard Dictionary of the English Language*. More recently, it was indicated (Nagy and Herman, 1987) that high school graduates in America have a

vocabulary of around 45,000 words – with the exclusion of proper names, names of places and idiomatic expressions. Aitchison (2003) suggested that people doing a great deal of reading might in fact know between 100,000 to 200,000 words, similarly, one of the most reputable dictionaries of Italian for native speakers, *Lo Zingarelli* (Zingarelli, 2002) lists 140,000 entries. Finally a reliable study by Goulden, Nation and Read (1990) has estimated that university graduates, native speakers of English, have a vocabulary size of around 17,000 word families. The differences in estimates are huge and are largely the product of the different definitions, used by the researchers, of what a word is. Only recently has a standardised approach to this emerged although, even now, the definition of a word used for counting can vary.

More recent studies on vocabulary size have used either *word families* or *lemmas* as measuring-units (Goulden et al., 1990; D'Anna et al., 1991) - thus indicating a smaller vocabulary size for native speakers, if compared to earlier estimates, which were usually based on counting by *type* (Seashore and Eckerson, 1940). Obviously, the ways words are counted as well as the concept of *word* that is adopted will greatly reflect on the final *volume* of the estimates. In the light of this, it is important, before we proceed further, that we dedicate a few lines to the definition of keywords like *tokens*, *types*, *lemmas* and *word-families*.

How many words are there in the following sentence? 'The frog jumped to the other side of the pond and, after a while, the frog jumped back.' If we count every word-item in the written text, we have eighteen words altogether. Here, words appearing more than once are counted as many times as their number of occurrences. In such types of counting, words are called *tokens* or *running words*. *Tokens* are a useful unit of counting if we need, for example, to qualify the amount of vocabulary in the foreign language that children are exposed to during one hour lesson; or if we wanted to compare the number of words per minute or the mean sentence length uttered by the teacher when she addresses either advanced learners or children at the offset of learning a foreign language.

On the other hand, if I wanted to investigate how many *different* words that teacher produces when she talks to beginner rather than advanced learners, I would need to

focus on *types*. In a counting by type, same word-items are only accounted once, therefore, in the sentence we mentioned above, 'the frog jumped to the other side of the pond and, after a while, the frog jumped back', we count only thirteen *types*, as words like *the*, *frog* and *jumped* are only counted once, although they are repeated a number of times in the text. There are some words that tend to appear very often in corpora. For example, the most frequent 100 words in general English make up the 44% of all occurrences in the language, while the most frequent 2,000 words make up the 80% (Schmitt, 2000). Function words, such as *the*, *of*, *to*, *and*, *that*, etc. tend to occur much more frequently than others and this might be one of the reasons, for example, for Müller's perception of highly educated people's vocabulary consisting of only 3,000 to 4,000 words.

A more complex method of counting words is the one based on lemmas and lemmatization. To lemmatize a list of items means to group them according to principles of *similarities* between the words. For example, *read*, *reads* and *reading* are all considered simple variations of the same headword *read* and therefore, should the counting be done by *lemmas*, they are counted as one unit only. A *lemma* is made of a core word, called *headword* and its inflected (and reduced) forms. *Inflected forms* consist of plurals, past tenses, past participles, etc., while *reduced forms* are abbreviations like *n't*, *'m*, *'re*, etc. The idea behind lemmatization is that of *learning burden* and, therefore, of the effort required in order to learn a particular item (Nation, 1990). Following this approach, once I know 'I *read*', I can easily learn 'he *reads*', 'I'm *reading*' or if I am familiar with *paint* I will probably also be able to guess *painted*, *painting* or *paints*. As a result of this, corpora that are organized by *lemmas* are clearly smaller than the ones that count *tokens* and/or *types*. Nevertheless, a problem with lemmas is that the learning burden of a word can be a difficult variable to define - particularly when dealing, as in our case, with young learners with only few hours exposure in the foreign language. For this category of learners, the semantic as well as the phonological and morphological links between *paint* and its inflected forms, such as, *paints*, *painting* and *painted* can be not so obvious. The teaching methodology in Italy, in order to avoid confusion between the numerous inflected forms and overburden the students, will encourage the learners to treat each grammatical form strictly as a separate item. For this purpose, the various items will be introduced in the syllabus at different stages during the school year. Things get

even harder if we take words like *mouse* and *mice*. Say child A is only familiar with *mouse*, while child B is well aware of the existence of both as well as of their grammatical differences, should we credit the latter a score of two points, while the former of one point only; or should both subjects score 1? If we allocate child A and B the same number of points, we use a counting by lemmas and we adopt the idea that the learning burden for acquiring *mouse* on its own will be the same as for acquiring both *mouse* and *mice*. Having spent a substantial amount of time in a variety of language classrooms, during the course of this research, it became obvious to me that this is not the case – children at a proficiency level like our subjects are clearly unable to make the link between *mouse* and *mice, child* and *children, goose* and *geese*. Most surprisingly, they often seem to be unable to related forms like *go* and *goes,* or *play* and *played* as belonging to the same word, and therefore carrying the same meaning. Research on L1 has suggested that regular verbs (e.g. *play, plays, played, playing)* and nouns (e.g. *pen, pens; car, cars*) may be stored in the child's brain as base forms (e.g. *play, pen,* car) and then changed according to need (Prasada and Pinker, 1993). Bauer and Nation (1993) go one step further and, applying the argument above to the L2 context, they argue that there may be a need – when dealing with learners at a low level of proficiency – to adopt different lemmatization rules. For example, a child who has only just started to study the language may require that words like *play, plays, played* are treated as three separate lexical units; on the other hand, by the time that child has received over 100 hours of instruction (that would correspond in Italy to 2 full school years) he may be ready for words like the above to be considered as morphological variations of the same base form, and therefore as one word. Problems with this methodology may occur in the comparison of data from learners at different proficiency levels – a child in his first year of English as a foreign language would score three points for knowing *play, plays, played,* while his peers in their third year of study would only score one.

It is worth remembering, that the learning burden of a word is only one of the factors affecting the acquisition of vocabulary. *Intra-lexical factors* – that is the intrinsic properties of words – are believed to substantially contribute to making word-items hard or easy for learners to acquire (Laufer, 1997b). Similarly, frequency of occurrence within the micro-environment has been suggested to strongly correlate with learnability factors in the foreign language (Donzelli, 2007). Finally, research

also indicates that individual differences play an important role in the acquisition of vocabulary (Milton, 2007; Mollet, 2008).

Another way of *quantifying* corpora and therefore of organizing the number of items they list is that of using *word families* as a unit of measurement. Similarly to lemmas, a word family consists of a headword, plus its inflected and abbreviated forms. On the other hand, word families will also include derived forms that belong to a different part of speech. For example, while *great*, *greater*, *greatest*, *greatly* and *greatness* all belong to the same word family, only *great*, *greater* and *greatest* will actually be included on the same lemma, while, by the addiction of the suffix *–ly*, *great* has now become *greatly* and therefore an adverb; a similar derivation applies to *greatness* that has changed into a noun. Similarly, if we take *act* as headword, we will have *acts*, *acted*, *acting* as members of the same lemma, while items like *action*, *actively*, *activity* or *actor* will be included in the same word family but not in the same lemma.

It must be said, though, that decision making regarding what items should be grouped in the same word family is often not as easy as it looks. The learner's ability to see the connection between a headword and its inflected and derived forms is most often determined by his proficiency in the language – an adult native speaker will automatically establish a connection between *act* and *actor*, while a child at his initial approach to the foreign language will probably see the same words as two very distinct items (Nagy, 1997: 70). For this reason, word families as a unit of counting have found wider an application in the literature for estimates of vocabulary size of native speakers or advanced learners of a foreign/second language; while data referring to language learners from *ab initio* to intermediate levels and certainly to young FL learners have been often investigated by means of counts by lemmas or types (Vassiliu, 2001; Donzelli, 2007).

Another important issue when making estimates of vocabulary size is how to account for words with multiple meanings (Sinclair and Renouf, 1988). Say, for example, that transcriptions of spoken data by subject A and subject B account for three occurrences of the word *coach* for each of the testees, but while A repeats the same token three times, B uses it in different lexical contexts and each of the three utterances acquires a different semantic identity (*coach* as trainer; *coach* as big bus;

coach as train wagon). Subject B is showing here a deeper knowledge of the word in account - maybe due to an overall higher proficiency in the language. It is important that this depth of knowledge is somehow accounted for when considering issues of vocabulary size. In order for this to occur, we need to make clear what it is meant by *knowing a word.*

2.4 *Knowing* a word

Some time ago, I interviewed a number of sixth form students and children in nurseries and early years of primary school, with the aim of investigating what it meant for them *knowing* a word. The former suggested they would say they *know* a word when they can explain its meaning, can use it confidently and can recognize it even if it is not spelled or pronounced correctly (this is in fact a well-known phenomenon, reported in the literature under the name of *phonemic restoration effect* - Morton, 1979). On the other hand, younger children – 3 to 5 years of age – seemed content with the idea of being familiar with the phonetic characteristics of words. A few of them independently worked on their vocabulary knowledge/size by repeating the sounds of the word-items they aimed to familiarize themselves with. Once they were able to pronounce the words confidently and accurately, they felt they *knew* those lexical items. Similarly, the data we collected for the present research project come from children of primary school age, at the outset of learning a foreign language. While conducting the experiments, it became obvious that *knowing* words in English was for them synonymous with being able to produce translation-equivalents, for those words, in the L1.

Therefore, as these examples show *age* (adults or older learners compared to younger learners) as well as a kind of *hierarchy* of the language learned (first, second or foreign language) can play an important role in determining the degrees of knowledge that individual learners would expect to achieve in acquiring individual word-items.

Knowing a word has different meanings for different types of learners as well as for different types of words (Laufer, 1997b). The reason is that "there are many things to know about any particular word and there are many degrees of knowing" (Nation, 2001: 23). Besides, words are not like numbers that wherever located, continue to retain their absolute values and convey a universal meaning; words and their

meanings change over time – particularly in the jargons of politics, economics and in the language of the youth – and depending on the context they are in; they can be modelled and shaped like clay and when dancing together they can transform into either stones or work-of-arts that will accompany generations.

Carter (1998: 239-40) reviews the various aspects involved in the idea of *knowing* a word in a second or foreign language. He summarises them into the seven points shown in Table 2.1.

Table 2.1: Carter's seven aspects of word knowledge (1998: 239-40)

1. Knowing how to *use* the word *productively*
2. Knowing the likelihood of encountering the word in either spoken or written contexts
3. Knowing its syntactic frames and derivations
4. Knowing its relations in the language as well as with words in L1
5. Perceiving the relative coreness of the word as well as its pragmatic and discoursal functions and its style-levels
6. Knowing multiple meanings and collocational patterns of a word
7. Knowing words in discourse is fundamental a skill in order to gain an insight of the syntactic, semantic and pragmatic functions of lexical items at all levels.

In his summary, Carter underlines three main ideas. The difference between the *productive* (P) and the *receptive* (R) use of vocabulary; the centrality of *meaning* and *use* as dimensions of knowledge; the importance of learning (and therefore of teaching) words *in context*.

2.4.1 Productive versus receptive knowledge

The twofold P/R dimension of vocabulary is also central in the analysis of word-knowledge introduced by Nation (2001: 27) and reported in Table 2.2.

Table 2.2: What is involved in knowing a word? (Nation, 2001: 27)

Form	Spoken	**R**	What does the word sound like?
		P	How is the word pronounced?
	Written	**R**	What does the word look like?
		P	How is the word written and spelled?
	Word parts	**R**	What parts are recognisable in this word?
		P	What word parts are needed to express the meaning?
Meaning	Form and meaning	**R**	What meaning does this word form signal?
		P	What word form can be used to express this meaning?
	Concepts and referents	**R**	What is included in the concept?
		P	What items can the concept refer to?
	Associations	**R**	What other words does this make us think of?
		P	What other words could we use instead of this one?
Use	Grammatical functions	**R**	In what patterns does the word occur?
		P	In what patterns must we use this word?
	Collocations	**R**	What words or types of words occur with this one?
		P	What words or types of words must we use with this one?
	Constraints and use	**R**	Where, when, and how often would we expect to meet this word?
		P	Where, when, and how often can we use this word?

R = receptive knowledge
P = productive knowledge

Since the beginning of the twentieth century, research has dealt extensively with the relationship between the Receptive and the Productive aspects of word knowledge (Stoddard, 1929). Generally accepted assumptions are that learners' receptive or *passive* vocabulary is much larger than their productive or *active* vocabulary and that the ability to perceive a word as a distinct and meaningful word-unit precedes the ability to use that word productively in one's speech or written text (Ingram, 1974; Clark, 1993). It has been suggested that *passive* vocabulary is around twice the size of *active* vocabulary (Waring, 1997). Nevertheless, if we take into account the fact that the amount of time we normally spend listening or reading is substantially greater than the time we spend producing either strings of speech or written texts, it could be argued that the *quantitative* difference between the two types of vocabulary knowledge could be due, in fact, to the amount of input received/language produced in the real world, rather than to an intrinsic difference in the way receptive and

productive vocabulary is stored in the mental lexicon as well as in the mental processes involved for its activation.

The literature shows evidence in both directions. On the one hand, receptive and productive vocabularies are considered as inter-related, although separate, systems; on the other R and P are two different types of signals/means by which the system, as a whole, is activated (Melka, 1997). Clark (1993) found that children, acquiring their first language, can understand words, and their derived forms, well before they can produce them. Also, in reviewing a significant number of studies, she concluded that productive vocabulary is always smaller than receptive vocabulary, both for children as well as for adults. Meara (1990b) also makes a clear distinction between receptive and productive vocabulary. He implies that the two types of vocabulary are qualitatively different and suggests that while the former (receptive) is only accessed by means of external stimuli, the latter (productive) "does not require any external stimulus, but can be activated by other words" (p.153).

Also, some evidence is found to suggest the opposite - that is the degree of interaction and overlap between the receptive and productive aspects of vocabulary knowledge. A study by Keeney and Wolfe (1972) shows that while a three-year old could accurately master a particular grammar rule in productive speech, his receptive skills, in the same area, were not equally advanced. Similarly, Hagtvet (1980) found that young children can convey syntactically complex messages, although they are unable to understand adults' messages, due to their complexity. This condition, in which language learners are better speakers than listeners, is particularly evident in formal-instruction environments, where students are encouraged to reach the highest possible level of proficiency in the language in the shortest period of time. Besides, the relationship between receptive and productive vocabulary knowledge, as suggested by Bloom (1974), is not static, but may vary from learner to learner and over time depending on the linguistic abilities as well as on the cognitive capacities of the individual child. Finally, a study by Mondria and Wiersma (2004) indicates a substantial interdependence between receptive and productive vocabularies and particularly shows that "productive learning leads to a considerable amount of receptive retention" (p.79). Therefore, it could be argued that the learning environment has such a substantial impact on the development of the productive and

receptive functions of language knowledge, that an accurate investigation of the exact lexical input to which learners have been exposed to in the classroom becomes of paramount importance.

2.4.2 Lexical space: breadth, depth of knowledge and fluency

Another way of defining vocabulary knowledge is that of investigating the idea of *lexical space* - a theoretical tri-dimensional space where *breadth* and *depth* of knowledge constitute the two main axes and *fluency* represents the added value, the rhythm that glues them together (Daller et al, 2007). In this model, no distinction is made between the receptive and the productive functions of the language.

Breadth is synonym to the '*how much* is known' and it can be addressed as the number of words that a learner can either recognize or use; the *volume* or the *size* of vocabulary available in a learner's mental lexicon. Not implying a clear distinction between receptive and productive use of the language, tests that aim at investigating vocabulary breadth can produce substantially different estimates. Vocabulary-size tests (such as the Vocabulary Levels Tests, Nation, 1983; 1990 – revised version by Schmitt et al., 2001, and X-Lex, Meara and Milton, 2003) and translation tests are examples of measurements used in contexts of vocabulary breadth.

As suggested by Nation's (2001) chart of the aspects of vocabulary knowledge, there is a clear distinction between phonological and orthographic vocabulary knowledge. Nevertheless, since most of the tests employed in the analysis of vocabulary size are delivered in writing only, at present, "we have little or no idea how learners might score on a phonological test of vocabulary knowledge" (Milton and Hopkins, 2006: 130). The need for the construction of such tests - that investigate learners' skills to recognize and identify a word from its phonological representation – becomes even more urgent in the investigation of lexical environments, such as the low level classroom, where a greater proportion of formal instruction is carried out orally rather than by means of the orthographic form of words. The literature shows some evidence that the amount of vocabulary spoken by teachers in class is much greater – nearly twice as much - than the exposure in the foreign language that learners gain from their textbooks (Donzelli, 2007).

Depth of knowledge is synonymous to the '*what* is known' of the words available to the learner. As suggested by Meara (1997), the exact boundaries of vocabulary depth can be hard to trace, since the concept might involve knowledge of a number of important lexical aspects, such as grammatical functions, word associates, collocation and colligation. To this list, Nation (2001) also adds *concepts and referents* and *constraints and use*, as suggested in Table 2.2. If we consider that most of these aspects of vocabulary knowledge can in fact be activated in either receptive or productive contexts, we understand how complex it is to include them all in a single test. For this reason, each of these elements is currently tested separately.

Fluency is the third dimension in this metaphor of lexical space. It indicates the ability of the learner to access the information required; the speed with which one or more words are recognized or activated for use. Wiese (1984) indicates that the idea of *fluency* is somehow related to learners' ability to plan their speech and it can be measured through the analysis of two main variables, *temporal variables* (i.e. *speech rate*, *pause length*, *length of run*. These variables are related to rate of speaking) and *hesitation phenomena* (i.e. *filled pauses, repetition, corrections*. These variables refer to linguistic features that disrupt the flow of speech). It could be argued that learners' linguistic skills strongly correlates with fluency in speech production - that is that the more proficient a student the more fluent he/she can be expected to be. Nevertheless, it is not as easy as it looks. It has been argued (Towell, 1987; Ellis, 1990) that the acquisition of linguistic *knowledge* (the amount of morphological, syntactic and lexical information available to learners) and *control* (the ability to process such information) can proceed separately. Ellis (1994: 395) suggests that "learners who opted to increase their store of L2 knowledge paid a price in terms of procedural [*control*] skills and vice versa." It is evident that there are learners who tend to be more communicative and quick than others in the way they organize their speech as well as in the way they access the information required, but whether this is to be attributed to a distinct lexical dimension, rather than to a personality factor this is still an open question and certainly an interesting point for future investigation.

2.5 Assessing vocabulary

As it is suggested later, in chapter 3 (Approaches and Methods), the teaching and learning of vocabulary have recently become an important focus of attention in formal second/foreign language instruction environments. In the low level classroom, the communicative approach – organized around topic-based teaching and regularly reinforced with specific focus-on-form activities - is the teaching method that currently finds a broader applicability in the Italian primary sector.

Many learners see the acquisition of a foreign language as essentially a matter of learning vocabulary. This is particularly true for young learners, for whom *naming* an item is often synonymous with *knowing* it as well as a way to establish with the referent (be it a person or an object) a special and unique relationship. The acquisition of vocabulary is a major focus of attention in learning a language, in general, and particularly in formal instruction environments and this implies that it is equally important to monitor the acquisition of such vocabulary and to investigate if students seem to learn the words they are taught or are expected to learn.

A wide range of tests is available, for different purposes. There are *placement tests* - that give an indication of the vocabulary available to learners and thus their general level of language ability. They are used to place students, from different linguistic backgrounds, in the right level class; *diagnostic tests* - used to investigate possible gaps in the vocabulary knowledge of students in order to allow for recovery work or for further teaching to try and fill such gaps; *achievement tests* - used to find out if students have learned what they were supposed to learn; and *proficiency tests* - that investigate the test-takers' general level of proficiency in the language (i.e. the tests administered by UCLES, the University of Cambridge Local Examinations Syndicate).

2.5.1 Reliability and validity of assessment measures

All language tests, need to make guesses, that is, they need to extrapolate estimates of vocabulary knowledge, size or general proficiency in the language from a restricted sample of data. It is as though we expect an interior designer to be able to supply us with a detailed picture of the variety as well as of the quality of the furniture in a house, having the hall, only, as input data. For this reason and in order to provide

accurate measurements and create some stability in the volume of data produced, a test needs to follow two major criteria, those of *reliability* and *validity*.

Reliability gives us an indication of the degree of *trust* that can be put on a particular test, that is, it is the extent to which a measure will give us the same response under similar conditions (Bachman and Palmer, 1996). For example if we measure a child's knowledge of a selected list of twenty word-items, twice in the same day – morning and afternoon – we expect to obtain identical data, after allowing for a small margin of error.

There are two main types of reliability – one that indicates *stability* over time and the other that focuses on *consistency* (Howitt and Cramer, 2000: 34). As to the former – also addressed as *test-retest reliability* (Howitt and Cramer, 2000: 34) - it is reasonable to believe that assessing a learner's vocabulary knowledge of a limited number of items within a time interval of few hours, it may not produce substantially different results; on the other hand, should the test-retest procedure consider a one, two or ten years interval, it may result in substantially different data, particularly with reference to lexical knowledge of a second language. *Consistency* – also called *inter-item* or *inter-rater* reliability (Howitt and Cramer, 2000: 35) – refers, respectively, to the degree of reliability of the test in question when slightly different types of measures are employed (i.e. the receptive knowledge of a list of lexical items tested by means of two different test formats, for example Yes/ No and Multiple Choice tests), or if two or more graders/examiners are required (i.e. in the grading of the learners' linguistic skills in productive written samples).

Validity is the ability of a test to measure what it is supposed to measure. There are different types of validity, *face* validity, *content* and *construct* validity and finally *concurrent* validity (Bachman and Palmer, 1996). *Face validity* (Hughes, 1989: 27) is referred to the format of the test itself and to whether it seems to relate to the variable/s that needs to be investigated. *Content validity* (Hughes, 1989: 22) goes one step deeper and it focuses on the content of the test itself, which is expected to be reasonably representative of aspects, of the language for example, that need to be assessed. In other words, if we aim to investigate the receptive vocabulary, from oral input, of a group of fourth graders we should opt for a test format that allows us to do

that, rather than for something related to productive knowledge or written materials. Related to the idea of *content* is *construct validity* (Bachman and Palmer, 1996). It represents the degree to which a measure produces theoretically predictable results. For example, it is reasonable to expect that more advanced learners have a greater vocabulary size than their less proficient peers. Should the construct of a particular test contradict the axiom, this might indicate low construct validity. Finally, *convergent* or *concurrent validity* (Hughes, 1989: 27) is the extent to which a measure is related to other measures that are known or expected to investigate congruent areas of research. The difficulty here - particularly when dealing with investigating aspects of vocabulary knowledge that typically behave not as isolated units, but rather as interrelated microcosms of a variety of language skills – can be that of recognizing what the cause for a low concurrent validity is, whether it is due to validity problems of the measure in question or rather to *disturbance factors* - that is other aspects of knowledge or language skills - that interfere with the overall aim of the tests (Fitzpatrick, 2007).

2.5.2 Choosing the right kind of test

Despite the central importance of testing as a way to inform teaching as well as to enhance potentials in vocabulary learning, scholars (Meara, 1996b; Read, 2000) report on the absence of a comprehensive and generally accepted method for the assessment of vocabulary. This becomes even bigger an issue when dealing with young learners in the low level class where, for many years, teachers have often relied on self-designed tests which could investigate the specific vocabulary covered in the course and therefore offer a better picture of learners' achievement (Heaton, 1988). Unfortunately, the risk in using types of measurements with no proven validity is the difficulty to compare results and to offer a reliable reading of the data.

Therefore, the question of which type of test to choose depends on a variety of factors, which have been grouped, for the purpose of this chapter, in the following two categories:

1. *What* is it we want to test
2. the *age* factor in the low-level class

What is it that we are testing?

Depending on what aspect/s of vocabulary knowledge we aim at investigating, a different type of assessment is required. For example, if we want to see how learners are able to recognize or use vocabulary in realistic language environments, tests based on embedded, comprehensive and context dependent formats might be more appropriate (Read 2000). On the other hand if a teacher wants to investigate the learners' knowledge of isolated word-items, then discrete, selective and context-independent formats may be preferable (Schmitt, 2000). We should not forget that when dealing with measures of vocabulary knowledge, the focus of attention often lies on the concept of *word.* As extensively discussed in sections 2.2, 2.3 and 2.4, the definition of criteria regarding issues of defining what a word is become very important for a correct and reliable reading of the data.

Testing is typically used for two types of investigations, a) for obtaining estimates of *how much* vocabulary (*breadth of knowledge*) is available to learners; b) to assess *what* and *how well* is known that which is known (*depth of knowledge).*

The assessment of the *number* of words learners have available in their mental lexicon has been somehow considered as more of an accessible task if compared to investigations of depth of knowledge (Schmitt, 2000). Also, by means of measures of vocabulary size it has been possible for researchers to make a number of important claims on:

- the vocabulary needed by university students to face the demands of a degree in a foreign language. For example, Hazenberg and Hulstijn (1996) suggested that a non-native first year student starting a university course in the Netherlands is likely to need a vocabulary of around 10,000 word families;
- the amount of vocabulary typically available to native speakers of English at different ages. This has direct connections with reading comprehension skills and with the development of reading programmes in schools (Read, 2000);
- how the above compares with the vocabulary of foreign language learners which findings inform the teaching and learning of issues such as the number as well as the types of words that should be taught (Schmitt, 2000); the relationship between instructional input and learners' uptake (Vassiliu, 2001; Donzelli, 2007).

Investigating breadth of knowledge

Widely researched tests of vocabulary size are the *Vocabulary Level Tests* (Nation, 1990; 2000, revised Schmitt et al, 2001) and the *Checklist Tests,* which include tests like the *Eurocentres Vocabulary Size Test* (Meara and Jones, 1990) and *X_Lex* (Meara and Milton, 2003). These are assessment tools that work particularly well with investigations of areas of receptive knowledge. The original idea beyond the *Vocabulary Level Tests* was the need to create a useful and practical tool of assessment for teachers. Similarly to the checklist tests, the Level tests are based on the generally accepted assumption that frequency of occurrence in the language is likely to be related to the degree of learnability of vocabulary, that is, words that belong to a higher frequency band are likely to be learned before words that belong to lower frequency bands. The *Vocabulary Level Test* is divided into five parts (first 2000 words, 3000 words, 5000 words, university word level - beyond 5000 words, and finally 10,000 words). The first 3000 most frequent words in English make up the vocabulary that all learners need to master in order to function in the language (Nation, 1990: 261). The format of the original version of the Level tests consists of some kind of multiple-choice word-definition matching, with a ratio, respectively, of 6:3. The learner is expected to match each of the three definitions with the right word. Therefore the test involves some reading comprehension, although a minimal amount.

On the other hand, Checklist tests are completely context-independent types of measures. They are based on the same principles of frequency of occurrence in the language, as the Level tests. Nevertheless, they utilize a format that allows a much larger number of words to be tested. Lists of *real* words are randomly mixed with *non-words* that aim to limit the possibility for the learners to overestimate their vocabulary knowledge. The testee is required to tick the words s/he believes to know. Examples of these types of tests are Meara's (1992a) series of frequency-based vocabulary tests for EFL learners as well as the *Eurocentres Vocabulary Size Test* (Meara and Jones, 1990). X_Lex (Meara and Milton, 2003) is another example of Yes/No test that assesses the receptive knowledge of a number of randomly chosen words from the first 5000 most frequent words in English, in addition to non-words items.

Investigating depth of knowledge

Depth of knowledge can be referred to a variety of lexical dimensions – how well I can spell a word, or recognize its spoken form; whether or not, and to what degree, I know its meaning as well as its grammatical functions, the words it usually associates with, and so on. The concept of *word* is central, once again. The interview-format has been widely used in studies of vocabulary depth (Read 1989; Verhallen and Schonnen, 1993; Schmitt, 1998). A considerable amount of work in the field of *degrees* of vocabulary knowledge has been carried out by Wesche and Paribakht (1996) in the development of the Vocabulary Knowledge Scale (VKS) – the testees are presented with a list of words and they are asked to self-assess their knowledge of them, following a list of five categories. The latter cover different aspects of language knowledge in the receptive-productive continuum.

Assessing spoken texts

In the acquisition of a foreign language, as in all areas of knowledge, it is reasonable to believe that learning only occurs in the presence of some kind of input. Vassiliu (2001) suggests that no ceiling effect seems to occur in the low-level class, where the more vocabulary learners encounter in their textbooks, the greater number of words most learners seem to acquire. Nevertheless, most of the data we have available on the language input, learners are exposed to in class, is based on evaluations of written materials and text-books in particular. On the other hand, given the fact that text-books are written in order to be used and taught by teachers – particularly when addressed to young learners with no or little knowledge of the L2 orthographic system – it is important to be able to assess and qualify the oral input that comes from the class-teacher which remains the true lexical environment where acquisition takes place.

While a substantial amount of research has been carried out in the field of assessment of written texts (e.g. Klare, 1984; Laufer and Sim, 1985; Laufer, 1989; Nation, 2006), there is only a limited amount of work in the area of *listenability* of spoken texts. Read (2000) highlights the characteristics of different types of oral communication, that range from formal speech that can be lexically very similar to a written text, to informal conversation, with vocalizations like *mm*, *er*, onomatopoeic words like *shush* as well as contracted forms like *aren't*, *I'm*, *don't*, and places teacher's speech

somewhere in between the formal-informal continuum. Moreover, a number of studies on the differences between oral and written materials (Tannen, 1982, Biber, 1988, Read, 2000) indicate a list of characteristics that are typical of a variety of spoken texts (i.e. role of interlocutor, body language, reiteration of information and rhythm of text).

Statistical measures that focus on the way how information is presented in the text are measures of *lexical richness*, largely employed in the evaluation and grading of students' written tasks. Researchers have adopted a variety of strategies to address aspects of lexical richness. As suggested by Bell (2003), some of them use *internal evidence* (that is, rank spoken or written samples according to criteria based on evaluation of words within the text), while others rely on external factors (like frequency lists or within-subjects variability) for their evidence. *Lexical variation* is the amount of *variation* in the type of vocabulary used by the writer/speaker. The idea is that more proficient learners or teachers (if it is the native/non-native teacher's speech that is being investigated) will produce a broader range of vocabulary and therefore a higher type-token ratio (TTR) than less proficient speakers. Length of text is the problematic issue with this type of measure (Arnaud, 1984; Richards and Malvern, 1997; Jarvis, 2002) for which a number of corrections have been suggested – such as Root TTR (Guiraud, 1954), Log TTR (Herdan, 1960), Malvern-Richards D (Malvern and Richards, 1997), Advanced TTR (Daller et al., 2003), Guiraud Advanced (Daller et al., 2003). *Lexical density* draws a line between content and function words. Typically spoken texts seem to show substantially lower lexical density figures than written sources (Ure, 1971). *Lexical sophistication*, on the other hand, looks at the proportion of unusual words in the text. These are words that are considered to be advanced, and maybe less frequent, in the related levels of proficiency of the learners. The idea of frequency of occurrence, as we already mentioned, is often related to the degree of *learnability* of word-items. The *Lexical Fequency Profile* - LFP (Laufer and Nation, 1995) is based on the idea that some words, in the language, tend to occur more frequently than others (first 1000 words most common in a language, second 1000 words, words included in the university wordlist and words that cannot be found in any of the frequency bands). In the LFP, when a text is assessed, the words are grouped into bands, according to the categories

of general frequency of occurrence in the language. The higher is the number of less frequent words in the text, the higher the level of lexical richness.

Age of test-takers

The *age* factor, how it relates to the learners' written and oral skills in the foreign language and what types of assessment are more suitable to analyze the vocabulary of the low-level class are areas of research that have been extensively investigated (Rea-Dickins, 2000; Cameron, 2001; Singleton and Ryan, 2004; Muñoz, 2006).

Assessing young learners involves a variety of issues different from assessment practices in other foreign language contexts (Cameron, 2001). Length of test-formats is an aspect of paramount importance when dealing with children. Their ability – and often their willingness – to maintain a high level of concentration is rather limited if compared to adults, also they can easily get distracted by the physical space around them, and finally, time restrictions imposed by the syllabus as well as by the education system do rarely – hardly ever in Italy, in fact - allow for long hours spent in extra-curricular research and investigations.

The content and method of testing also need to be considered with extra care when dealing with young learners. The language learning experience in formal instruction at primary levels mostly focuses on interaction (both physical and linguistic) and participation in discourse-level activities - that range from role-plays, to songs and story-telling – whose aim is that of leading the children towards dimensions of social and cultural awareness. According to a survey by Rea-Dickins and Rixon (1999), of 120 teachers in European primary schools, those which are priorities in the classroom environment (that is a focus on the rhythm of the language, on the *sound* of words and on the pupils' ability to make sense and to use the language their hear in class) are, in fact, not reflected as priorities when it comes to testing young learners. While there is an emphasis in the classroom on oral skills, kids are assessed by means of written tests; National Curricula aim at communication and language awareness, while test-formats are often reduced to grammar-based, paper-and-pencil types of assessment. This becomes a particularly important issue, if we aim at investigating the proficiency in the foreign language of children who are used in their L1 to a transparent writing system and who are therefore used to a mirroring relationship

between the written and the spoken forms of words. All Italian primary school children – approaching English for the first time – would naturally identify the word *name* with the sound /nɑ:me/, *girl* with /dʒi:rl/, and *I* with /aɪ/. The two forms (written and spoken) of the same word might, in fact, be initially learned and stored as two different lexical items. In such a scenario, it becomes very important that assessment measures take into account the strategies and methodologies employed in the teaching as well as the classroom environment as a whole.

2.5.3 Yes/ No tests – a measure of vocabulary knowledge

Yes/No tests are a well known measure of receptive vocabulary size. In their classic form they consisted of lists of individual word-items, indicated by the test-taker as either *known* or *unknown*. Recognizing a word form (strings of letters or phonemes) as a word is, in itself, a proof of word-knowledge of some kind (Meara and Jones, 1988) particularly with children whose conceptual development is in-progress and who are still building up a vocabulary network in their first language (Cameron, 2001).

The process of answering a Yes/No test is simple. Learners are presented with isolated word-items and are required to say *yes* if they think they know a word and *no* if they believe they do not (Anderson and Freebody, 1983; Meara, 1990a). An example of tests of this kind is Meara's (1992a) frequency-based tests, mentioned earlier, which were developed for assessing the vocabulary size of foreign language learners.

The score on the test is based on the theoretical principle (Signal Detection Theory) that "people with better vocabularies will recognize more words as words" (Zimmerman et al., 1977: 6). It is determined by the proportion of words claimed to be known (*hit rate*), adjusted on the number of *imaginary words* - also addressed as *non-words* or *pseudo-words* – identified as known (*false alarm rate*) (Meara, 1989). In other words, estimates of the true hit rate are adjusted in the light of the false alarm rate according to the following example. Testee A scores 100% hit rate and 100% false alarm rate, he will finally score 0 as a result of his Yes/No vocabulary test; testee B scores 50% hits and 0% false alarms, his score will be equal to 50; finally testee C's results (i.e. 50% hits and 10% false alarms) suggest that his *actual* hit rate

somehow over-estimates his *real* hit rate, therefore his actual hit rate will be adjusted downwards and corrected according to the number of the false alarm rates. One problem with this formula is that false alarm rates can severely penalize students who incorrectly identify pseudo-words as known items and if the number of false alarms is high it is possible for a subject to have a negative score on a test (Shillaw, 1996).

The function of pseudo-words has been extensively discussed in the literature substantially as a means to estimate the degree to which a learner is guessing when claiming to know all the words tested (Anderson and Freebody, 1983; Meara, 1992a; 1992b; 1994b; Zimmerman et al., 1977). While the use of correction *formulae* for marking the test - based on the calculation of the number of hits to false-alarm responses – have been addressed in the studies reported above as a means to create a *controlled* testing environment, one which can more accurately monitor the participants' response behaviour and vocabulary size, research findings seem to report contradictory results. Eyckmans et al. (2007), for example, emphasize the importance, on the one hand, of adopting a test design that can provide a more controlled environment, so that "variability between testees can only be attributed to knowledge of the tested construct and not to preconceptions or attitudes." (Eyckmans et al., 2007: 63). On the other hand, they report that a high number of false alarms were also produced by learners tested in computerized controlled environments and they conclude that while it is possible to influence "test-takers' response behaviour by manipulating certain variables of the Yes/No Vocabulary test [...] these variables do not overcome or counterbalance the inherent problem of the format, namely that two dimensions are measured at the same time: the vocabulary size of the participants and their own estimation of their vocabulary knowledge" (Eyckmans et al., 2007: 75).

Some of the most commonly raised criticisms to these types of vocabulary measure are illustrated and discussed below:

a) Difficulty to evaluate the degree of validity of test-takers' responses to stimulus-words with particular reference to the possibility that unknown word-items may be genuinely mistaken by learners for known words (Read, 2000).

This is a recurrent issue in discrete assessment measures. It is possible, for example, that spoken/written input corresponding to *cat* may activate the word *pat*, based on the overlapping vowel. On the other hand, the simple construct of the Yes/No test-format allows for larger numbers of words to be tested. This is likely to statistically reduce the impact of *genuine* word-overlapping on the overall test performance, thus increasing the chances for a valid assessment of word knowledge.

b) Possible contamination of data by means of *guesswork.* Guesswork concerns the fact that if unsure whether they know a word the testees may be induced, by the dichotomous character of the Yes/No decision process (Eyckmans et al., 2007), to make guesses that may lead to a risk of alteration of data due to *response bias.* Studies have reported that yes/no answers to stimulus-words are likely to be influenced by the learners' tendency to choose one of the two options (*yes,* I know this word, or *no,* I do not know this word) and therefore by their attitude towards the task rather than by their actual knowledge of the words (Beeckmans et al., 2001; Eyckmans, 2004; Eyckmans et al., 2007).

Guessing the meaning of a new word is an essential skill when it comes to learning vocabulary and low-frequency vocabulary in particular (Nation, 1990; Huckin, Haynes and Coady, 1993; Schmitt, 2000). Children are encouraged to make *intelligent/ instructed* guesses since the very beginning of their learning experience, in their attempt to make sense of the world. Similarly, as they try and make sense of the lexical environment in the foreign language class, they make guesses on the meanings of words they do not know – inferencing them from context. On the other hand, given the context-independent nature of checklist tests, it is reasonable to believe that any guessing strategies, activated by learners in the process of identifying the correct answers to the stimulus-words, are in fact determined by the polarized test-format and therefore by the necessity to produce polarized answers (*yes* or *no*) – leading to response bias - rather than by genuine, instructed guessing. On the other hand, studies which investigated the concurrent validity of a number of assessment measures reported on a significant correlation being found between learners' scores in Yes/No and multiple-choice tests (Tilley, 1936) and between scores in Yes/No tests and the learners' general proficiency in the language (Meara and Jones, 1988; Meara, 1992b). Eyckmans et al. (2007) who investigated concurrent validity between a Yes/No

vocabulary test and a translation task that targeted the same lexical items found "unsatisfactory correlations" (Eyckmans et al., 2007: 75) between the two types of constructs, which were mostly due according to the authors to a high *false alarm* rate recorded in the Yes/No task. A different reading of the results discussed in Eyckmans et al. (2007) is offered by Fitzpatrick (2007: 129) who suggests that while the checklist format asks the learner to acknowledge his/her *familiarity* with the way word-items *look like*, translation tasks ask the learner to focus his/her attention on the *meaning of words*. Therefore, the two assessment measures employ constructs that seem to investigate different aspects of word knowledge which brings us back to the discussion addressed above (see section 2.4) on the multi-faceted nature of vocabulary knowledge.

With particular reference to young learners, White et al. (1989) assessed the validity of Yes/No tests with children. Two types of tests were administered – a Yes/No test and a multiple choice test – followed by an interview on the tested word-items. A significant correlation was found between the tests. The interview also showed that the Yes/No test was accurate in estimating the word knowledge of first and second graders, being at the same time slightly more accurate than the multiple choice test.

Moreover, the administration of Yes/No tests in an oral-format – like the one employed for the present investigation – we found may offer interesting insights of the issues discussed above and contribute to the design of a more controlled testing environment where variability in scores is more likely to relate to knowledge of the tested construct (Eyckmans et al., 2007). Table 2.3 illustrates possible advantages of more controlled testing-environments with particular reference to the construct employed in the research reported in this thesis - test administrator-testee oral format (see chapters 6, section 6.4.2 and discussion in chapter 8).

Table 2.3: Yes/No Vocabulary tests. Advantages offered by controlled testing-environments (adapted from Eyckmans et al., 2007: 66).

- Presenting the items one by one is of great importance because it changes the test experience drastically. Firstly, testees do not have an overview of the complete test – like in traditional *list-presentation* where all the items are presented to the test-taker.

- Testees do not know how many items are still to come and they may not remember how many stimuli they have already rejected or accepted.

- Test-takers cannot apply alterations to the choices they have already made or leave items unanswered or go back to them once they have skimmed through the rest. These types of behaviours are likely to influence the testees' response pattern and therefore their scores.

- The implementation of an *oral* format allows the imposition of a time limit per item, which leads to more uniformity because the time variation no longer comes into place.
- Finally, by assessing testees orally and individually (*face to face*) a whole range of *signals* (i.e. hesitance, fatigue, test-takers' body language) – that in more traditional formats are likely to be lost - may become evident to the test-administrator.

c) Difficulties, for researchers, in investigating the criteria adopted by testees in qualifying their own knowledge of individual words (Sims, 1929; Anderson and Freebody, 1983) and Yes/No tests' inability to investigate to what extent the words, that are indicated as known by the learner, are in fact known (Read, 1988; Wesche and Paribakht, 1996).

Difficulties with identifying testees' Yes/No answers to a set level of proficiency in vocabulary knowledge (see point c. above) may be particularly evident with children. Nevertheless, it could be argued that such issues seem to be more naturally related to the age of the learners rather than to the type of measure itself. Vygotsky (1962) has in fact warned us of the differences between adults' and children's vocabulary knowledge. He pointed out that although young learners make use of the same words as adults, they might attribute those items different meanings. Similarly, observing children's speech it becomes clear how they can often use vocabulary and syntactic constructions far in advance of their ability to fully master their meanings and grammar (Locke, 1993). Finally, it is evident that these types of vocabulary measures aim at assessing receptive, rather than productive, vocabulary knowledge. Passive word recognition and therefore the ability to identify a word as a meaningful unit is the starting point from which the process of language learning originates and unfolds

(Meara, 1990a). Therefore, being able to quantify the vocabulary the learners are familiar with is an initial, although essential, step in the investigation of the relationship between lexical environment and learners' uptake.

Finally, further advantages of the Yes/ No format are to be found in the fact that such test-construct assesses knowledge of the words which are really intended to be tested - unlike multiple choice tests where although learners are supposed to be tested upon a single word they are in fact tested on all the words appearing in the test, including distracters, which may affect performance (Anderson and Freebody, 1983; Meara, 1992a; Welsche and Paribakht, 1996). Checklists tests are therefore a completely context-independent type of assessment. This allows for investigations of larger numbers of words, as mentioned above which is a key point particularly when dealing with young learners whose ability to maintain a high level of concentration in a single task can be substantially lower than with adults. Also, in school environments where the requirements of the National Curriculum force the teachers to a tight schedule (since 2006, an average of 70 hours per year have been allocated to the teaching of a foreign language, in Italy. Before then, 50 contact hours a year was regarded as the national norm) and do not allow for much time to be spent in extra activities and testing (not to mention the strict regulations on privacy and children's protection) the simplicity of administration of Yes/No tests is, indeed, to be intended as a virtue (Anderson and Freebody, 1983).

Explicit and incidental vocabulary learning

Can a child learn a foreign language through incidental acquisition? Or do words have to be learned explicitly in order to be acquired? *Explicit learning* occurs when intentional effort is made by learners in order to access information (Graf and Schacter, 1987) on the mechanisms and rules that regulate a specific linguistic code. On the other hand, *incidental learning* takes place when attention is put in effective communication rather than on the language itself.

Nation (1990) reviews a number of studies on young foreign language learners in India and Indonesia and concludes that the number of words acquired after five years of regular teaching ranges from 1,000 to 2,000 lexical items - roughly 200 items a year. Similarly, a study by Milton and Meara (1998) suggests that the number of

word families learned by British students, in French as a foreign language, range between 3.8 and 4.3 per teaching contact hour – that is around 200-225 word families per school year. Vassiliu (1993) reported that Greek students of English at an intermediate level seem to acquire 3 new lemmas per 50-minute class. More optimistic is Cameron (2001) who indicates a figure of around 500 words a year, given – she specifies – good learning conditions. Considering that in Italy, for example, the teaching of a foreign language is only compulsory from year 3 of primary school, this means that a 10-year-old child, entering secondary education, is only equipped with a portion of the 2,000 word families that make up a basic vocabulary, considered to be necessary in order to *survive* everyday conversations (Schonell et al., 1956; Schmitt, 2000; Adolphs and Schmitt, 2004).

If we compare these figures with the number of words typically acquired by children native speakers of English that range from about 4,000 to 5,000 word families by the age of 5, and successively increase by around 1,000 new words a year (Nation and Waring, 1997) it seems unlikely that such a substantial amount of vocabulary can be acquired through explicit learning, as this would imply the use of time-consuming strategies, accompanied by even more time-consuming *expanding rehearsal* procedures (Pimsleur, 1967) in order to prevent forgetting and, in the long run, attrition (Schmitt, 2000, for a review of studies). Therefore, it is unlikely that every word learned in class can be taught explicitly (Carter and McCarthy, 1988; Meara, 1994a) we have to deduce that a proportion of the vocabulary learned is acquired incidentally, through exposure and use in communicative tasks (Nagy and Anderson, 1984; Nagy and Herman, 1987).

While incidental learning can occur when using language for communicative purposes, acquiring vocabulary incidentally has been suggested to be a more gradual process than explicit learning (Schmitt, 2000: 120). Also, in order to acquire an equal number of words, a much greater proportion of input - from written texts or spoken discourse - may be required. Therefore, dealing with the foreign language classroom, where the *learning experience* is organized according to syllabus indications and in consideration of time constraints, a combination of explicit and incidental learning seem to be necessary.

Examples of explicit learning techniques employed with young learners can be divided into two major categories. The first category includes strategies adopted by teachers in order to encourage the acquisition of meaning of new words – by demonstration, use of pictures, or by verbal explanation (Nation, 1990: 51); the second group focuses on a range of organizational strategies - thematic grouping of vocabulary, finding antonyms and synonyms, organizing words by target of action (i.e. *going to the beach*; *at a birthday party*, Barsalou, 1987). In both circumstances the focus is on the learning itself, and students are fully *aware* of the strategies and methods in use that aim at enhancing proficiency in the language.

The consensus is that a substantial amount of vocabulary is acquired incidentally through listening and reading (Nagy et al., 1985; Nagy and Herman, 1987; Krashen, 1989; Coady, 1997). In L1 as well as in contexts of second/foreign language formal instruction, storytelling is often claimed to encourage lexical development, particularly with young learners (Garvie, 1990; Wright, 1997). A study by Elley (1989) reports that children native speakers of English, at different levels of proficiency in the language, seem to have all equally learned - and retained over a number of months - a useful amount of vocabulary, from listening to stories being read aloud in class. While this kind of incidental learning activity has its advocates area successful mechanism for vocabulary expansion in foreign language learners (Ellis, 1994a), the evidence for it is anecdotal only and it requires verification from empirical studies.

In the acquisition of a foreign language, as much as in all areas of knowledge, it is reasonable to believe that learning – be it explicit or incidental - only occurs in the presence of some kind of input. The centrality of input in the classroom environment is our next point of investigation.

2.6 Input available in the foreign language low-level class

Ellis (1994a: 563) underlines the centrality of the classroom as a learning, as well as a research, environment:

> the classroom constitutes an ideal setting for examining the key theoretical issues because it is possible to observe closely [...] what input learners are exposed to and how it is made available to them.

When dealing with foreign language formal instruction, most – if not all – of the written material available to learners comes from course-books. Nevertheless, the lexical content of the latter can only be transposed into oral input by the teacher, who makes the language available, to the children, for acquisition. Therefore, a comprehensive qualification and analysis of the lexical input learners are exposed to in class is only possible by means of a joint investigation of both course-book materials and teachers' speech.

The study of input in second language acquisition had its beginning in the late 1960s and early 1970s (Gass, 1997) when the relationships between input and intake (Corder, 1967) and input and interaction (Wagner-Gough and Hatch, 1975) started to take shape.

The fundamental distinction between input and uptake, that is between the amount of forms and meanings that are conveyed and made available in the language classroom and the proportion of these that are actually taken in and acquired by the learners, was first introduced by Corder (1967: 165):

> The simple fact of presenting a certain linguistic form to a learner in the classroom does not necessarily qualify it for the status of input, for the reason that input is what goes in not what is available for going in.

The relationship between availability of input and its retention – leading to acquisition - has been investigated by scholars in a number of ways. Krashen (1985; 1989) differentiated between (conscious) *learning* and (subconscious) *acquisition* and claimed that the main function of language instruction is primarily to support acquisition by providing *optimal input*. His *Comprehensible Input Hypothesis* is therefore based on the belief that language is acquired through written and oral exposure to linguistic forms slightly in advance of the learner's existing knowledge (i + 1). He postulated that all learners of a second language will follow the same sequence of acquisition in a predictable and natural order although, according to Krashen (1982), it is unlikely that all learners will be at the same stage of acquisition, at the same time, hence, in order to be equally profitable for all, it becomes essential that input to classroom L2 learners is *natural*, but not *grammatically sequenced*:

> unsequenced but natural input [...] will contain a rich variety of structures – if it is comprehensible there will be i + 1 for everybody as long as there is *enough* input. (Krashen, 1982: 68)

Criticism of Krashen's position comes from Pienemann (1984; 1985; 1989) in his *Teachability Hypothesis*. While the former states that acquisition can only take place as a result of natural input that is tuned – and therefore simplified - to the learners' level of acquisition, the latter emphasizes the drastic influence that instruction has on L2 speech production (Pienemann, 1985: 37):

> provided the learner is at the appropriate acquisitional stage – instruction can improve acquisition with respect to (a) the speed of acquisition, (b) the frequency of rule application and (c) the different linguistic contexts in which the rule has to be applied.

A number of longitudinal studies for the acquisition of German as a second language (Clahsen, 1980; Pienemann, 1980) give evidence that learners seem to develop acquisition by moving through the successive stages of the *acquisitional sequence*, so that if a learner finds him/herself, for example, at stage *X*, he/she will not be able to acquire stage *X + 2* unless stage *X + 1* has been achieved first. Pienemann (1984: 37) claims therefore that "acquisitional stages are interrelated in such a way that at each stage the processing prerequisites are developed". Table 2.4 illustrates the types of procedural skills that are needed for processing language, and their progression, as postulated in Pienemann's (1998a) *Processability Theory*. Learners' ability to process the language progresses from an initial level (1) of recognition and acquisition of individual word items - with no grammatical cues - to a level (5) of improved proficiency where main and subordinate clauses can be handled separately. Pienemann's work has some important implications for the investigation of successive stages in language-learning acquisitional sequence but it also offers an insight in the procedural skills that are necessary in order for distinctive features of vocabulary to become acquired (i.e. the use of the *–s* to indicate plurality in English; the use of suffixes like *-schaft* or *–ner* to indicate noun gender in German).

Table 2.4: Progression in processing pre-requisites and structural target language outcomes predicted by processability theory. (Pienemann and Håkansson, 1999 – as cited in Milton, 2009: 107)

Level	Processing pre-requisites	Structural outcome
5	Clause boundary	Main and subordinate clause
4	S-procedure	Inter-phrasal information exchange
3	Phrasal procedure	Phrasal information exchange
2	Category procedure	Lexical morphemes
1	Word/lemma	*Words*

The relationship between comprehension (input) and production (output) is also investigated by Long (1981) who identified negotiation and interaction as the gateways to acquisition. It is only through modifications in interactional conversations that it is possible to achieve a fine tuning of the input, which so becomes fully accessible and comprehensible. Finally, the Comprehensible Output Hypothesis formulated by Swain (1985) identifies in the attempt of the learner to successfully convey the intended meaning and therefore in comprehensible output the key factor towards language proficiency. These three main hypotheses to language learning were challenged in a substantial number of experiments. Ellis and his co-researchers investigated the correlations between different types of vocabulary teaching and vocabulary learning (Ellis, 1995; Ellis, Tanaka and Yamazaki, 1995; Ellis and He, 1999). They isolated four different learning conditions, 1) the unmodified input environment (UMI) – where the learners were exposed to new vocabulary with no explanation of form and meaning; 2) the pre-modified input environment (PMI) – where explanations of word-items occurred in asymmetrical discourse: from teacher to students; 3) the interactionally modified input environment (IMI) – where clarifications on new items and interaction occurred in a "dialogically symmetrical discourse" (Ellis and He, 1999) – from teacher to student as well as from student to teacher; finally 4), the modified output environment (MO) – where the learners were asked to interact in pairs and adopt strategies of negotiation in order to convey their intended meanings. Learners exposed to IMI acquired a greater proportion of new words than their peers taught in a PMI environment. As expected,

UMI proved to be the least successful condition, while MO the most successful one – with the limitation though of a much slower rate of acquisition, which will represent a difficulty in the applicability of the latter experimental condition in ordinary syllabus-restricted school environments.

Gass (1997: 76) differentiates between two main types of *modified* input - *simplified* speech and *elaborated* speech which often co-occur in the input to non-proficient speakers and aim at enhancing comprehension and therefore communication. In the case of *simplification* being intended as a reduction in the amount of syntactic information available in the discourse structure, it could be argued that a reduced number of information to be processed by the interlocutors is likely to encourage learners' comprehension (Kelch, 1985). Also, simplification in terms of slower speech, longer pauses and, possibly, fewer words being uttered in a set length of time (i.e. lesson-unit) may result in the learners having more time available to process information (Gass, 1997). On the other hand, a number of studies (see Parker and Chaudron, 1987 for a review of studies) which investigated the way how elaborated speech (i.e. when redundant syntactic, semantic or lexical information is provided) affected the comprehension skills of non-proficient learners concluded that there is a positive effect on comprehension of elaborated modification.

Teacher talk and its relationship with learners' acquisition of a second language is also investigated in Wong-Fillmore (1985). The study focuses on the interaction between different types of teaching practices, instructional settings and language learning in American schools. The author suggests that types of teacher talk that seem to work well for young learners' acquisition of a second language show, among others, the following characteristics (Wong-Fillmore, 1985: 44):

- clear instructions and lesson phases clearly marked;
- focus on communication;
- richness of lexical input produced by the teacher.

In order for teachers to communicate effectively with their learners it is reasonable to believe that a certain degree of linguistic and discourse accommodation is likely to occur.

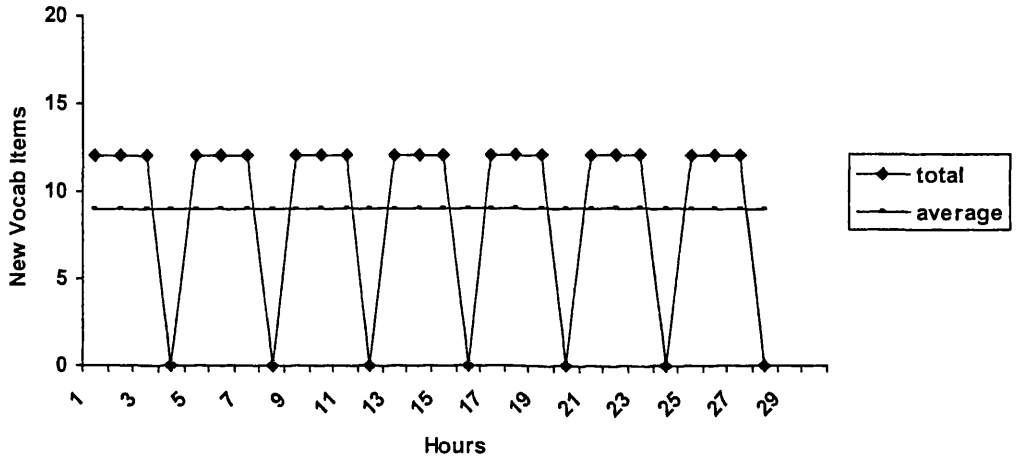
The term accommodation was first introduced by Giles (1973) and then developed by Giles and St. Clair (1979). It indicates the move to make one's way of communicating converge with that of one's interlocutors. In the context of second language formal instruction, for example, accommodation occurs when the teacher tries to meet learners on their expressive grounds by consciously, or unconsciously - as in the case of some forms of ungrammatical input (Gass, 1997) - adopting features of their pronunciation, topic conventions or by modifying length of response, complexity of response and vocabulary size according to his/her learners' levels of proficiency.

Accommodation and non-native directed speech have been investigated in a number of studies. A study by Gaies (1979) analysed the speech produced by eight teacher trainers and addressed to students of English as a second language at different levels of proficiency. All teachers seemed to accommodate their linguistic outputs to the overall proficiency levels of their interlocutors. In other words, learners' degree of competence in the foreign language proved a statistically significant predictor of the syntactic and lexical complexity of these teachers' speech. Richards and Malvern (2000) investigated linguistic and discourse accommodation of teacher-testers involved in language proficiency interviews to teenage learners of French. The aspect of teachers' language that was most responsive to the linguistic competence of their students was lexical diversity - traditionally measured by the ratio of different words to total words used, but identified in this study as *D*, a measure which typically investigates the way how new words are introduced into larger and larger language samples. In the attempt to classify the nature of non-native-directed, *modified* speech and identify the ways in which it differs from native-directed, *authentic* speech Gass (1997) suggested that the most obvious differences between the two lay on four dimensions, respectively, *discourse* (i.e. clarification requests, comprehension checks); *morphology*/syntax (a number of studies - Giles and Smith, 1979; Gass and Varonis, 1985; Gass and Lakshmanan, 1991- have reported on simple syntax and occurrences of ungrammarical input been used in speech directed to low-proficiency learners); *phonology* (speech signals such as loudness, speed, etc.); *vocabulary* (Gass, 1997, in his review of studies on the use of vocabulary in non-native directed speech suggests that vocabulary to non-native speakers tends to be simpler than the one used in conversations with fluent speakers. Also, idoms and formulaic sequences seem to appear less frequently). The latter is particularly relevant to the investigation of the

data reported in this thesis which focus on the analysis of classrooms as lexical environments and, in particular, on teachers' linguistic output and degree of lexical accommodation to their learners' levels of competence in the foreign language.

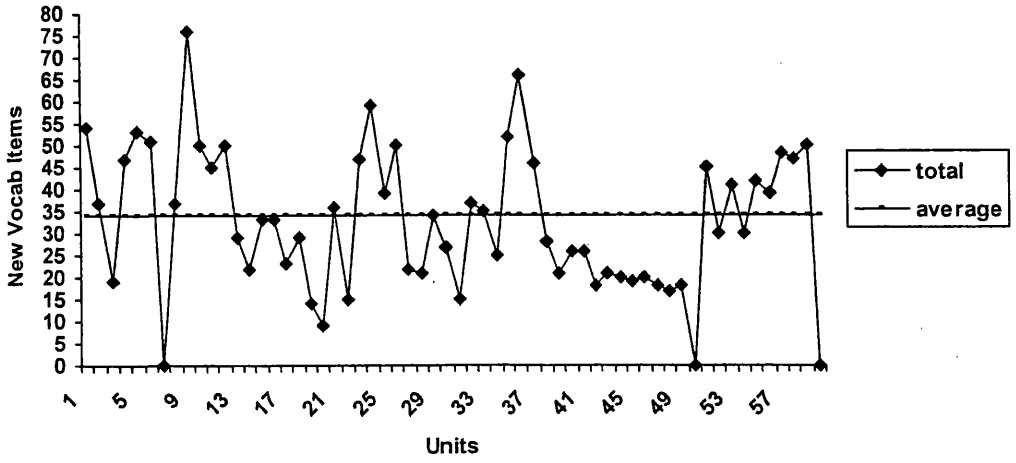
A first important analysis of classrooms as lexical environments, under non-experimental conditions, was carried out by Scholfield (1991). He hypothesises that in an ideal course vocabulary input would be spread evenly across the course of learning with regular breaks from input as words are recycled and tested. His ideal vocabulary rate plot is shown in Figure 2.1.

Figure 2.1: Vocabulary Rate Plot for Imaginary Course (Scholfield, 1991: 27)



To investigate how closely real books come to matching this ideal plot, he calculated the vocabulary rate plot of a set of 5 textbooks – three aimed at beginners and two at intermediate learners – and he observed the rate of introduction of new vocabulary. No consistent patterns were found in the way how new lexical items are introduced in the courses. Scholfield reports a huge degree of variation both within units and between books. The number of new words typically encountered per unit period varied enormously: from a minimum of 21 to a maximum of 58. A typical example of the plot obtained from a real book is shown in Figure 2.2.

Figure 2.2: Vocabulary Rate Plot for *American Language Course 2101* (Scholfield, 1991: 28)



A replication of this study on beginner EFL course books used in Greece (Vassiliu, 2001) reveals that this observation is general and that books can vary hugely in terms of; the volumes of vocabulary they introduce; how the input is spread across the academic year; and how this material is recycled and practised once it has been introduced.

We have rather less idea about the nature and volumes of vocabulary used by the teacher in the classroom and across different levels of proficiency (i.e. teachers' accommodation to their class) probably for the practical reason that this information is harder to access and record than is the written material in books. Yet this must provide an equally important source of input for learners and perhaps the most important source of language input for young learners who are likely to be still learning writing in their native language.

Among the studies that attempted to shed light on speech variations in formal instruction are the following. A study by Chaudron (1982) investigated the lexical environments of Canadian high schools and university classrooms. He identified the linguistic and interactional modifications in the speech of native speaker teachers, of English as a SL, in order to accommodate the learners' level of proficiency.

Similarly, Håkansson (1986) investigated the variation in teachers' speech rate (tokens per minute) according to the learners' proficiency, while Henzl (1973, 1979)

focused on teacher/ native speaker talk when addressing native speakers or foreign language learners. Despite the interest raised by this work, none of these studies has offered an overall picture of classrooms as lexical environments.

One piece of work that has, to some extent, contributed to this line of investigation, is a study by Meara, Lightbown and Halter (1997) which analyzes the vocabulary available in the speech of 10 teachers of ESL. The context is that of immersion courses in Quebec, where a mainly communicative approach to language learning is employed. The subjects are 11 and 12 year-olds, native speakers of French. A total of 10 thirty-minute samples of teachers' oral input were transcribed. The corpus was analyzed according to the frequency lists developed by Nation (1986). On average 85% of teachers' utterances belonged to Nation's base-list 1 and therefore to the most common 1000 words in English. Only 3% of the vocabulary available to the learners could not be found in the first 2500 most common words and was therefore regarded as *unusual*.

Finally, a study by Tang and Nesi (2003) analyzed the speech produced by two teachers of EFL during a week of formal instruction. Lexical richness of the teachers' output was calculated by means of two different measures - lexical variation (type/token ratio - for a discussion on measures of lexical richness, refer to section *Assessing spoken texts*) and frequency count – using VocabProfile and according to Nation's frequency lists. An interesting point raised by the authors is the relationship between syllabus requirements and the amount as well as the type of vocabulary available for acquisition. The study suggests that strict syllabus guidelines may lead to the creation of poor lexical environments, while teachers who are allowed a degree of instrumental autonomy and methodological freedom may produce lexically richer output, thus enhancing the learners' chances of implicit vocabulary acquisition. This diversity in lexical offers between different types of teaching is also present in Cameron's views on vocabulary input in Government Primary schools compared to Milton and Vassiliu's analysis of the Greek private sector. Cameron (2001: 90) criticizes the *predictability* of the vocabulary presented in course-books – typically focused on semantic-content-led topics, like family, school, holidays - and she stresses the importance of introducing young learners to more stimulating material and sources of learning. She suggests that traditionally course-book centred classes

might be not-challenging-enough lexical environments for the younger generations of *globalized* learners. On the other hand, Milton and Vassiliu (2000), in a study that reviews the vocabulary of a number of textbooks for beginners of English as a foreign language, report on the high rate of lexical variation of teaching materials aimed at similar age and proficiency groups. Only a small proportion of 32% of vocabulary is shared between the different text-books, the remaining 68% is made of a range of different words. Moreover, the authors analysed the corpus comparing it with the frequency lists developed by Nation (1986). They concluded that a substantial amount (46%) of lemmas used in the textbooks did not belong to the most frequent 2000 words in English, and therefore consisted of infrequent vocabulary. Whether such range of infrequent vocabulary is stimulating enough lexical input for today's generation of young learners (a view challenged by Cameron) is still open to discussion.

2.7 What words to teach at beginner levels?

No exact indications can be found in the literature regarding which teaching method or approach to second and foreign language learning seem to produce more effective results in terms of learners' proficiency (see chapter three). Moreover, there is little agreement on whether formal instruction is at all necessary in order to learn the L2 - with particular reference to the improvement of grammatical accuracy (Krashen, 1982; Prabhu, 1987; Harley, 1989). The consensus is that most of the learning that occurs in the classroom takes place *naturally* as a result of exposure to some kind of input as well as to the learners' processing of the latter (Ellis, 1994a: 657).

On the other hand, as we shift our attention from language learning in general to the acquisition of vocabulary, in particular, there is general recognition that not all words are equally useful for all learners (i.e. children may need different vocabulary from that of adults in order to function in simple communicative tasks; more advanced learners may need to become familiar with multi-word-units, collocations or linguistic registers, while beginner students may be perfectly happy with being able to simply recognize a word as a word or with getting a grasp of words meanings and associations) and that not all words are equally easy of difficult to learn.

Learning a language *naturally* is certainly a more lengthy process than learning it through some kind of formal instruction. A native-speaker takes approximately 12 to 14 months before she is able to utter her first isolated words. Should this be an applicable methodology with young learners of a foreign language, can teachers of the public sector allow themselves and their pupils such a dilated amount of time? Thus, in the first place, it is reasonable to suggest that the amount of vocabulary taught in class should go hand-in-hand with the time available for a course (Mackey, 1965). Also, factors that should be taken into consideration in syllabus design as well as in the planning of individual teaching sessions are learners' age, motivation and needs (McCarthy, 1984); differences between thematic-content classes (organized by a series of events, i.e. stories, cartoons, plays) and semantic-content material (like textbooks that follow a vocabulary progression by topic), (Cameron, 2001; Finkbeiner and Nicol, 2003); degrees of difficulty of individual words or groups of words (Laufer, 1997b); frequency of occurrence in the language (Sinclair and Renouf, 1988; McCarthy, 1990; Willis, 1990; Nation and Waring, 1997; Nation 2000, 2001). The consensus is that the general frequency of words in the language is an indication of the degree of *usefulness* of such words. For example, *the*, *I*, *you*, *and*, *to*, *it*, *a*, *yeah*, *that*, *of*, are the most frequent words in spoken English (Schmitt, 2000: 72) therefore it is reasonable to believe that they are also among the first words we may want to teach our learners. On the other hand, word-items that only occur rarely in the language may be less useful for the less proficient learners to acquire. With reference to spoken discourse, Schonell et al. (1956) found that familiarity with the first 2,000 word families in English corresponds to a 99% lexical coverage. Later, a study by Adolphs and Schmitt (2004) suggested that the most frequent 2,000 word families in the language only give coverage of less than 95%, in spoken discourse.

Calculations of lexical coverage offer good indications of the number of words that should be learned in order to function in a variety of written or spoken discourse settings. Nevertheless, it has been suggested (Tinkham, 1997; Finkbeiner and Nicol, 2003) that words arranged by sequence of events or *thematic* fields (i.e. *kitchen*, *cook*, *eat*, *smell*) are more easily learned, by children, than those organized in *semantic* clusters (i.e. *plate*, *glass*, *fork*, *knife*). A thematic organization of vocabulary, on the other hand, may often clash with selections of words by frequency of occurrence in the language – as more frequent as well as less frequent words may be equally

necessary to the unfolding of the *plot* of the lesson. Lewis (1993) reckons that a balance between frequent and infrequent words is recommendable. On the other hand, despite the volume of research on the topic, the studies seem to have produced contrasting results and no clear-cut indications have been offered on recommendable numbers and types of words to be taught in the foreign language classroom, which justifies the huge range of variation in the vocabulary introduced in course-books across time (Milton and Benn, 1933; Sinclair and Renouf, 1988; Miranda, 1990). Cameron (2001) indicated a figure of around 500 words a year, to be effectively acquired by young foreign language learners in states school, that would result in a greater amount of lexical exposure, after allowing for the disparity between what is taught and what it is actually learned (Robson, 1934). Willis (1990) organized the lexical input according to three progressive levels of learning – level 1, first 700 most frequent words in the language; level 2, second 850 words; level 3, final 950 words – that make up the first 2,500 most frequent words in English. Willis also points out the need for continuous recycling and consolidation of vocabulary when moving from one level to the next. Scholfield (1991) shifted the focus of attention from total amount of vocabulary to the rate at which new words are introduced. He suggested a rate of 9 to 12 new items per contact hour, to be recalled in spaced-out recycling activities. Gairns and Redman (1986) indicate 8 new words to be a fair measure. Donzelli (2007) analysed the lexical input of one primary school teacher for the duration of an academic year. She reported a huge degree of variation in the amount of vocabulary the children were exposed to per class period. The number of word-types per lesson ranges from a minimum of 33 to a maximum of 353.

In order to be able to apply theoretical guidelines on the number and types of words that *should* be learned, to the classroom environment, it is also necessary to investigate how many words *can* be typically learned in a set period of time. For example, could we learn 10 words a day if we wanted to? Learning 10 words a day it would mean to be able to acquire 300 words in a month and 2,400 words in a school year. I wish this could be possible both, as a teacher as well as a foreign language learner. Unfortunately, things are not so straightforward, and if little is known on the amount of exposure to the language learners receive in class, even more sparse are indications regarding the proportion of vocabulary typically acquired by students.

2.7.1 Young learners: do they learn what they are taught?

As mentioned above, few are the studies that try and shed some light on the amount of vocabulary learned by students in the language classroom. Milton and Meara (1998), who investigated a number of French courses for British students, suggested that the latter seem to learn around 3.8 to 4.3 lemmas per hour lesson, which makes up 200 to 225 lemmas per school year. Vassiliu (1993) reported that Greek students of English at an intermediate level seem to acquire 3 new lemmas per 50-minute class. Donzelli (2007) indicated that children, by the end of a school year, have acquired 462.7 words, that is a rate of 8.4 word types per contact hour, possibly not very different a figure from the one reported by Milton and Meara (1998), 1.7 to 4.4 word families, for students of EFL from different backgrounds, once you allow for the difference in word counting in the two studies.

An interesting study by Caselli and colleagues, which focuses on rate of L1 vocabulary acquisition (Caselli et al., 1995), suggests that native Italian children seem to learn new words at a lower rate than their English speaking peers – despite similarities in the input received between the two languages (Tardif et al., 1997). Whether these outcomes are applicable to the foreign language classroom, and therefore whether Italian young learners seem to also acquire English words at a similar slower rate than their peers, native speakers of different languages, is still a matter of investigation for future research.

An adult native speaker of English is estimated to have a vocabulary of around 20,000 word families (Goulden et al., 1990; D'Anna et al., 1991; Zechmeister et al. 1995). As discussed above, knowledge of the first 2,000 most frequent words in the language gives access to 80% of the words in ordinary texts and 95% of the words in spoken discourse. Therefore, it is reasonable to believe that these words are among the first to be taught and, consequently, among the first to be learned by students. On the other hand, a number of studies (Meara, 1992a; Schmitt and Meara, 1997) could not confirm the hypothesis and suggested that learners' vocabulary knowledge appears more similar to a jigsaw completed in patches that finally fit together rather than to a jigsaw build up line by line and where the easier piece is placed first and the hardest last. If it is true that students adopt a variety of strategies – different from the

frequency model – in order to acquire and retain vocabulary, it is important to try and identify the factors that positively contribute to the learnability of words.

2.7.2 Factors that determine the learnability of words

A variety of factors may contribute to making new vocabulary more easily learnable by foreign language students.

If it is commonly accepted that languages can only be acquired through exposure, it also seems reasonable to suggest that the more lexical exposure we receive the more we are likely to learn. In other words, it could be argued that *frequency of occurrence* in the micro-environment is likely to be a good indicator of learnability (Milton, 2009). For example, if a teacher greets her pupils, at the beginning of every lesson, with the sentence, 'Good morning children!' it is likely that the latter learn *good morning* and *children* quicker than other words that are only uttered a limited number of times. Hence, is there a threshold in the number of repetitions that guarantees the learnability of words? Unfortunately, once again, the answer is *no*. Nevertheless, research in the field suggests that words repeated more than 7 to 16 times are more easily acquired than those repeated a fewer number of times (Kachroo, 1962; Saragi et al., 1978; Beck et al., 1987; Nation, 2001 – for a review of studies). Hence, the importance of *recycling* and *consolidation* of vocabulary. If recycling is neglected, many words that are only partially known may be forgotten, and the effort already put into learning them would be lost (Nation, 1990: 45). A study by Nagy (1997) suggests that chances of learning and retaining words from a single exposure are very low (between 5% and 14%).

The number of times a word is repeated in a text or in a string of speech is not the only factor influencing its acquisition and therefore its *labelling* and *packaging* in the learners' mental lexicon (Aitchison, 2003). Some words are remembered while others go unnoticed or are quickly forgotten, for a variety of reasons. Part of these reasons are somehow related to learners' individual differences (Lightbown and Spada, 2006) and learning strategies (Nation, 2001), while others are due to intrinsic properties of individual words (Laufer, 1997b).

2.7.3 Learners' individual differences

All of us who have been involved with teaching a foreign language to different age groups are well aware of the strengths and weaknesses of children and adult learners (Ellis, 1994a, for a comprehensive review of studies on age and SLA). Research offers no conclusive findings on which of the two – younger or older learners - should be accredited with the title of *better language learner*. Nevertheless, scholars seem to agree on few important issues. Although the existence of a *critical period hypothesis* is still a matter of controversy (Scovel, 1988; Long, 1990), children seem to be particularly skilled in the acquisition of phonology and native-like pronunciation, while adults, due to their already matured cognitive and L1 linguistic abilities, seem to have an initial advantage over the former for what concerns rate of learning and knowledge of grammar (Ellis, 1994a - for a review of studies).

Other differences among learners are more of a socio-psychological nature. *Attitude* and *motivation* (Gardner and Lambert, 1972), for example, have been found to correlate highly with the acquisition of a second language. Research also stressed the importance of *affective* variables - the willingness or reluctance to enter an empathic relationship and to integrate oneself into the *foreign* culture can strongly influence the degree of success or failure of the learning experience (Nida, 1971; Gardner and Lambert, 1972). This was very evident in the class-dynamics I observed while collecting data for the present research. The children who showed a higher degree of interest towards the foreign culture I was representing, as well as toward my person, as a microcosm of that far-away world, were also able to articulate more complex questions and answers, and they were more willing to participate. Regarding the latter, it is certainly problematic to tell whether "participation causes learning" or "proficiency causes participation" (Ellis, 1994a: 592). Other factors playing an important role in the learning process are related to learners' *personality* (degree of extroversion - Wong-Fillmore, 1979; *inhibition* – Guiora et al., 1972; *anxiety* in the classroom environment - Horwitz et al., 1986; MacIntyre, 1995), *intellectual abilities* and *learning styles* (Reid, 1995).

2.7.4 Easy words and difficult words

Are words all equally difficult or easy to acquire? As mentioned above, not all words are equally easy or hard for all learners. Most Italian students, with little or no

exposure to English, for example, will probably find meanings for word-items like *elementary, government, temporary* easier to identify than those for *book, girl* or *eye.* The reason is that the former have a Latin etymology and are therefore *cognates* of the corresponding items in the learners' L1.

Another category of words (i.e. *borrowed* vocabulary) that are more easily identifiable by learners are items like *coke, taxi, Internet.* This type of vocabulary has, in a way, lost its national identity. It no longer belongs to a specific linguistic code, but it has become part of a globalized language culture.

Other characteristics affecting learnability are related to intrinsic properties of words, like *syntactic* properties (Gentner, 1982; McCarthy, 1990), *length* (Rodgers, 1969; Laufer, 1997b) *phonological* and *orthographical correspondence* (Henning, 1973), degree of *imageability* (Ellis and Beaton, 1993, Lewis, 1993).

Studies that investigated the relationship between *length* and *learnability* have not come to unified conclusions on whether longer words are actually more difficult for learners to acquire (for a review of studies, see Schmitt and McCarthy, 1997). Intuitively, words like *schedule, acknowledge* or *straightforward* may be regarded as more difficult than items like *dog, ship* or *water.* It could be argued that the longer a word, the longer it takes to identify it in written texts or spoken discourse – particularly in a language like English that has "an absolutely, unspeakably awful spelling system" (Asthana, 2008) and one that only allows English speaking children to acquire basic reading skills after three years of formal instruction, compared to three months for learners of Italian and Finnish, where the same sound is spelled with the same letter every time. On the other hand, it has been claimed that a large proportion of longer words also show a high degree of morphological transparency (i.e. *–ment, un-, mis-*) which, somehow, counterbalance a length effect (Laufer, 1997b). In fact, experimental studies in the field of psycholinguistics do not seem to support this view. For example, Bergam et al. (2006) who investigated word length effect on two groups of Italian and English third- and fifth-grade readers found that longer words take testees longer to read (ms), both in *alphabetical* (Italian) and *lexical* (English) languages, suggesting that children of this age seem to adopt a letter-by-letter approach to reading, despite the type of language.

The consensus is that the L1 plays an important role in the phonological acquisition of a second/foreign language (e.g. Bongaerts, 1999), for both young learners and adults. Also, pronouncing words aloud has been suggested to enhance vocabulary acquisition and retention (Seibert, 1927, cited in Ellis, 1995). For Italian speakers of English, the ability to remember the sound of a foreign word may become a challenging task, mainly due to the poor phonological-orthographical correspondence in English, compared to Italian. In Italy, children are introduced to reading and writing virtually at the same time as to listening and speaking, with the result that they often end up calling a *ball*, /bɑ:l/ or *eyes*, /eɪs/. Nevertheless, there are words that are particularly *listener-friendly* and that according to our classroom observations tend to stimulate the imagination of young learners, despite their lengths and/or complex pronunciations. These are onomatopoeic words, like *squeaky*, *slimy* or funny words, like *wibbly wobbly jelly*, *silly-billy* or *easy-peasy*.

Another widely researched area of investigation is whether *nouns* are acquired more easily than *verbs*. Laufer (1997b: 149) claims there is no evidence that *verbs* and *adjectives* are harder to acquire than *nouns*. On the other hand, a number of studies seem to prove the opposite. Phillips (1981) found that an unbalanced relationship between the two categories does exist and it is in favour of *nouns*, particularly with less proficient learners. Gentner (1982: 327) who looked at data collected from children of different linguistic backgrounds concluded that younger learners tend to acquire a higher proportion of *nouns* than predicate terms, for both productive use and comprehension, in a variety of linguistic codes.

It has been argued that concrete nouns are more *appealing* than abstract verbs to the memory system of very young learners, with yet limited cognitive and linguistic abilities. Objects like *pappa* (Italian for *children's food*), *mommy*, *doggy* – where the object-referent relation may be easier to identify – may imply a more direct access to the linguistic item and its meaning than it happens with more abstract predicate terms, like *fly*, *move*, *go* - whose semantic attributes depend on a system of relational information and meanings. Another way of looking at the issue is that children seem to approach their learning experience by focusing on *object names* rather than *functional terms* as a result of the stimuli they receive from adults and from the world

around them (Nelson, 1982; Corrigan and Schommer, 1984). That is, the reason why they find particular types of nouns (i.e. proper nouns, animal nouns, objects in the house/classroom) easier to acquire may be because they have been *trained* by adults and carers to deal with concepts and new words by *labelling* the physical space they live in.

If it is true, therefore, that we get to acquire what we are taught, it goes with it that any investigations of the learners' uptake is only truly interpretable in the light of the *lexical input* they have been exposed to – that is the focus of the present research.

2.8 Summary and contribution of present research

What has emerged from this review and particularly the final section, I hope, is that despite the acceptance that input is central to the learning process in any foreign language, we still have very few studies which investigate this area. There is no grand theory, based on empirical evidence, which tell us which words to introduce, how many words to introduce and precisely when in the learning and teaching process. We do not know whether a theory of this kind would vary from country to country or among learners of different ages, or from one individual learner to another. A particular area of ignorance is the role of input in young learners. The formal teaching of foreign languages to primary age children, or even earlier, is a comparatively recent phenomenon and while all would agree that language learning is likely to be different in this age group than in adults – after all, adults have a complete first language system while young children are still developing this – it is not clear what all these differences might be, nor how they should impact on the foreign language classroom for such youngsters.

The good thing that has emerged from this review, however, is that we now have a number of testing and research methods which make the job of collecting and analysing material in this area rather easier and more systematic than might previously have been the case. While tests, for example, may need to be selected with care for the age groups concerned in this dissertation, it should be possible to collect data in a manner that makes the results comparable with other studies in this area and with adult data.

Chapter three has emphasized the relationship between *written* and *oral* language in a number of approaches and methods that have been implemented in the teaching of foreign languages across time. With reference to the interaction between *written* and *oral* input in the classroom environment, there is some evidence in the literature (Donzelli, 2007) that written sources of input seem to comprise less than 50% of the total lexical exposure available to learners in the low-level class. Therefore, teacher speech is likely to remain the main source of input particularly for young learners, whose writing and reading skills in the L1 are still at an initial stage of development and whose degree of autonomy in interpreting written sources of input and in the learning process in general is still limited.

With reference to the points raise above, it is in this underexplored area of research - namely the investigation of the *nature* and *volumes* of vocabulary used by the teacher in class - that lays the true contribution of this thesis. The latter is an attempt to offer a comprehensive picture of classrooms as lexical environments, one that takes into account both the oral and the written sources of input available to learners; that investigates the dynamic relationship between these two dimensions of language; one that focuses on the classroom as the true *stage*, and as the *emotional* and *physical* space where the relation between contextualized (oral) and de-contextualized (written) language interact and where the teaching takes place.

2.8.1 Questions for research

This dissertation, therefore intends to address two broad research questions which have emerged from this review. One is to investigate what goes on in the low-level primary age classroom to see what vocabulary is really used and introduced to such learners. It intends to examine both the written input, where we have some data from other studies for comparison, and oral input, where we seem to know almost nothing. It intends to investigate whether patterns of input can be seen. A second area of investigation is to attempt to measure the effect of input and to assess the nature and scale of vocabulary uptake from the low-level, primary age classroom. This information should usefully inform textbook construction and teacher performance in the classroom.

2.8.2 Hypotheses

- Are more proficient students exposed to a wider range of vocabulary and to a greater proportion of infrequent lexis than their younger peers? And are equally proficient learners exposed to equally rich lexical environments?

- Is there any significant difference between NS teacher and NNS teacher speech? Does the former typically expose their learners to richer lexical environments than the latter?

- Is the oral language produced by the teacher in class rigidly controlled to meet the demands of the syllabus? With reference to the differences between oral and written language we are testing the hypothesis that course books expose learners to a lexically richer input than class teachers.

- With reference to learners' uptake rate and in consideration of the fact that subjects were tested on the vocabulary heard from successive classes we expect that words heard closer to the date of test are easier for learners to remember.

- The generally accepted assumption that frequency of occurrence in the language is likely to be related to the degree of learnability of vocabulary, so that words that belong to a higher frequency band are likely to be learned before words that belong to lower frequency bands, has instructed our last hypothesis. It has been assumed that infrequent vocabulary in general language will be harder for learners to acquire.

In the following chapter a description will be provided of the learning background and environment, primary age, *ab initio* learners in Italy, of the subjects used in this study. It will also consider the methodologies which have been used to teach foreign languages and which apply to the subjects in this book.

2.9 Reviews

Some of the issues addressed in the literature review - which more strictly relates to the analysis carried out in the research presented in this thesis – have been investigated in the following studies. Meara, Lightbown and Halter (1997), for instance, aimed to explore the vocabulary available in the speech of ten teachers involved in English as a second language immersion courses in Quebec. They found that infrequent vocabulary (that is words not among the 2,500 most common words in English) only covered a limited proportion of the total exposure received by learners in 30-minute class periods. Scholfield (1991) conducted an analysis of classrooms as lexical environments, under non-experimental conditions. He calculated the vocabulary rate plot of a set of five textbooks and he observed the rate of introduction of new vocabulary. No consistent patterns were found in the way how new lexical items are introduced in the courses. Scholfield reports a huge degree of variation both within units and between books. Finally, a study by Tang and Nesi (2003) examined lexical richness in the speech produced by two EFL teachers, in China. Lessons conducted during a week-period were tape-recorded and teacher output was analyzed. Teaching methods employed in introducing new vocabulary were also taken into account as well as syllabus requirements. The authors concluded that strict syllabus guidelines seem to substantially affect the amount, as well as the *type* of vocabulary available for acquisition. Specifically, teachers with a degree of instrumental autonomy and methodological freedom are likely to produce lexically richer output, and to offer learners better chances of incidental vocabulary acquisition.

Strengths and weaknesses of these studies have been evaluated. The former have provided the incentive for part of the methodology employed in the present work, the latter have offered an insight into methodological issues which needed to be addressed and improved. Each of them will be dealt with separately.

2.9.1 Meara, Lightbown and Halter (1997)

This is the first empirical study, to my knowledge, which attempted to investigate the lexical resources available to students in their foreign language class. The speech of ten different teachers was recorded and processed by means of specially designed computer programmes. Lexical profiles were produced, and the proportion of unusual vocabulary was calculated, for each of the teachers involved in the study.

The study

This study by Meara, Lightbown and Halter (1997) aims to qualify classrooms as lexical environments. It first addresses the issue of calculating the *available* vocabulary, in the language class - that is the number as well as the *type* of words learners are typically exposed to, in the target language.

The teachers taking part in the experimental study are ten, in total. The background to the data collected is that of intensive ESL programmes in Quebec. The students involved are native speakers of French (aged 11 to 12) and they attend their final years (grade 5 and 6) of primary education. On a regular basis they would have English classes twice a week, for a total of 90 to 120 minutes. Immersion courses typically last five months – five days a week - and students, during this period of time, get involved in a variety of communicative activities designed to help them learn English. In these classes, there is no, or little, explicit teaching of grammar and vocabulary, and little error correction.

The data collected for this study comprise 10 samples of class-recordings, of the duration of 30 minutes each, taken from 10 different teachers. In the process of producing transcriptions of teacher speech, all student data were discarded, and two 500-running-word samples were thus obtained for each of the teachers, but one. The corpora were processed by means of *VocabProfile*, and according to the frequency lists developed by Nation (1986). The lexis in each speech sample was organized into five levels. Level 0 comprising the most common 500 words in English (mostly function words, numbers and greetings); level 1 including the remaining 1,000 most frequent words in the language; level 2 which listed the second 1,000 most frequent vocabulary and level 3 including a more academic vocabulary, largely concerned with scientific and technical concepts. The lexical items in the corpora, which did not fall into any of these categories, were grouped in level 4, and treated as infrequent and, therefore, unusual vocabulary. Words were counted by lemmas. The working assumption employed by the authors, in this study, was that a great proportion of unusual lexis would indicate a rich lexical environment, while a small number of infrequent words would expose learners to lexically poor classes.

Teachers' lexical productions were strikingly similarly. As expected, a large proportion of teacher speech comprised words among the 1,000 most common words in English. On average, only 3% of total exposure was made of unusual lexis (vocabulary not among the first 2,500 most common words in English). Words in this category were also found to have very low frequency of occurrence in the micro-environment of the classroom, being typically repeated once or twice per 500 running words.

Comments

A clear strength of the present study is that of having drawn some attention to an area of research, previously neglected – the investigation of lexical availability in the *black-box* of the language classroom. As it is well known to all of us who have gone through the hassle of filling in forms in order to obtain formal permissions to enter school and record teaching sessions, such procedures can be extremely time consuming and at times frustrating. Besides, even when things go smoothly, the researcher will find her/himself with hours of audio-recordings to transcribe. This partly explains the lack of research studies in this direction. Nevertheless, accepted that learners can only acquire a language if they have access to input in the L2, in order to gain a clear understanding of the relationship between input and uptake, it is necessary to start from the classroom – that is, from the very place where lexical input unfolds.

A methodological problem with this study is to be found in the corpus sizes, which were very small. The authors based their analysis on two 500-word samples per teacher, roughly corresponding to a thirty-minute lesson-unit, each. If we consider that this study aims to evaluate the lexical input produced by language teachers involved in intensive courses that lasted approximately five months - where students were taught in English for around 5 hours a day, five days a week - it seems rather unlikely that ten thirty-minute recordings can be considered as representative a sample of the total 500-hour exposure available to learners.

An observation to be made on this study is the following. A feature of language is that the most frequent words typically occupy a very large proportion of normal text. Even in written language the first 2,000 words in English might provide over 80%

coverage in a normal text. In speech, where frequent lexis is proportionately more frequent than in writing, this figure can often be even higher. What may emerge from this study is that the teacher is talking fairly normally and one might hope this would be the case since if learners were exposed to a highly abnormal model of language then the English they learned might be very odd indeed. It might be thought, contrary to received wisdom in this area, that spoken language would be quite a poor medium from which to learn a large vocabulary because it is, of its nature, lexically less rich than written text. It is not clear, and we do not have a model to guide us, what the features of good teacher talk might be to suggest whether these results are, in fact, good or bad from a pedagogical point of view.

It must also be considered that the learners are still learners and are not native-speakers with full command of even the most frequent vocabulary, in English. The authors reflect that for learners who have a small vocabulary, the lexical environment they describe might actually be quite rich in that it might contain many words that would be unfamiliar to the learners. No data on the level of the learners vocabulary knowledge was taken to suggest whether this was the case but future experiments would clearly want to pick up this point and try to make a more informed estimate of the proportions of the teacher talk that are new to the learners in the classroom.

Finally, the writers reflect that the learners were exposed to no more words than they would have been in a 1960s audiolingual classroom, with explicit limitations on new vocabulary, restricted to focus on structure and pronunciation. Again, from a pedagogical point of view this might be no bad thing since, even for vocabulary learning, the ability to handle some of the more frequent and regular morphemic changes in English would be a profound asset and this observation, far from being something negative, might reflect a feature of teacher language which would actually aid vocabulary learning. Again, the point that we do not know what good teacher talk is, we have no model of ideal practice, draws attention to the dearth of research in this area and the need for more of it.

2.9.2 Scholfield (1991)

Scholfield examines the vocabulary load of course books used in the FL classroom. The investigation allows for quantifying the vocabulary typically available in

teaching materials addressed to the low-level class. The number of new words per unit was calculated and the degree of overlap between textbooks was analyzed.

The study

The environment analyzed in this study is that of the classroom, whose teaching and learning activities, as well as the input produced in the foreign language, are mostly controlled by the course book being followed. Scholfield believes that by calculating the rate at which new lexis is introduced per text-unit it is possible to obtain an accurate picture of the planning employed in the language course.

The author first describes the way a vocabulary rate plot is to be calculated – by drawing a graph where text or lesson-units are indicated as well as the umber of new lexical items per unit. He highlights the importance of setting criteria for counting words, identifying *new* lexis (particularly when the latter is not listed by the author), as well as words new to the course but, in fact, already familiar to the learners.

Scholfield then proceeds by illustrating a vocabulary rate plot for an imaginary course - where he hypotheses a succession of three classes which introduce the same number of new lexis (namely 12 new words) per teaching unit and where every fourth lesson is intended only for revision purposes and recycles the vocabulary previously encountered in the course. Such *ideal* rate plot is successively employed in the study as a point of reference against which five more courses/ textbooks are compared and evaluated.

Comments

This study represents the first important attempt to analyze the vocabulary load of the foreign language classroom. It seems to provide useful guidance to both teachers and authors on the content and organization of course books. The former are also given the opportunity to judge whether the lexical load of teaching materials appears to be within the abilities of their students and plan the way how new vocabulary is going to be introduced in class.

Scholfields highlights the difference, between sections in the same text, as far as the number of new words introduced per unit. Besides, course books appear to expose

learners to a total vocabulary which varies substantially and ranges from 315 to 1380 items.

However, a problematic issue with this study is the following. The author hypotheses an *ideal* vocabulary rate plot, to be employed in textbooks – one which, in his views, is likely to guarantee a more successful input/ uptake ratio, by introducing a manageable number of new items per lesson-unit (12, on average), and by allowing the learner enough time for recycling and consolidation activities. Suggestive though it may sound, the rate plot suggested here has found, to my knowledge, no practical applications in experimental studies which could prove it more successful than, for example, the other rate plots considered in Scholfield's investigation. Moreover, it could be argued that the very principle of an *ideal* vocabulary rate plot that can find applicability to all-purpose language courses as well as to learners of all proficiency levels is, in itself, in contrast with the idea, suggested in the literature (Ellis, 1994; Cangià, 1998; Cameron, 2001; Nation, 2001) that course designing and planning is strictly related to the setting of learning goals which take into account fundamental variables such as, duration of the course, entry level of learners, age of learners, as well as some kind of made-to-measure balance between the four major strands (Nation, 2001: 2) in language teaching – which envisage a focus on *comprehensible meaning-focused input*, *form-focused instruction*, *meaning-focused output*, and *fluency*. Guidelines on the *recommended* amount of new lexis to be introduced per lesson-unit; intervals between vocabulary loaded lessons and revisions classes; rhythm and pace of the language course are, indeed, useful information for syllabus design, textbooks' writers as well as for class teachers; nevertheless, similar indications ought to be intended as guidelines, rather than *ideal* figures, and should not be generalized and indistinctively applied to all language teaching environments.

Finally, a methodological difficulty that appears to have been, somehow, underestimated by the author, is related to the problematic issue of identifying which words are new to the learner and which others have already been encountered (although, possibly, not fully acquired). In the light of this, it could be argued that the method proposed is best applicable to studies dealing with learners who have had no or little previous exposure to the target language, and thus with the lexical content of the book examined.

2.9.3 Tang and Nesi (2003)

This study addresses two main issues. It first aims to compare the lexical richness of the speech produced by two different teachers in China; it then evaluates teachers' performance in relation to the methodologies employed in the language classroom – with particular reference to explicit teaching of planned or unplanned vocabulary.

The study

In this paper Tang and Nesi compare the lexical environment of secondary school English language classrooms in Hong Kong and Guangzhou through transcripts of teacher talk. In each case the teacher's classroom talk was recorded for one week of lessons in a representative school. The students attending the course are 12 years of age; 40 subjects in the Hong Kong form and 45 in the class in Guangzhou. The authors carried out a number of analyses of the transcripts including calculating lexical richness in terms of type-token ratio and word-type frequency. They also analysed the words that were explicitly taught and categorized them according to whether the teaching was planned or unplanned, and the teaching treatments according to these words were examined.

Their results show the influence of the rather different types of language syllabus and teaching methods in the two administrative divisions of China where these cities are located. The teacher in Hong Kong adopted a more flexible approach, incorporating a range of activities, materials, and topics, which produced more lexical variation and a higher proportion of infrequent vocabulary. In Guangzhou, the treatment of vocabulary was much more systematic, within a strictly controlled lesson plan that left little opportunity for spontaneous interaction between the teacher and students. Not surprisingly perhaps, the lexical richness of teacher output was found to be greater in the Hong Kong classroom than in the Guangzhou classroom. In the Guangzhou classroom more words were explicitly taught, but learners were exposed to far fewer word types for incidental acquisition. In that sense, it could be argued that the Hong Kong classroom provided a lexically richer environment for vocabulary acquisition.

Comments

The first piece of information that struck me, while reading this study, was the extremely unfavourable staff-student ratio (i.e. 45 students is the average class size in Hon Kong) compared to the numbers you are used to in Italy, where the average class-size is of around 17/18 students. It is reasonable to expect that class-size is likely to have an impact on the methodology employed in class. For example, it is possible that acoustic issues - that is students' distance from the board and the teacher as well as possible difficulties in the clear reception of the language input – may induce teachers to opt for more explicit teaching of vocabulary and grammar rather than to rely on rich lexical and syntactic environment which is likely to encourage implicit learning.

Similarly to the study by Meara, Lightbown and Halter (1997), reviewed above, this study also relies on a limited amount of data. The corpora obtained from class-transcripts only comprise four and five teaching units monitored for schools in Guangzhou and Hong Kong, respectively. This shows once again the difficulty of collecting data of this type, which need to address administrative issues as well as teachers' overall reluctance to become involved with *inquisitive* research studies. The outcome is – as suggested by the authors – that results are likely to become available from *elite* schools or teaching staff. It could be argued, therefore, that calculations of lexical richness in teacher speech based on *elite* samples of data may, in fact, overestimate the lexical environment of the average language classroom.

A further point to be noticed is the sheer volume of words which teachers speak in class. The Hong Kong teacher in one 35 minute class managed to speak a total, of 2942 word tokens, and 3747 in another, suggesting the classes were little more than monologues where there can have been little or no opportunity for learner interaction. Compared with the modest numbers of words included in a course book lesson, these numbers are very considerable. To be fair, other lessons have far fewer words with 1478 being the smallest volume of teachers' words in Guangzhou and 1678 in Hong Kong.

Given this variation in the *volume* of teacher talk, from lesson to lesson, it must be suspected that the figures for lexical variation which the authors produce will be

sensitive to length since they are essentially type/ token ratio calculations. The comparison of one teacher with another and one class with another in this paper is suspect therefore. Nonetheless, the idea of using measures of lexical richness and lexical sophistication to gain an insight into the nature and the appropriateness for learning of the classroom environment is a good one which probably bears replication with rather more sophisticated testing measure which will be less sensitive to length.

Finally, the paper is highly detailed in the way it handles the individual words being taught in each class and the way these are treated and repeated in class. While this might be seen as a virtue, it means that the application of its conclusions to other contexts is difficult. It is difficult to generalise whether either teacher provides a good model of the vocabulary exposure that can expedite learning in the absence of figures for the lexical uptake that the learners gain from their classes, and in the absence of baseline figures to indicate what their level of knowledge was at the outset of the class. These are considerations which also suggest possible methodologies for use in this dissertation.

Chapter 3

Approaches and methods in language teaching

3.1 Introduction

In time, scholars have been formulating different theories on languages – what a language is and how it is learned. These many, and at times opposing, views have given birth to a range of different approaches and methods to language teaching. I will divide this chapter into two parts. The first part reviews the history of the major trends in language teaching across time; while the second part sets the background to the data that have been collected for the present research. It will offer an insight of the Education System in Italy and look at the changes in the Italian legislation that allowed the teaching of the foreign languages to become a priority in the political agenda, for the primary sector.

3.1.1 What constitutes best practice in teaching a foreign language?

The issue of whether there is an overall better way of teaching a foreign language is a question that has interested methodologists for a long time and has somehow intrigued all of us who have been involved with the study and the teaching of a foreign language. In the 1960s, classroom research focused, in particular, on issues of interest to teacher training and which tried to determine what exactly constituted effective teaching (Allwright and Bailey, 1991). Results of a number of longitudinal studies (Scherer and Wertheimer, 1964; Smith, 1970, report of the Pennsylvania Project), that compared the linguistic proficiency gained by learners instructed by means of the audio-lingual method and the traditional grammar-translation method, proved inconclusive.

Politzer suggested that "the very high complexity of the teaching process makes it very difficult to talk in absolute terms about *good* and *bad* teaching devices" (1970: 43). Therefore, *learning* started to be intended not just as the product of a specific methodology but rather as the outcome of a combination of input and *multi-directional* interaction - that occurred between teacher and learner, learner and teacher, learner and learner. The interests of researchers gradually moved

away from a strictly pedagogical aim and towards an in-depth analysis of the classroom environment (see chapter 2, for a review of studies on teachers' input and classroom interaction).

We do have some, general data, however, suggesting what is normal practice in Europe as to the amount of teaching that is devoted to a foreign language in school. According to data collected at the EU 2005 summit in Barcelona (report published by Eurydice, 2005) 95% of pupils in Europe acquire a foreign language through formal instruction and for the majority of them the classroom environment represents the main source of exposure to the language. It is commonly argued, though, that this is not often the case for a *global* language like English, which is widely available, particularly for the younger generations, in computer games, songs as well as in the culture of fast food. This is certainly true. None the less, whether exposure to isolated lexical items (i.e. *hamburger*, *start*, *exit*) and more often than not grammatically incorrect song lyrics (i.e. *wanna*, *gonna, she do/don't*) encourages the acquisition of a foreign language is something for future research to investigate.

On average 10% to 15% of the school week, in Europe, is assigned to the study of languages – with a range of 2 to 5-6 hours per week, in Luxembourg (Eurydice Report, European Commission, 2005). In Spain, 90% of primary school children acquire at least one foreign language while in Italy there is a substantial difference between 3rd, 4th, 5th graders and 1st and 2nd graders – 86% and 29%, respectively (Eurydice Report, European Commission, 2005).

It is reasonable to believe that the way in which these children are taught today finds its roots in what we have learned of the many theories and language teaching methodologies that were generated in the past fifty years or so. The studies that constitute the present research employ an essentially communicative, content-based approach with some focus on form activities. This kind of methodology is widely in use today, particularly in syllabus-restricted school environments, where the targets set by the National Curriculum as well as time restrictions leave little space to teachers' degree of instrumental autonomy and methodological freedom (Cameron, 2001; Tang and Nesi, 2003). Nevertheless, although Government

schools have been subject, for a long time, to strict performance standards (indeed so in Italy, where private schools represent a mere *second choice* for students who have failed in the main stream schools) the children of ten, fifteen, twenty years ago used to be taught a foreign language in a substantially different manner.
The present chapter aims to offer a mainly historical description of the variety of approaches and methods that influenced the teaching of second and foreign languages, in the last decades, with some references to a number of substantial empirical studies.

3.2 Major trends in language teaching

Interest in languages, and language teaching, dates back a long time. Around four thousand B.C., people in the region of Mesopotamia – the Sumerians – created the world's oldest written language and through the compilation of the first dictionaries offered a first example of lexicographical research (Cangiá, 1998). Many years later, it was common habit among the noble families in Ancient Rome to educate their children in bilingual environments (Latin – Greek). The youth would learn through *direct method*, thanks to the employment of a preceptor (tutor), native speaker of the TL (Titone, 1986). Within the Roman state, Latin was the language of public administration as well as of religion, but it also provided a tool for communication between people whose first language was often another tongue. In Medieval Ages Latin was still the most widely studied foreign language in the Western world.

The formal teaching of languages only dates back a few centuries (Titone, 1986). Due to social and political changes, in the sixteen century, French, English and Italian became the main languages in Europe and the use of Latin became restricted to the teaching of grammar, in formal school environments. Since then, and until the late nineteenth century, the methods in use for the teaching of the classical languages – abstract grammar rules, endless lists of vocabulary to memorize, built-to-art sentences to translate of the type, "Thou hast a book. [...] The horse of the father was kind." (Titone, 1968: 27) - were taken as an example of *good practice* for the teaching of modern languages. This method became known as the Grammar-Translation Method.

3.2.1 The Grammar-Translation Method

The *golden years* of the Grammar-Translation Method go from the 1840s to the 1940s (Richards & Rodgers, 1986). This method was also called the *Classical Method* as it was first used in the teaching of Latin and Greek. The theoretical principles behind, identify the knowledge of grammar as the end rather than a means for the acquisition of a foreign language. Hence, reading and writing are considered primary skills, while little if not any importance at all is given to listening and speaking. The impact of teacher's talk on the learners' degree of proficiency in the foreign language is not yet a matter of investigation. Nevertheless, despite its numerous faults, the Grammar-Translation Method is still widely used today in situations where understanding of literary texts is the main focus in the study of the foreign language.

By the end of the nineteenth century, Western Europe had moved through profound political, social and economic changes. On the one hand, the growth of the middle classes had changed the rules of landed aristocracy and gentry; on the other, the increased opportunities for communication contributed to spread new optimism and enthusiasm. Indeed, among linguists and educators, this *mood of the ages* translated into a stronger need for speaking and oral proficiency in the foreign language (Titone, 1968). The first weak attempts to start a *linguistic revolution* were made by Marcel (1793-1896) and Gouin (1831-1896) in France, and by Prendergast (1806-1886) in Britain. Marcel proposed to take as an example of *best practice* for the learning of a foreign language, children's acquisition of their L1. Prendergast analyzed the use that children make of contextualized stimuli for oral comprehension and of memorized chunks of language for supporting their speaking. Finally, Gouin, through the observation of his own son's linguistic behaviour, designed a method for the acquisition of the foreign language that focuses on the use of the TL in accompanying actions (Marcel, Gouin and Prendergast, cited in Richards & Rodgers, 1986).

3.2.2 The Reform Movement

The Reform movement was born when these views could finally be put into a sound theoretical frame and one based on a scientific approach to the analysis of language and language learning (Richards & Rodgers, 1986). Scholars like Sweet

(1845-1912), in England, Viëtor (1850-1918), in Germany and Passy (1859-1940), in France, who became the charismatic leaders of a radical change in linguistics and in language teaching (Howatt, 1984). It was thanks to the *Reform Movement* that *speech* – rather than the written word – became an essential component of language instruction. The discipline of Phonetics was thus established and the *International Phonetic Alphabet* (IPA) was produced (Richards & Rodgers, 1986).

3.2.3 The Direct Method

The Direct Method is the best known of the many *natural* or *oral* methods that appeared in the late nineteenth century. It is based on the importance of sounds and spoken communication. Classroom instruction is conducted entirely in the TL. Grammar is taught inductively, while everyday vocabulary becomes an important focus of attention in the lesson format. Research conducted in those years proved the Direct Method to be very successful in environments where students were strongly self-motivated, but it also revealed some important weaknesses - it is a method based on procedures that are difficult to apply in a typical classroom environment (Howatt, 1984). Also, it requires the teachers to have a very high level of proficiency in the foreign language, particularly in speaking and in phonetic accuracy. The degree of accuracy as well as the *amount* of FL input, offered by the teacher in class, becomes a major issue in Direct Method (Brown, 1973: 5). Nevertheless, although topics for the oral communication are introduced here following a careful graded progression, such progression is still strongly influenced by syntactic rather than lexical elements.

3.2.4 The Oral approach and the Situational Language Teaching

In the 1920s and 1930s, while in the United States was emerging the need to develop a teaching method that could enhance students' reading skills, in Britain, Michael West was stressing the importance of vocabulary:

> The primary thing in learning a language is the acquisition of vocabulary [...] The problem is *what* vocabulary; and none of these 'modern textbooks in common use in English schools' have attempted to solve the problem. (West, 1930: 514.)

In the meantime, Thorndike's word-frequency list (Thorndike and Lorge, 1944) and later West's *A General Service List of English Words* (West, 1953)

represented a turning-point in the central role that teaching methods assumed within applied linguistics.

Palmer (1940) and Hornby (1950) structured the so called Situational Language Teaching Movement, which became influential not only in Britain but also in Southern Europe. Despite the many similarities with the Direct Method – communication occurring in the TL; implementation of useful and everyday vocabulary; importance of linguistic and cultural context - the Oral Method and the Situational Language Teaching were based on a more articulated and sound linguistic theory. Speaking was intended as the starting point in language learning and structure was viewed as the means through which speaking ability would take shape; therefore, teaching procedures focused on the practice of basic structures in meaningful situation-based activities. The pace of learning as well as the *selection, gradation* and *presentation* (Richards and Rogers, 1986) of the lexical and morphological elements of the language became fundamental principles of the Situational Language Teaching.

Structural linguistics was the theory beyond another type of Oral/ Aural-Oral Approach, which developed in America - independently from its British *sibling* - during the years of World War II. Charles Fries (1945) was the father of the American Oral Approach, which shaped its teaching principles around two main ideas:

- *Deconstructing* the language into basic sentence patterns and grammatical structures;
- Oral-drilling practice as means for acquisition. This, together with the novelty of the *stimulus-response* theories introduced by the behaviourist Skinner, gave birth to the Audiolingual Method, so named by Brooks (1968).

A study by Scherer and Wertheimer (1964) investigated the progress in German as a foreign language of different group of college students, instructed by means of the grammar-translation method and the audiolingual approach. They concluded that areas of proficiency of learners were strictly related to the type of method

employed. That is, students in the traditional group performed better in reading and writing, while students involved in audiolingual instruction showed more advanced listening and speaking skills.

The emergence of new approaches and methodologies to language teaching often reflected the changes and moods that happened in society. Historically, the 1960s were a time of great revolution, in the scientific, the social as well as the political world. In 1961, Yuri Gagarin was the first man in space; in 1965, Russia and America signed an international agreement to stop their experiments on nuclear weapons; the Treaty of Rome (1957), established the European Economic Community (EEC), which soon led the way to the European Union (EU) and to the *widening* of the strictly national borders; the II Vatican Council, with Pope John XXIII, brought radical changes into the rigid structure of the Roman Catholic Church – Latin, for example, disappeared from the liturgy and was replaced by the use of the national languages. Society, in general, was therefore *de-structuralized*, in the name of dialogue between the peoples and communication.

The same happened in linguistics. Communicative proficiency – rather than a mechanical mastery of structures - became the focus of attention in language teaching. The *International Association of Applied Linguistics* was founded in 1963. By promoting conferences, publishing monographs and spreading ideas, it finally placed the teaching of modern languages as a priority in the political agenda.

3.2.5 Communicative Language Teaching

The teaching method that claimed the superiority of fluency over accuracy became known as the Communicative Approach or the Notional-Functional Approach. The syllabi based on communicative language teaching give absolute priority to the conveying of meanings. Mistakes are tolerated as far as they do not hinder comprehension; fluency together with an adequate pronunciation are paramount; contextualization is important as well as a situational use of the target language. Translations of word-items or semantic units into and/or from the mother tongue are accepted, for the sake of the re-creation in class of a realistic communicative

environment. To summarise, the communicative approach aims at communicative competence by means of a great degree of flexibility in the procedures it adopts.

3.2.6 The Natural Approach

The Natural Approach can be addressed as the least *revolutionary* of all methods, in the sense that it was not born out of contrast with the other theories but rather out of selection and reinforcement of some good ideas that had already been in use in the past. Krashen and Terrell (1983) started from observing how learners acquire both their mother tongue as well as a second language in non-formal settings. They deduced that *communication* must remain the major focus of attention; that it should occur in an as-natural-as-possible environment – where the level of anxiety caused by the artificial setting of the class is minimized - and that input in the TL is essential, if interesting and relevant. In the definition of *input* comes in the true novelty of this language theory, Krashen's Input Hypothesis (1985), according to which language is acquired when input is embodied in an interesting and relevant context, it is comprehensible and slightly above the learners' current level of proficiency (i + 1 hypothesis). Also, Krashen stresses the strong correlation between maintaining a natural and positive attitude towards learning and the degree of acquisition. He thus indicates reading for pleasure as an excellent example of comprehensible input.

Studies that compared the applicability of different methods to the microcosm of the language classroom tried to evaluate degrees of success of learners in a variety of instructional settings. Palmer (1979) investigated the differences in proficiency levels of learners taught with the grammar-translation method or with the communicative method. No significant differences between the two groups were found. Hammond (1988) focused on accuracy of linguistic structures of two groups of university students instructed by means of the traditional (grammar-translation) method and Krashen's Natural Approach, respectively. The study showed that students in the communicative classroom could master their knowledge of grammar as well as their traditionally taught peers.

To conclude, studies which compared characteristics and strengths of the different teaching methods in order to establish which of them produced more effective

results in terms of learners' proficiency in the foreign language, failed to prove one generally more successful than the others, with the only exception of Asher's Total Physical Response Method (TPR) (see Ellis, 1994a for a review of studies on TPR).

3.2.7 The present

In recent years, lexicographical research has dramatically changed the way we analyze languages and consequently the way we approach language teaching. Corpus linguistics and computational analysis threw new questions on what vocabulary is, on what grammar is and how they relate to each other. The idea that languages might be made of more complex semantic units (*chunks* of language) rather than isolated lexical or syntactic items became more evident thanks to the work, among others, of Sinclair (1987, 1991) and Lewis (1993: 149), who challenged the traditional dichotomy between grammar and lexis and viewed language as consisting of "grammaticalized lexis, not lexicalized grammar".

Unfortunately, this area of research is still relatively new. While there is quite a substantial amount of studies based on computational analysis and corpus linguistics that focus on the English language, there is a lack of research tools and materials applicable to other European languages such as French, Spanish and Italian. Therefore, I believe there is an urgent need to create a solid structure of experimental studies in this area of research, before new pedagogical directions can be drawn from it and can find application in the contemporary language classroom.

3.3 The school system in Italy

The Republic of San Marino is located within the Italian territory, in a region close to the Apennine Mountains, to the West and to the Mediterranean Sea, to the East. It has a resident population of approximately 30,000 and it is the oldest constitutional republic in the world and a fully independent and autonomous country. With its own parliament and national mint, a distinct passport as well as the right to be represented in the Olympic Games, one might think that San Marino's only link to Italy is the language. In fact, there is a lot more than that. An important similarity between the two countries lays, for example, in the education

system. While Italy leads the way in the introduction of important changes in legislation, the Republic of San Marino – mainly due to the size of the population and to lighter bureaucratic procedures - is able to guarantee its Government schools a greater degree of autonomy. This factor – together, indeed, with the teacher's willingness to use it – can lead a long way in the teaching of foreign languages. A study by Tang and Nesi (2003) - dealt with in chapter 2 - suggests that strict syllabus guidelines may lead to the creation of poor lexical environments, while teachers who are allowed a degree of instrumental autonomy and methodological freedom may produce lexically richer output, thus enhancing the learners' chances of implicit vocabulary acquisition.

In the light of the points raised above as well as in consideration of the fact that the data collected for our research come from a non-native teacher of English, in Italy, and a native teacher, in San Marino, it is reasonable to expect that the lexical environment to which learners are exposed to by the latter is richer and more stimulating than the output produced by the former (chapters 4 and 5).

As summarized in table 3.1, children from San Marin as well as Italian children can attend nursery from the age of three, for three years. They start compulsory education at the age of six and continue for ten years. Primary education lasts for a total of five academic years and it is split into two basic units - unit 1 is made of the initial two years (very few schools introduce the teaching of a foreign language at this early stage), unit 2 follows for the next three years. At the age of eleven, children enter middle schools. From fourteen to eighteen they attend secondary education and around 60% of secondary school graduates will eventually enrol at university.

Table 3.1: Educational system in Italy and in the Republic of San Marino

Education in Italy/ Republic of San Marino		
Nursery (not compulsory)	year/grade 1, 2 and 3	from age 3 to 5/6
Primary School (beginning of compulsory education)	**UNIT 1 year/grade 1 and 2**	**from age 6 to 7/8**
	UNIT 2 year/grade 3, 4 and 5	**from age 8 to 10/11**
Middle School	year/grade 1, 2 and 3	from age 11 to 13/14
High School	year/grade 1 and 2	from age 14 to 15/16 (end of compulsory education)
	year/grade 3, 4 and 5	from age 16 to 18/19 (A-Levels)
University	Duration according to type of degree	-

3.3.1 Legislation in Italy and San Marino – a turning point for FL teaching in the primary sector.

Traditionally, the only foreign languages taught in the Italian schools were Latin and French. They were first introduced half-way through Middle school and the methodology adopted in class followed a grammar-translation approach. Accuracy was still the focus of attention, while no emphasis was given to communicative competence.

In 1950s, while in Britain Michael West was working on word-frequency lists (West, 1953) and in America behaviourism was setting the theoretical frame for the development of the Oral Approaches, Italy's recovery from the devastating years of the world war was progressing steadily but slowly. Then, issues such as the development of public housing, the extent duration of compulsory education, the spread of a national language and the construction of a national identity were priorities in the political agenda.

The teaching of foreign languages was not yet a matter of discussion by the Ministry of Education, neither is it mentioned in the compilation of the National Curriculum. Its application in the language classroom is left to the creativity and personal interest of few enthusiasts as well as to the organization of sporadic and isolated linguistic events by individual schools.

Nevertheless, the end of the 1950s represents a turning point in the history of language teaching in Italy. 1957 was established by Titone (1978) as the year when the teaching of a foreign language finally gained the status of a scientific discipline. Since then, an increasing number of teachers' associations were formed; the need for systematic linguistic publications was felt and the first experimental linguistic research projects took place in primary education.

ILSSE was the first scientific experimental project that focused on the implications of the teaching of a foreign language in the primary sector. It took place in 1978 and was carried out in a sample of Italian cities, namely, Turin, Milan and Rome. It used a notional-functional approach to the language teaching and therefore encouraged fluency and communication skills. The outcomes of this research indicated, a) the urgent need to improve teachers' linguistic skills in the target language; b) the need for teacher training courses, in order to enhance the use of methodological skills in the classroom.

The next revolutionary step – brought forwards by the Ministerial Decree, 12th February 1985, no. 104 – was the new National Curriculum for Primary Schools. In Italy as well as in the Republic of San Marino, a foreign language was then introduced as compulsory for all primary school children from the age of 8 (grade 3). The methodology used in the teaching followed the guidelines of the communicative approach, with particular focus on self-contained content-related topics as well as an emphasis on receptive – rather than productive – knowledge.

Since 1985, a lively research activity, as well as substantial international research projects (i.e. *Lingua 2000*), force continuous further changes in the specifications of the National Curriculum for Modern Languages. The Italian national television (RAI) became a front-line supporter of the development of the English language to households and schools. It launched an educational television channel for children, called *Il Divertinglese*, which - by means of cross-linguistic conversation patterns (Italian-English-Italian, in the case of programs like *Tracy and Polpetta*) among the characters involved in the stories - aimed at exposing the children to a great amount of vocabulary in the TL as well as at creating a natural environment, where

the level of anxiety present in the artificial setting of the classroom - mainly caused by peer pressure (Bailey, 1983) or difficulty in communication (Horwitz and Young, 1991) - is likely to be reduced and where the chances for incidental acquisition may, thus, be enhanced.

Only in 2003, was English introduced in all primary schools in Italy as well as in San Marino from the first year of compulsory education. Children of six and seven years of age learn to familiarize with the sounds of the foreign language. The emphasis is mostly on oral skills – both receptive (listening) and productive (speaking). Some use of CALL is recommended.

In the last few years, the teaching of modern languages at primary level has revolved around a major point of discussion - that is whether the foreign language should be taught by a qualified speaker of the language in question (*specialist*) or rather by a qualified primary teacher, with no specific linguistic knowledge (*specialized*). The latter will be expected to attend immersion courses of 100 to 500 hours and will finally teach the foreign language together with other subjects, like maths, Italian, history, etc., in the same school. The former, on the other hand, will be employed in a number of different schools, in order to make up a weekly timetable, and will remain somehow *external* to the life of the school itself - although she may be expected to work and collaborate with teachers of other subject areas by means of a number of cross-curricular activities.

In 2005, the Ministry of Education establishes that language teaching positions in the primary sector will have to be covered, in the first instance, by members of staff within each school. Should there be no subject-matter teachers with suitable qualifications in the foreign language, then places with be assigned to *specialist* teachers.

3.3.2 The data – where do they come from and how typical are they of foreign language teaching in the Italian low-level class, today?

Data for the present research were collected from two primary school teachers. Teacher A is a specialist, native speaker of American English. She has taught at low-level classes for more than thirty years and adopts a mainly communicative

approach with some explicit teaching of vocabulary and use of focus on form activities. Teacher B, at the time of data collection, fell in the category of specialized teachers (primary school teachers with no or little knowledge of the foreign language, prior to the attendance of intensive courses). Nevertheless, due to her qualifications both as a primary teacher as well as a graduate in Modern Languages, she had earlier also worked as a specialist. She could offer, therefore, the best of the two worlds. For both, the duration of each lesson-unit is of approximately 50 minutes. In one complete academic year the learners will receive a total of approximately 55 hour-exposure to the foreign language. The methodology employed by teacher B has elements of the *Oral approach* and *Situational Language Teaching* (for example, a substantial use of the target language, emphasis on speaking and focus on accuracy. For a more in-depth analysis of the Oral approach, see section 3.2.4 in this chapter). Her classes are typically grammar-led, with some focus on communicative activities, such as role-plays, games and songs. The teaching point is generally a grammatical structure (i.e. third person singular: *–s*, present progressive: conjugated form for *auxiliary* followed by *–ing*) that emphasizes accuracy, rather than fluency, both on the teacher's side and on the learners'. She tends to stress morphemes, or parts of words or sentences that she expects the pupils to notice, to such an extent that she risks, at times, to compromise the production of a native-like pronunciation. The effects of this focus on accuracy on the learners are very obvious from listening to the tape-recordings; the pupils in teacher B's classroom setting sound more *disciplined* and, indeed, quieter than the children in teacher A's class (see chapter 8 for a discussion on this point). Also, while Teacher A includes class-activities that use a TFR (total physical response) approach - as shown in table 3.2 - (children are asked, for example, to mime actions, make animals' noises, prepare a Halloween pumpkin, act out a story), teacher B typically adopts a more static approach to learning and teaching. Pupils typically sit at their desks, sing, and point at parts of the body or at objects in the classroom, without leaving their chairs.

Table 3.2: Classroom organization implemented by teacher A and teacher B

	Teacher A	Teacher B
Vocabulary introduced in class	Typically organized by *semantic-content* fields (numbers, animals, school, etc.) + songs and games	Typically organized by *semantic-content* fields (numbers, animals, school, etc.) + songs and games
Methodology adopted in class	Communicative approach + focus on form activities Emphasis on comprehension	Focus on accuracy Emphasis on production
Type of instructional setting	Lively activities with elements of TFR method ↓ Some difficulties in capturing teacher's voice for transcriptions Mixture of teacher-directed activities and individual work	Static, disciplined ↓ No difficulties in capturing teacher's voice for transcriptions Mixture of teacher-directed activities and individual work
Separation of languages	Class held mostly in the target language Pupils typically interact in both languages	Class held mostly in the target language Pupils are expected to interact in the FL
Duration of class-unit	approx. 50 minutes	approx. 50 minutes
Hours of FL instruction per school year	55	55

Both settings offered a balance between teacher-directed activities and individual work. Teacher B sets clear boundaries in the use of the two languages (English and Italian) in class – she often reminds the children not to interact in the native tongue. When pupils get distracted or too noisy, she interrupts the lesson and starts speaking in Italian. She will switch back to the foreign language once the children show their interest to resume the class. Teacher A does not seem to keep such clear boundaries between the two languages – children are encouraged to answer as well as to deal with tasks in the target language, nevertheless, they are also allowed to interact and collaborate with peers and to exchange ideas and comments on the activities they are involved in, by means of their native tongue. Despite the degree of autonomy pupils are allowed to, lessons are carefully planned and delivered and clear instructions are given.

As mentioned in chapter 2, a longitudinal study by Wong-Fillmore (1985) that investigates the relationship between different types of teaching practices and instructional settings on language learning in American schools suggests that

lesson-formats as well as types of teacher talk that seem to work well for young learners' acquisition of a second language show, among others, the following characteristics:

Table 3.3: Characteristics of teacher talk that seem to encourage learners' acquisition of second language (Wong-Fillmore, 1985: 44)

- clear physical boundaries and separation of languages
- clear instructions and lesson phases clearly marked
- focus on communication
- richness of lexical input produced by the teacher
- going beyond books
- playfulness

I find that data from teachers A and B are very *not-typical* of the general background in Italy and San Marino, in their own ways. Teacher A is not only a native speaker of the target language she also has a degree in Modern Foreign Languages as well as many years experience in the primary sector. She has an interest for research and runs teacher training courses on a regular basis. Teacher B is an experienced primary school teacher with a degree in English. They can offer the best of the two worlds.

Course books

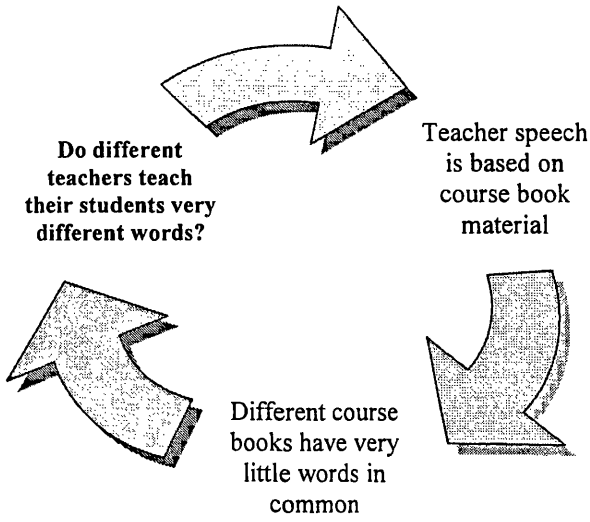
The speech teachers produce in the foreign language classroom is often, in Italian primary schools, the only source of exposure learners receive in the target language. Nevertheless, teacher speech is different from spontaneous speech in a number of ways (Ellis, 1994a). It is accurately planned in advance, it reflects the interests, the age and the stages of development of the children it is addressed to, it covers specific semantic areas and, indeed, it follows the guidelines of the National Curriculum and of the year-syllabus. In other words, teacher speech finds its roots in the material contained in the course book and it is, to some extent, guided by it.

In the light of the above, it could be argued that an accurate analysis of classrooms as lexical environments will aim at qualifying both types of sources of learners' exposure to the foreign language - the words uttered by teachers, as well as the language contained in course books.

It would be reasonable to expect that course books addressed to teachers who deal with learners of equivalent age groups, same level of proficiency as well as the same National Curriculum (hence, similar syllabus guidelines) also comprise similar amount and range of vocabulary. But the literature seems to suggest that course books addressed to learners of similar proficiency levels actually introduce a rather diverse range of lexical items. Milton and Benn (1933) calculated only 19 words being common to 30 first-year courses of French as a FL. Vassiliu (2001) found that three course books of EFL, for Greek young learners, shared less than 30% of the cumulative number of lemmas they contained. Therefore, what may appear to be a logical assumption - that learners of similar age and proficiency level are taught a similar vocabulary – is, in fact, not supported by empirical data.

According to mathematical rules, if $a = b$ and $b = c$, then $a = c$. Therefore, for the same transitive property of equality, if teacher speech is based on course-book material, and different course books have been proven to have very little vocabulary in common, then it becomes reasonable to suggest that teacher speech varies a great deal from one teacher to another and the foreign language vocabulary that different teachers produce in class may have very little word-items in common (as illustrated in Diagram 3.4) despite the fact it is addressed to learners of similar age and levels of proficiency. This is one of the objectives of the present research, qualifying teacher speech, in the attempt to highlight differences, similarities and, indeed, characteristics of individual teachers.

Diagram 3.4: Diagram illustrating the relationship between teacher speech and course book material in use in the classroom.



Course books in use with teacher A are *semantic-content* material, typically organized by topics of discussion (i.e. *all about me*, *hobbies*, *home*, *animals and pets*, *numbers*). They are divided into units, which contain a similar range of activities, like *singing*, *making* things, *role-playing* – mostly in the form of pair-work, on questions and answers. Finally each of the units includes a *cultural* section, where the child is encouraged to familiarize with aspects of the foreign culture (i.e. Halloween, Mother's Day, Easter bunnies).

An important element of continuity throughout the book are the characters (either a group of animals or children of similar age to the learners, fairies and elves or superheroes) which *reassure* and accompany the child in her journey through learning as well as in his adventures in the *foreign world.* In the stories or in the cultural sections in the books vocabulary is organized by thematic clusters - that is words are grouped with reference to a situation or by following a plot. A study by Tinkham (1997) suggests that words organized by *thematic clusters* may be easier to memorize by learners than words organized by *semantic* fields.

A large proportion of the teaching material available today and addressed to young learners seems to share the structural characteristics listed above. Besides, most course books take a holistic approach to the child, thus aiming not only at the acquisition of the foreign language but also at developing his cognitive abilities, cultural awareness as well as at enhancing the child's confidence in the learning process.

The course books we analyzed in the present research move from an initial emphasis on listening activities and receptive knowledge to the introduction of more substantial written texts. Unfortunately, no indication is given of the criteria adopted for the selection of vocabulary. Also, no indications were found in the National Curriculum with reference to the number of words that children are expected to acquire during the five years of primary education. The only material available, of this type, consists of wordlists (i.e. *The Maestra Marchigiana Wordlist* – available from the Internet, at the following address, http://www.crtpesaro.altervista.org/Materiali/Materiali%20Didattici/The%20Maestra%20Marchigiana's%20Wordlist.php) that make up the total vocabulary that specialized teachers, enrolled for immersion courses of EFL, are expected to acquire.

Despite no focus being placed in the Italian National Curriculum on the amount of vocabulary to be taught in the low-level class, research, calculations of lexical coverage offer good indications of the number of words that should be learned in order to function in a variety of written or spoken discourse. Adolphs and Schmitt (2004) suggested that the most frequent 2,000 word families in English give a coverage of around 95%, in spoken discourse. The consensus is that the general frequency of words in the language is an indication of the degree of *usefulness* of such words. Therefore, it could be argued that they should also be among the first few words we may want to teach our learners.

To conclude, the teaching of foreign languages in primary schools in Italy, today, is mainly focused on the teaching of English, which became only recently compulsory from the age of six (first year of primary education). New Ministerial Decrees and regulations contributed to fast changes in education. During our first

year of data collection, children were introduced to the study of a FL at the age of eight (grade 3 of primary) and they received an overall exposure to the language of approximately 55 hours per academic year. Since 2006, children in grade 1 (aged six) learn a language for 33 hours per year (1 contact-hour per week), children in grades 2 and 3 are allocated 2 and a half hours of FL a week and children in grades 4 and 5 receive 3-hour exposure per week, for a total of 396 hours of English language teaching during the five years of primary education. A substantially different figure from the 165 (in San Marino) to the 247 (in Italy) hours of foreign language instruction that subjects involved in the present research will have received by the time they leave primary education (as shown in tables 3.5 and 3.6).

Table 3.5. Hours of foreign language instruction, at primary level, received by subjects involved in our experiments.

	Hours per week	**Hours per school year**	**Total hours of exposure to the FL in primary education**
Year 1 (children aged six)	Learning a foreign language at six is not yet compulsory	-	165** (247.5*)
Year 2 (children aged seven)	Learning a foreign language at seven is not yet compulsory	-	
Year 3, 4 & 5 (children aged eight, nine and ten)	2** (3*) fifty-minute sessions per grade	55** (82,5*) per grade	

* These data refer to the number of hours of formal instruction in Italy.
** These data refer to the number of hours of formal instruction in San Marino.

Table 3.6. Hours of foreign language instruction, at primary level, in Italy and San Marino, since 2006.

	Hours per week	**Hours per school year**	**Total hours of exposure to the FL in primary education**
Year 1 (children aged six)	2 (1*)	66 (33*)	330 (396*)
Year 2 & 3 (children aged seven and eight)	2 (2.5*) each grade	66 (82.5*) per grade	
Year 4 & 5 (children aged nine and ten)	2 (3*) per grade	66 (99*) per grade	

* These data refer to the number of hours of formal instruction in Italy.

Major changes that are put in place in a short period of time often cause a great deal of distress and organizational problems. This is, I believe, the panorama in Italy at present. The *typical* foreign language teacher of a few years ago was either a qualified linguist (*specialist*) or a qualified educationalist (*specialized*). Today, the large majority of language teaching positions in the primary sector are allocated by law to members of staff already employed by individual schools, who are willing to learn a foreign language in immersion courses of the duration of approximately 380 hours. Whether this is a successful methodology, one that grants the learners a good level of proficiency in the foreign language, is an issue that will be initially addressed in the present research but which requires the implementation of larger scale longitudinal studies in order to be fully investigated.

Chapter 4

Experiment 1

The English children hear in class in primary schools in Italy. A case study

A replication of Meara, Lightbown and Halter (1997)

4.1 Introduction

Learning takes place through experiences that are stored in the brain (Aitchison, 2003). Therefore, it could be argued that we most likely learn to love if we are loved, to abuse if we have been abused, to enjoy reading if we are read to when young and, maybe, to speak a foreign language if we are spoken to. A number of linguists (among others, Krashen, 1985, 1989; Ellis, 1994a) share this view and believe that language acquisition can take place only if and when learners can gain access to input in the target language.

On the other hand, things are not as straightforward as they may appear. Corder (1967: 165) has in fact reminded us of the difference between *food* and *nutriment*. By *food* it is intended the amount of items available for us to eat, while *nutriment* is the food we actually *take in* and which contributes to our physical growth, health and general well-being. Therefore, *input*, says Corder (1967) is not what is *available* for going in but rather *what goes in*, what gets noticed - *labelled*, *packaged* and *networked* (Aitchison, 2003) - in the learner's mental lexicon, in the process of becoming fully acquired.

A number of linguistic theories and experimental studies focused on the relationship between *input* and *uptake* (see chapter 1). Krashen (1985, 1989) stressed the importance of comprehensible input; while Long (1980) identified *negotiation* and *interaction* as the gateway to acquisition. Swain (1985) saw in *comprehensible output* the key factor towards language proficiency. Ellis and his colleagues (Ellis, 1995; Ellis, Tanaka and Yamazaki, 1995; Ellis and He, 1999) have investigated the correlations between different types of language teaching strategies and vocabulary learning, while, in an interesting experiment Henzl (1973) analysed the speech

produced by native speakers and directed to native as well as to non-native speakers. Often these studies have analysed sections of the classroom environment, but nothing or little is known on the vocabulary that is actually available in the classroom.

As dealt with extensively in chapter 3, throughout history a variety of approaches and methods in language teaching have reflected changes in theories of the nature of language and language learning. We moved from the Grammar-Translation Method that mainly focused on the study of grammar and lists of translation equivalents to the Direct Method which encouraged classroom instruction to be conducted entirely in the TL that caused great difficulties for the least self-motivated students (Howatt, 1984).

Things have changed since then. Language classes are now very pleasant environments that take a holistic approach to the child. The teacher and the course books she uses in class aim not only at the acquisition of the foreign language but also at developing the child's cognitive abilities, cultural awareness as well as at enhancing his confidence in the learning process.

On the other hand, despite the numerous methodological attempts to adjust today's language teaching and assessment criteria to the needs of a more globalized society (for example, *Common European Framework of Reference for Languages*), very little is known of the actual exposure, to the target language, that learners receive in class. What is the vocabulary *available* in the classroom? Is the language rigidly controlled to match the learners' level or meet the demands of a syllabus? Is the vocabulary addressed to less proficient students easier than the vocabulary directed to their more advanced peers? These are some of the questions, which we have looked into, in the present study.

4.2 Aims and objectives

The present investigation is, partly, a replication of the study by Meara, Lightbown and Halter (1997) – dealt with in chapter 2, section 2.9.1. It also extends the analysis of the data in order to allow a link with the experimental studies dealt with further on in this thesis. It aims at qualifying the lexical environment of the low-level foreign language class in Italian primary schools.

The data were collected from a single teacher (teacher B), a native speaker of Italian, specialized in the teaching of young learners and with a degree in English (*Lingue e Letterature Straniere Moderne*). We cannot consider teacher B as a typical teacher within the general background of the Italian primary sector of the last few years as she holds qualifications both as an educationalist (being qualified for teaching at primary level) and as a linguist (being graduated in the foreign language she teaches). Typically teachers at primary level would be either qualified educationalists (*specialized*) or linguists (*specialist*). On the other hand, teacher B can offer the children a broader range of skills – the competence in dealing with children of a young age, as well as the linguistic skills to confidently interact in the target language. Although reassuring for the school system, in fact, this may not be an ideal situation for research, as the more atypical or *unusual* the data collected, the less representative they are of a more generalized situation, throughout the country. As a matter of fact, the scarce amount of experimental studies that focus on real classroom data gives us an idea of how difficult and time consuming it may be to collect and process material of this kind. Teachers may be reluctant to collaborate with research projects that may be seen as *intrusive* and which may at times disrupt the natural flow of the language class. Besides, bureaucratic procedures as well as laws on child protection make it extremely hard nowadays for individual researchers to enter school environments for observational purposes. Problems get bigger, still, if one aims at recording classes or testing the learners.

Objectives of the present study:

1. To qualify the vocabulary, in the FL, available to learners of different proficiency levels. The questions addressed will be the following:

    - How much vocabulary is available to children of different proficiency levels?
    - Are more proficient students exposed to a wider range of vocabulary, in class?
    - What proportion of the vocabulary available in class is made of words less frequent (*unusual*) in general English?

2. To compare the FL exposure received by the subjects in this study with the findings in the study by Meara, Lightbown and Halter (1997).

4.3 Education in Italy

As mentioned in chapter 3 (section 3.3), in 2005 only 29% of first and second graders, in Italy – children aged six and seven, respectively - were involved in the study of a foreign language (EU Summit report published by Eurydice, 2005) while children of eight, nine and ten years of age received about 250 hours of foreign language instruction by the end of primary education.

The duration of the classes is of approximately 50 minutes. On average, two sessions per week are scheduled for the teaching of the foreign language. In a small proportion of schools more than one FL is taught. The methodology used in class typically varies from teacher to teacher and depending on the text-book used in the course. At the same time, children are often involved in a number of activities that range from songs and rhymes to working in pairs, drawing and labelling as well as cross-curricular activities. The National Curriculum encourages a holistic approach to the child, one that combines the teaching of the foreign language with activities that involve a variety of subject-matters (for example, school subjects like maths or geography are, often, taught, in part, through the medium of English) cognitive abilities and personal skills.

It is important to notice that for children in grades 1 and 2 of primary school, the study of a FL was not compulsory at the time we collected the data. Therefore, such provision was then left to the enthusiasm and availability of the teacher. It comes with it that the methodology employed at such early age mainly focused on fun activities and children's progress was not yet formally assessed.

4.4 The data

The data for the present study come from the oral input, in the foreign language, offered to pupils of three different proficiency levels, by a single teacher (whom I will address as teacher B, for practical reasons). The children involved belong to four age groups and they attend year 1, 2, 3 and 5 of primary school, respectively. Pupils in grades 1 and 2 are taught together – for the reason that these are also the classes were

language teaching is not yet compulsory. Grade 3 is the first year when children are officially introduced to the FL. Grade 5 is the final year of primary education. Eight classes have been tape-recorded, in total; two successive classes from grades 1 and 2, three from grade 3 and three from grade 5 - as shown in table 4.1. All classes were recorded by means of an audio-tape device during a period of one week at the beginning of the academic year. Prior to the experiment, children aged six and seven (grades 1 and 2) would have received no or little exposure to the foreign language, though they would be familiar with words like *hamburger*, *hotdog*, *jeans* that in nowadays society can no longer be regarded as *foreign*. Grade 3's pupils would be in a similar situation, for the reasons mentioned above; while children in grade 5 would have had an exposure to the FL of about 169 hours.

Table 4.1: Number of classes recorded by grade.

	Grades 1 and 2	**Grade 3**	**Grade 5**
Number of recordings per grade	2 classes (50 minutes each)	3 classes (50 minutes each)	3 classes (50 minutes each)

4.5 Instruments

The tools used for processing the data are the following:

1. *Range* (Heatley et al., 2002).

This program was designed by Nation and Coxhead and programmed by Heatley, for PCs. We used Range to compare the corpora, from our transcripts, against the frequency lists developed by Nation (1986). Base-list 1 includes the first 1,000 most frequent words in English; base-list 2 is made of the second 1,000 most frequent words in the language; base-list 3 includes the vocabulary (570 word-families) in the AWL (Academic Word List), that is the words that are not among the first 2,000 but that are frequent in upper secondary school and at university level. Base-lists 1 and 2 originate from West's earlier frequency counts (West, 1953). Text corpora analysed with *Range* are divided into four blocks. Blocks one, two and three correspond to the word-families listed in each of the base-list mentioned above; block four is made of

the words not included in the first 2,500 most common words in English, and therefore, more *unusual*, in the language.

2. V_Tools v 6.0 (Meara, 2003) is a simple piece of software (Version 5.0 had problems processing corpora longer than a couple of thousand words, types. Version 6.0 runs smoothly). I used this programme mainly for creating wordlists from corpora, comparing lists and calculating the number of new words per lesson-unit.

3. Web VP v 2.7 Classic is the adaptation for the web of Nation's *Vocabprofile* – which is the original DOS version of *Range* (see point 1., above). It has been recently updated to deal with word files longer than 2,000 lexical items. Like *Range* it compares each corpus with the frequency lists developed by Nation (1986), but it also provides the researcher with some useful calculations (for example, proportion of Greco-Latin cognates in the text and content words). The output of the analysis is the original text coloured into four different shades – one shade per base-list. Words not included in the first 2,500 most frequent word-families in English come out red and they are very easily identifiable in the output file. It is important to notice that *Range* and *Web VP v 2.7 Classic* count words in different ways. This is a central issue to this method of analysis and it will be discussed in depth in paragraph 4.6.2.

4.6 Methodology

As mentioned above, the data collected for this study come from 8 fifty-minute recordings of EFL classes at three different proficiency levels – grades 1 and 2; grade 3 and grade 5, respectively. Two successive lessons were taped in grades 1 and 2, that constitutes a single group, three more lessons make up the corpus for grade 3 and finally three more recordings were originated by the input in the foreign language offered by teacher B, to pupils in grade 5.

In calculating the *amount* of speech produced by the teacher, per proficiency level, complete transcriptions were taken into account. For calculations of type/token ratios, transcripts were organized in blocks of 500 running words. This methodology serves two aims. Firstly, by reducing the size of each block to a limited number of tokens we were able to minimize the number of words that had to be excluded from

the files. Secondly, results from the present study would be easily comparable with the outcomes in the study by Meara, Lightbown and Halter (1997).

The methodology used in this analysis can be divided in the following two phases:

- a lexical corpus was created for each of the class-groups
- decisions were taken about what to count as a word

4.6.1 Building corpora

Three corpora were built, one per each class-group. The 2 + 3 + 3 tape-recordings were transcribed. The children's data were removed and transcriptions only comprised the oral, foreign language input by teacher B. All foreign (not Italian) proper nouns were categorized as such and placed in base-list 1, as well as numerals and loanwords (i.e. *hotdog, computer*). Names of geographical places (i.e. England, Scotland) were not treated as proper nouns and added to base-list 1, but they were grouped by criteria of frequency as the rest of the corpora. Children are in fact taught such words in class in the same manner as common nouns. Contractions (i.e. *it's, didn't*) were replaced by constituent words (*it is, did not*), the same procedure applies to lexical items like *let's* changed into *let us* and genitive cases were re-phrased thus to include the preposition *of* (i.e. *the teacher's pen* becomes *the pen of the teacher*).

4.6.2 Criteria for counting words

The two pieces of software mentioned above, *Range* and *Web VP v 2.7 Classic*, count words in slightly different ways, as shown in table 4.2. For example, the former treats *pencil-case* as a single word-unit and does not include it in the first 2,500 most frequent words in English, the latter reads *pencil* and *case* as two separate items and locates each of them in the correspondent base-lists.

Table 4.2: Word counts in *Range* and *Web VP v 2.7 Classic*.

Lexical units	Range	Web VP v 2.7 Classic
It's	It + s	It + is
Pencil-case	Pencil-case	Pencil + case
Fireman	Fireman	Fireman

In the light of the studies discussed in chapter 2, there seem to be no clear-cut definitions of how words should be counted. This may be due to the fact that the same words may often have different *learning burdens* for learners of different proficiency levels (Nagy, 1997: 70). For example, counts by lemmas would typically assign *mouse* and *mice* a score of 1 (two word-items within a single head-word). On the other hand, while for secondary school students, with 400/500 hours exposure to the foreign language, the link between words like *mouse/ mice*, *child/ children*, *play/ playing* may appear obvious, it is likely not to be so for young learner with no or little exposure to the language. Therefore, if a teacher teaches grade 3 students *mouse*, *child* and *play* and grade 5 students *mouse/ mice*, *child/ children*, *play/ playing*, by counting words by lemmas both groups of learners appear to be taught three words each, when in fact fifth graders are exposed to six different words and third graders to only three word-items.

Nevertheless, things are not as clear-cut as they appear. In fact, by counting words by type we may incur into a different kind of problem. It has been suggested that words falling within the first 2,000 most frequent word-families in English give a coverage of around 95%, in some areas of spoken discourse (Adolphs and Schmitt, 2004), hence, infrequent words tend to be limited to a very small proportion of the entire corpus. Therefore, by using lemmas, the amount of high frequency words may be reduced and the proportion of low-frequency words increased.

In consideration of the above, and in order to obtain results that could be directly comparable with the outcomes in the study by Meara, Lightbown and Halter (1997), I decided to count lemmas.

The working assumption was that a large proportion of low-frequency – and therefore *unusual* - words would mirror a *rich* lexical environment, while a small number of unusual words would define a *poor* lexical environment. Because of the similarity in the levels of proficiency between Grades 1 & 2 and 3 (also see discussion) I expect to find minor differences in the type of input produced by the teacher in the two year-groups, while grade 5 is expected to be exposed to a substantially richer input than the one received by their younger peers.

4.7 Results

The results of the present study will be reported in the same order as the questions raised in section 4.2.

4.7.1 *How much* vocabulary is available to children of different proficiency levels?

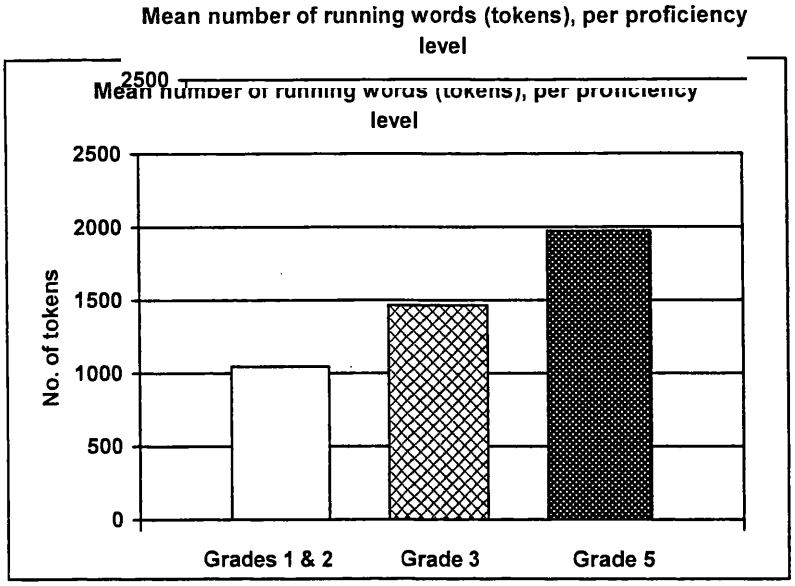
In order to address this question, transcripts from three different course-levels were analyzed and the total number of words produced by the teacher in the foreign language class were taken into account. As reported in table 4.3, the number of tokens – and, therefore, of running words – that teacher B utters during a fifty-minute period vary substantially from lesson to lesson. Unfortunately, a progression of three successive teaching-units is too limited, in time, in order to investigate whether there may be a patter the teacher follows, during the school year - for example, heavy-loaded classes spaced out with revision classes and assessment sessions.

Table 4.3: Total number of tokens and types per class-unit.

	Lesson 1		Lesson 2		Lesson 3		MEAN no. of	
	Tokens	**Types**	**Tokens**	**Types**	**Tokens**	**Types**	**Tokens**	**Types**
Grades 1 & 2	1083	144	1014	94	-	-	1048	119
Grade 3	1784	209	1301	188	1310	174	1465	190
Grade 5	2246	271	1997	287	1680	200	1974	253

The data - as shown in figure 4.1 - seem to suggest that the *amount* of oral input in the foreign language that learners are typically exposed to in class varies with the level of proficiency of the students. That is, learners from lower levels of proficiency are exposed to a smaller amount of running words than their more advanced peers.

Figure 4.1: Mean number of tokens per proficiency level.



Counts by tokens give us an indication of the *volume* of FL speech that learners hear in class from their teachers. What they cannot tell us, though, is whether the teacher keeps repeating the same few words over and over again or whether she offers the learners a wide range of vocabulary. For example, if the children are very loud and the teacher spends half of the lesson repeating, "*Quiet, please, kids. Quiet, please!*" the children may be exposed to a great number of running words, although the lexical richness of teacher speech may in fact be rather poor. The next section investigates how many *different* words (*types*) can be found by lesson-unit.

4.7.2 Are more proficient students exposed to a *wider range* of vocabulary?

To address this point, class-transcripts were divided into blocks of 500 tokens each. Because of a substantial difference in length between the corpora, some of the class-units could be split into two blocks, others into three and four blocks of 500 running words each, as summarized in table 4.4. It should be noticed that transcripts of grade 3 classes are the ones in which a highest proportion of tokens have been left out due to the partition of the original corpora of teacher speech into sections of 500 word-tokens each (table 4.4).

Table 4.4: Number of 500-token blocks, per class-unit.

	Lesson 1	Lesson 2	Lesson 3	Mean % of deleted word-items
Grades 1 & 2	2	2	-	**2.9**
Grade 3	3	2	2	**19.7**
Grade 5	4	4	3	**6.4**

Transcripts were analysed by means of Web VP v 2.7 Classic and type/token ratio (TTR) was calculated for each individual sample (table 4.5). A TTR of 1 means that each word in the text only appears once, and that no repetitions occur. 1 obviously represents the highest possible value and it indicates a high lexical variation. The column indicating the number of tokens per types gives us the mirror image of the TTR, that is if 1 different word is introduced every 10 running words, I will obtain a *number-of-tokens-per-type* figure of 10, while if 2 different words are introduced every 10 running words, I will obtain a *number-of-tokens-per-type* figure of 5 – the smaller the value, the higher the degree of lexical variation within the text. There is an indication in the data (table 4.5) that although learners in years 3 and 5 seem to have access to equally rich vocabulary input, the input available to learners with no previous exposure to the foreign language appears to be more repetitive and less varied.

Table 4.5: TTR per class-unit, per level of proficiency.

	Lesson 1	Lesson 2	Lesson 3	Mean TTR
Grades 1 & 2	**0.16**	**0.11**	**-**	**0.13**
Grade 3	**0.19**	**0.20**	**0.18**	**0.19**
Grade 5	**0.23**	**0.23**	**0.20**	**0.22**
Bob the builder	*0.41*	-	-	*0.41*
Thomas the Tank Engine	*0.45*	-	-	*0.45*

In order to find out *how rich/ poor* lexical environments these classes are, a similar analysis was run of the two following sources:

- Book: *Thomas the Tank Engine*
- TV programme: *Bob the Builder*

Thomas the Tank Engine is a series of books addressed to children of three to five years of age. As discussed in chapter 2, native speakers of English are estimated to know about 4,000 to 5,000 word-families by the time they enter compulsory education (Nation and Waring, 1997).

Bob the Builder is a cartoon for children of a similar age, as above. Contrarily to *Thomas* we are not dealing here with a written text but rather with spoken discourse. Therefore we would expect the television programme to have a lower TTR than the book. From both sources a 500-word sample was obtained.

As shown in table 4.6, the TTRs for the book and the TV programme are substantially different from those found in our classes. Specifically, children in year 1&2 and year 5 of primary education are exposed to 66 to 106 different words, respectively, every 500 running words, while their native speaker peers receive an input of 208 different words. Therefore, children watching TV may be exposed to a vocabulary in English at least twice as rich as the input available in instructional settings.

Table 4.6: Number of different words (types), per unit of 500 running words (tokens).

	No. of different words per unit of 500 tokens
Grades 1 & 2	66
Grade 3	94
Grade 5	106
Bob the builder	*208*
Thomas the Tank Engine	*227*

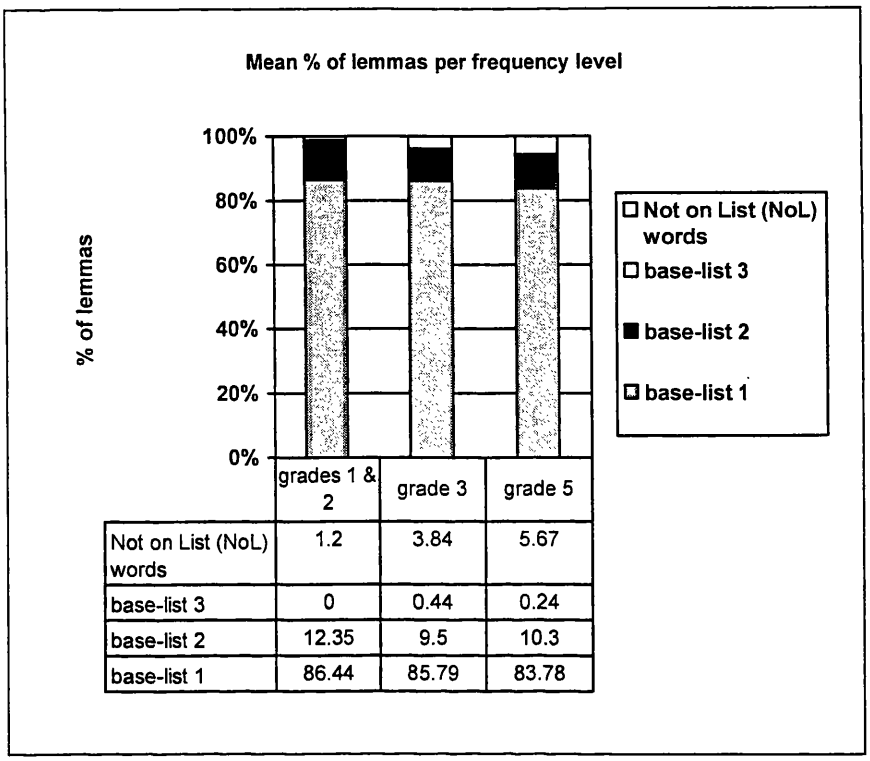
4.7.3 What proportion of the vocabulary available in class at different proficiency levels is made of *unusual* words?

The first two to three thousand most frequent words in English constitute a baseline for surviving a professional-based conversation (Adolphs and Schmitt, 2004) and comprehending an acceptable proportion of written texts (Nation, 1990; Laufer, 1992). Given the fact some words are very frequent in the language, while others are more unusual, it could be argued that more frequent words are also more *accessible*, while more *unusual* words are less accessible and may therefore be addressed as more *difficult*.

In order to investigate this hypothesis as well as to address question 4.7.3, each of the 500-word corpora, described above, were compared against Web VP v 2.7 Classic and according to the frequency lists developed by Nation (1986). Again, our working assumption was that a large proportion of words, not included in the first 2,500 most common words in English (Base-lists 1, 2 and 3 [AWL]), would characterize a *rich* lexical environment, while a small number of *unusual* words would qualify a *poor* lexical environment.

Figure 4.2 indicates, as expected, that a large proportion of vocabulary in the low-level class consists of highly frequent lemmas. Nevertheless, the mean percentage of *Not on List (NoL)* words (that we also addressed as *unusual* words) per proficiency group seems to increase, slowly but gradually, together with the learners' degree of familiarity with the foreign language. While children in first and second grades are exposed to 1.2% of unusual words, in grade 3 3.8% of the total vocabulary will consist of infrequent words that will grow to 5.7% by grade 5. If you remember the children's TV programme and the book which were mentioned above, an episode of *Bob the Builder* contains a mean proportion of 7.3% unusual lemmas, while *Thomas the Tank Engine* booklet a slightly higher proportion of 9.23%.

Figure 4.2: Mean percentage of lemmas, per frequency level.



	grades 1 & 2	grade 3	grade 5
Not on List (NoL) words	1.2	3.84	5.67
base-list 3	0	0.44	0.24
base-list 2	12.35	9.5	10.3
base-list 1	86.44	85.79	83.78

The mean number of lemmas, calculated per units of 500 running words, also appears to be very low. It ranges from 0.75 unusual lemmas in the beginner group, to just over 5 infrequent words per unit (table 4.7). It must be noticed, though, that while for the book and the television episode 500 tokens is a sample very near in length to the full size, in the case of our classes things are in fact very different. The shortest corpus included 1,000 running words, the longest was made of over 2,300 tokens uttered by the teacher in the same amount of time, the class-unit.

Table 4.7: Number of *unusual* lemmas, per 500-token unit.

	Lesson 1	**Lesson 2**	**Lesson 3**	**Mean no. of *unusual* lemmas**
Grades 1 & 2	1	0.5	-	**0.75**
Grade 3	3	3.5	4.5	**3.7**
Grade 5	9	7	1	**5.7**

Tables 4.7 and 4.8 show the differences between the proportion and the number of unusual words produced in class, calculated per 500-token sample or if considering the full lengths of the teaching sessions.

Table 4.8: Proportion and number of *unusual* lemmas, per full-length class unit.

	Lesson 1		Lesson 2		Lesson 3		*Mean % of unusual lemmas*	Mean no. of *unusual* lemmas
	%	No.	%	No.	%	No.		
Grades 1 & 2	*1.72*	2	*1.33*	1	-	-	***1.52***	**1.5**
Grade 3	*3.98*	7	*5.66*	9	*6.76*	10	***5.57***	**8.7**
Grade 5	*8.41*	19	*8.22*	19	*1.25*	2	***5.96***	**13.3**

4.8 Discussion

The working assumption at the outset of this replication was that a large proportion of low-frequency – and therefore *unusual* - words would mirror a *rich* lexical environment, while a small number of unusual words would define a *poor* lexical environment. Because of the differences in age as well as in the number of hours of English instruction - prior to the time recordings took place - I expected to find minor differences in the type of input produced by the teacher in grades 3 and 5. Classes addressed to these two groups were expected to offer a substantially richer input than those addressed to grades 1 and 2, who were taught as a single group.

As expected, learners with more hours of exposure to the FL receive a greater amount of input. Thus, fifth grade lessons are substantially longer than first and second grade classes, with a number of tokens that ranges from 1,000 to over 2,000 words, per class period. Part of the reason may be due to the fact that children in year one and two are not only studying English for the first time but they have also just started compulsory education. Therefore, it sounds sensible that they are given time to adjust both to the new environment as well as to the *foreign* sounds of a language that the large majority of them have never encountered before. The methodology adopted in order to allow this to happen is to create a balance in the use, in class, of L2 and L1.

By allowing the L1 to play a role in the teacher-learner, learner-teacher and learner-learner interaction the teacher establishes an element of continuity with that part of the world the child is familiar with and enhances the possibility for the child to enter an empathic relationship with the *foreign* culture – a fact that has been suggested to strongly influence the degree of success or failure of the learning experience (Nida, 1971; Gardner and Lambert, 1972).

Moving on to the proportion of unusual words in the texts, my first reaction was one of disappointment. In fact, despite a minor increase in the number of infrequent words in the classes addressed to more advanced learners, the number of unusual words in the texts was limited to just over 5 words per 500 running words. Vassiliu (2001), in a study that investigates the frequency profile of course material used in the low-level class, reports that 31% of the total number of lemmas in a textbook are words that do not belong to the first 2,500 most frequent words in English. As Ure (1971) suggested, typically, written sources seem to show substantially greater proportions of content words than spoken texts. Nevertheless this can hardly fill in such an important gap. Other ways of looking at things are the following:

- comparing units of measures between the two studies
- analysing the criteria used in the categorization of words

Because of the substantial differences in length of the speech produced by the teacher in a variety of proficiency levels, a common unit of measure was adopted in the present study. The data thus obtained refer to samples of 500 running words each. As mentioned above, some of the more advanced classes contained figures in excess of 2,000 tokens, that is more than four times the size of our sample. Therefore, it is possible that the sampling procedure has led to an underestimate of the number of infrequent words available to students in a 50-minute session. In order to investigate this hypothesis, I went back to my data and re-run the analysis, this time including the sections of the single corpora that had been excluded before and therefore taking into account the complete corpora. Results were very clear. The percentages of unusual lemmas, in full-length corpora, were surprising similar to the data obtained for the 500-word samples (grades 1&2: 1.52%; grade 3: 5.47%; grade 5: 5.96%). It should be noted that year 3 percentages are those which registered the greatest increase. This

may be due to the fact – as suggested above – that transcriptions of year 3 classes were those with a higher percentage of *deleted* tokens in order to accommodate multiples of 500-word samples. As a result, the figures for 3rd and 5th grades have closed the small gap, suggesting that these two age groups are likely to be treated by the teacher as equally proficient groups in the foreign language.

As shown in tables 4.7 and 4.8, despite the similarities of percentages between the infrequent words in 500-token samples and full texts, the *number* of unusual words encountered in the texts does vary with the unit of measure. Say a text is made up of 100 tokens, 5 of which are infrequent words. We have 5% of unusual words. If we split the corpus into two 50-word samples – one which contains 5 infrequent words (10%) and one with none (0%) – we would still have a mean percentage of $10 \div 2 =$ 5% unusual words, but a mean number of $5 \div 2 = 2.5$ such words, per 50-word sample. Our data suggest that while the youngest learners are typically exposed to 1.5 infrequent words, per class period, children in grade 3 get to meet 8.7 words and the number for the most proficient students goes up to 13.3 unusual words, per 50-minute lesson. Being such words categorized as *infrequent* in the general English, it is likely that they remain so also in the vocabulary produced by the teacher in spontaneous classroom discourse (i.e. directions for tasks and activities, instructions to children, extra-curricular activities) that is not strictly guided by the syllabus. It can be argued, therefore, that because generally infrequent, such words will sound as new word-items to the learners. Scholfield (1991) suggests a rate of introduction of new words per contact hour that ranges from 9 to 12 new items. Gairns and Redman (1986) indicate 8 new words to be a fair measure. Our data indicate a figure of 8 to 13 unusual – and possibly new – words per 50-minute session, that seems quite a challenge particularly for learners with under 200 hour exposure to the foreign language, spread out in four years. Therefore, despite the low proportion of infrequent words in the corpora, which seems to characterize classrooms as *poor* lexical environments, the challenge for the learners of being exposed to quite a substantial number of unusual words, per class period, seems to remain. The problem is, of course, that most of these words only occur a very limited number of times in the text and there are indications in the literature that chances of learning and retaining words from a single exposure are in fact very low (Nagy, 1997).

To go back to our original interrogation, how can the gap in lexical richness between spoken corpora and written textbooks remain so substantial? Maybe the answer lays in a combination of factors - the issues raised above and the criteria used for categorizing vocabulary, which will be discussed next.

As pointed out in the methodology section (4.6), words like *hooray* and *yippee* were left in the corpora. Also, loanwords like *hamburgers*, *hotdog*, *walkman* and personal names in English were treated as ordinary words – with the only adjustment that they were tagged and placed in base-list 1, and among the first 1,000 most common words in English. The rationale beyond this decision was that the majority of the subjects involved in the study had had little or no previous exposure to the sounds of the foreign language, at the time the recordings were made. This means that identifying words in the stream of speech the teacher produces already constitute a challenge for them. Also, for children of such low proficiency level, the effort put in learning foreign names like *George*, *Mike*, *Cloe* may be similar to the effort put in the acquisition of *standard* words like *cat*, *dog* or *house*. In fact, names - as much as any other words - have to be recognized in the string of speech where they are embedded, learnt to be pronounced correctly (and possibly spelled), memorized and used productively. I am arguing that the *learning burden* these words carry may in fact be very similar to that of other common nouns and in the light of this should be kept in the corpora. As to international words, it should be noticed that the Italian pronunciation for words like *hamburgers* or *hotdog* is substantially different from the English, to such an extent that Italians with no knowledge of English would be unable to recognize the two pronunciations as belonging to the same word unless they had access to its written form. The points raised here can, in part, explain the low proportion of unusual words in our data. There is a possibility that the methodology used in this study (e.g. placing loanwords, names and nonsense words in base-list one) has produced an underestimation of the proportion of unusual words learners are exposed to, per lesson-unit.

In our working assumption, it was postulated that a large proportion of low-frequency words would reflect a *rich* lexical environment, while a small number of unusual words may indicate that the teacher exposed the learners to a rather *poor* and basic vocabulary input. Studies on L1 (Prasada and Pinker, 1993) and L2 (Bauer and

Nation, 1993), described in the literature, suggest that learners at different proficiency levels may process English morphology in different ways and estimate the degree of complexity of a text or a segment of spoken discourse according to their ability to recognize, or not, the link between, for example, conjugated forms of the same verb (e.g. *cut, cuts, cutting*). In the light of this, it could be argued that a lexical environment that is proportionally *too rich* for the amount of richness learners at a set level of proficiency can take in, could turn out not to be a *good* learning environment, after all. Krashen (1985, 1989) tells us that language is acquired through written and oral exposure to linguistic forms, slightly in advance of the learner's existing knowledge. Studies reported by Nation (1990) of EFL teaching in India and Indonesia, suggested that learners had a vocabulary between 1,000 to 2,000 word-families, after five years of formal instruction. Taken together, these considerations suggest that the classes analysed in the present study – despite the fact they introduce the students to a mean figure of only 4% of unusual words - are likely to present rather rich learning environments, particularly for younger learners with only few hours exposure to the foreign language.

4.9 Comparison with frequency profile in Meara, Lightbown and Halter (1997)

The data obtained in this replication study look strikingly similar to the outcomes of the investigation carried out in Meara, Lightbown and Halter (1997). The authors analysed the speech produced by 10 teachers of English, participating in immersion programmes in Quebec. Subjects involved in the study are students of 11 and 12 years of age, whose only contact with the foreign language happens in class. Meara, Lightbown and Halter (1997) found that teacher speech is characterized by a very low percentage of words not included in the first 2,500 most common words in English. Only 3% of the total exposure in the foreign language is made up of infrequent words. Besides, most of these words tend to occur only once in the text.

Similarly, the outcomes of this study indicate a mean figure of 3% to 4% - depending on whether 500-word samples or full texts are taken into account. This proportion, dealing with sampled corpora, corresponds to a number of words that ranges from nearly 1 unusual lemma (in the lowest proficient group) to around 6 infrequent lemmas (in grade 5) uttered by the teacher per 500 words of running text. The study by Meara, Lightbown and Halter (1997) reports that words not in the first 2,500 most

frequent vocabulary in English occur at a rate of only 2.75 per 500 word-tokens. It would appear that the lexical environment of primary school children in Italy is, on average, richer than the vocabulary available to secondary school students involved in immersion courses. This sounds a surprising finding, indeed. Nevertheless, there is something that still has to be added to the analysis. The figure of 2.75 infrequent lemmas, suggested by Meara, Lightbown and Halter (1997), exclude cognates, while our data do include such words (e.g. *biscuit, carrot, chant*). Cognates were included in our counting for the same reasons as loanwords were (see 4.6.1). It is likely that the low proficiency level of the children in this study does not allow them to establish the link between words like *biscuit* and *biscotto*, *chant* and *canto* - particularly when the word is only accessible orally and the learners become unable to apply the L1 phonetic system to the foreign combination of graphemes. Meara, Lightbown and Halter (1997) indicate that cognates account for about half of the number of unusual lemmas. Therefore, allowing for the differences in methodology, the two studies do seem to deal with classroom environments with similar levels of lexical richness.

To summarize the points raised above, both studies based their analyses on 500-token samples. Also, they both report that infrequent words occur in the corpora at an average rate of 4/5 lemmas per 500 word-tokens (excluding grade 1&2 in my study, with a much lower figure).

Despite the similarity of the data, I believe these are surprising findings, for the following reason. The students involved in my investigation are children of primary school age. In one of the groups (grade 1&2), the subjects have only just started compulsory education. They are still learning to read, write and work with numbers. They have had virtually zero hours of exposure to the foreign language prior to the collection of the data. The middle grade would have received around 60 to 100 hour exposure, grade 5 less than 200 hours (approximations depend on teaching arrangements in year 1 and 2. As discussed in chapter 3, the teaching of the foreign language in the early years is often left to the enthusiasm and good will of individual teachers. It may occur that, should the children need to catch up with subject areas like Maths, Italian or History, the teacher may decide to take the time allocated to the foreign language, for that week). Students in the study by Meara, Lightbown and Halter (1997) are 11 and 12 year-olds, with 400/500 hours of English instruction, of

which around 350 in immersion courses. It is striking that learners with substantial differences as to time of exposure to the FL prior to test, and supposedly at different levels of proficiency seem to be exposed to equally rich lexical environments.

4.10 Conclusions

This study by Meara, Lightbown and Halter (1997) is, to our knowledge, one of the first pieces of experimental work that aim at qualifying classrooms as lexical environments.

In today's globalized society language learning takes place in a variety of *contexts* or settings (Ellis, 1994a). *Natural* settings occur when the second language functions as one of the official languages in a country or as the language used for interpersonal communication (Judd, 1978). *Educational* settings are characterized by the physical as well as the emotional *space* of the language classroom where the target language is taught as a subject and it is not used as a medium of communication outside the instructional setting itself (Ellis, 1994a: 227). With reference to the Italian primary sector, the language classroom remains for the vast majority of pupils the main source of input in the target language and of exposure to the foreign linguistic code (Cangià, 1998). Nevertheless, to date, very little is known of what actually happens within that *magic black-box* of the language classroom. For this reason, I decided to replicate this study.

I asked questions like, how much vocabulary is available to children of different proficiency levels; are more proficient students exposed, in class, to a wider range of vocabulary; what proportion of the vocabulary available in class is made of infrequent vocabulary? There is evidence in the data that more proficient learners are exposed to a greater amount of words than their younger peers. Also the proportion of infrequent words seem to vary in accordance with the level of proficiency of students. Finally, children in the replication study - with less than 200 hours of FL instruction - seem to be exposed, in class, to an equally rich lexical environment as older students - with more than twice the number of hours of formal instruction. Both groups have access to a much poorer lexical environment than native speaker children who are read to (e.g. *Thomas the Tank Engine*) or who watch cartoons on TV (e.g. *Bob the Builder*).

The questions I would like to address in the next chapter are the following:

- How many new words are typically introduced per class period?
- How do lexical availability in teacher speech and course book relate to each other? More specifically, is the language rigidly controlled to meet the demands of the syllabus?
- Do native speaker (NS) teachers typically expose their students to richer lexical environments than their non-native speaker (NNS) colleagues?

Chapter 5

Experiment 2

The English children hear in class, in primary schools in San Marino

5.1 Introduction

The previous chapter has focused on replicating the study by Meara, Lightbown and Halter (1997), which aims at qualifying the vocabulary available to students in the foreign language class. The input offered by one teacher to children at different proficiency levels in primary education in Italy was analysed. The percentage of words not included in the first 2,500 most common words in English was calculated and evidence was found that more advanced learners are gradually exposed to lexically richer environments than the least proficient groups.

The present study consists of two parts. In part one, I will carry out a similar analysis to the one illustrated in chapter 4. My aim here is to investigate the hypothesis that equally proficient learners are exposed to equally rich lexical environments. Therefore, results from the previous study (foreign language speech produced, in class, by teacher B) will be compared against the outcomes of the present investigation (foreign language speech produced, in class, by teacher A). For anyone familiar with the Education System in Italy (see chapter 3) this is, indeed, an interesting piece of analysis, one that touches a number of historically *sensitive* issues, like the relationship between two countries (i.e. Italy and the Republic of San Marino) that are together so close and so different, as well as between two *categories* of teachers (i.e. native speakers, NS, and non-native speakers, NNS) who in recent years have been alternately recognized the position of *better language teacher*, for young learners, by a number of contradictory Ministerial Decrees (see chapter 3 for a detailed analysis of the Italian political background and regulations in the primary sector).

Comparing the vocabulary produced by different teachers is also instructive from another point of view. As already discussed, in chapters 2 and 3 of this book, almost 95% of all English vocabulary used in spoken discourse belongs to the first 2,000

most frequent words in the language (Adolphs and Schmitt, 2004). Besides, if we consider that – according to the data reported in Schmitt (2000: 72) - the most frequent 50 types in *general* English (taken from the Cambridge International Corpus - CIC) and in *spoken* English (taken from the Cambridge and Nottingham Corpus of Discourse English - CANCODE) have more than half of their words in common, it would be reasonable to expect that the vocabulary produced by teachers A and B may share a good proportion of the words most frequently repeated in class.

It is important to remember that while teacher B, in experiment one, comes from and operates in Italy, teacher A works in the Republic of San Marino. San Marino is a wealthy country with an unemployment rate just above the 3%. Its school system is subject to the regulations put in place by the Italian Ministry of Education. On the other hand, mainly due to the size of the population as well as to reasonably lighter bureaucratic procedures, Government schools in San Marino seem to enjoy a greater degree of autonomy than their Italian neighbours. During my numerous visits, while in the process of collecting data, it struck me the strong sense of community that characterized the primary schools in San Marino. This might not be, in fact, a generalized situation – not even in such a small country – or it could be mainly due to the dedication and enthusiasm of individual teachers. Anyhow, the schools I became acquainted with were very pleasant environments, where teachers worked as a team and contributed – each within his/her own subject-matters – to stimulating cross-curricular projects that enhanced the learning experience of the children and contributed to reducing the level of anxiety, present in the artificial setting of the classroom (Bailey, 1983; Horwitz and Young, 1991). The children, who took part in this study, seemed to enjoy the encouraging, enthusiastic and motivating atmosphere that surrounded the foreign language class.

5.2 Aims and objectives

In the previous study, the speech produced by a NNS in three different grades was analyzed. The data consisted of three successive classes recorded from grades 3 and 5, and two classes from grades 1&2, that formed a single group. The present study is divided into two parts. Part one aims at qualifying the input, in the foreign language, received by learners at similar levels of proficiency as the ones in chapter 4. The teacher is a NS of American English, and the data consists of a substantial number of

complete-class recordings. The outcomes of this investigation will be compared with the data from the previous study. Part two will analyze the lexical profile of the course books, used in the respective groups, and the vocabulary of the texts will be compared with the vocabulary, in the foreign language, produced by the class teacher.

Part one of the present study has the following objectives:

1. To qualify the foreign language vocabulary, produced in class by teacher A, and available to learners of different proficiency levels.

2. To compare the foreign language exposure, received by the subjects in this study, with the outcomes of experiment 1 (see chapter 4).

These are the questions that will be addressed in the first part of the study:

1a. What is the *amount* of vocabulary learners are typically exposed to in class?
1b. Lessons addressed to more proficient learners – are they richer lexical environments?
1c. How many new words do learners typically encounter per class-period?

With reference to point two, above, and therefore to the comparison between the different types of speech produced by teacher B (chapter 4) and teacher A, here are the questions that will be asked:

2a. Are equally proficient learners exposed to equally rich lexical environments?
2b. Do NS teachers typically expose their students to richer lexical environments than their NNS colleagues?

The foreign language produced by teachers in instructional settings remains for learners in the majority of cases the main if not the only source of input. Nevertheless, it should be noticed that teacher speech is different from spontaneous speech in a number of ways. It is planned in advance; it covers specific semantic areas; it follows the guidelines of the National Curriculum and of the year-syllabus. Therefore – like in any reputable Elizabethan theatres – the teacher is the actor, the classroom represents the stage and learners are sometimes the audience and some

others, actors, themselves whose role ties in with the script but also contributes to changing it. Similarly, the teacher acts out a script and the script *is* the teaching material, the course books she uses for her lessons. They follow the guidelines of the National Curriculum and define the year-syllabus. Thus, teacher speech finds its roots in the material contained in course books and it is, to some extent, guided by it.

On the other hand, studies that investigated the vocabulary of course books for beginners of English as a foreign language (Scholfield, 1991; Milton and Vassiliu, 2000; Vassiliu, 2001) found that teaching materials, aimed at similar age and proficiency groups, typically share only a small proportion of the total vocabulary they introduce in the low-level class (see chapter 2).

Taken together, these considerations suggest that, while it is reasonable to expect that equally proficient learners are exposed in class to equally rich/ poor lexical environments and to a similar range of vocabulary, it is likely that course book-based instruction introduces learners to a rather diverse range of words.

Part two has the following objectives:

3. To investigate the lexical profile of three course books addressed to learners of different age and levels of proficiency.

4. To compare the vocabulary exposure pupils receive from their class teacher with the exposure they gain from course books.

The following questions will be addressed:

3a. Do course books for more advanced classes contain a greater *amount* of vocabulary?
3b. Is the vocabulary addressed to more proficient learners made up of a greater proportion of unusual words?
4a. Do course books expose learners to a lexically richer input than class-teachers?

4b. Is the language produced by the teacher in class rigidly controlled to meet the demands of the syllabus?

Despite the substantial number of issues to be discussed, it is possible – if not recommendable - to cover them in a single study. It will enhance our chances to obtain a clearer picture of lexical dynamics in the *black box* of the foreign language classroom.

5.3 The data

The data collected for the present investigation come from the following two main sources:

- The speech in the foreign language produced by the teacher in class, in three successive levels of proficiency.
- The course books used in class to guide and support the teaching activities.

5.3.1 Teacher speech

The data for the present study come from the oral input, in the foreign language, offered to pupils of three successive proficiency levels, by a teacher NS of American English (I will address this teacher as teacher A, for practical reasons). The children involved belong to three age groups and they attend grades 3, 4, and 5 of primary school. In the Republic of San Marino and at the time the data were collected (also see chapter 3) pupils in grade 3 used to be introduced to the study of a foreign language for the very first time. Therefore, the children in this age group would have had no previous formal exposure to English, although it is possible that they have become familiar with few isolated words by means of television advertisements, slogans or video games. Children in grade 4 would have received around 55 hours of exposure to the foreign language; while pupils in grade 5, twice as many.

The recordings took place in the second part of term one. They cover a period of approximately 5 weeks, from the middle of October until the end of term - before the Christmas break (please note that the school-year in Italy and San Marino officially starts around the middle of September and continues with no half-terms or interruptions until Christmas). Altogether, 28 classes were tape-recorded, of the

duration of approximately 50 minutes each. Nine successive classes were taken from grade 3, nine from grade 4 and ten from grade 5 - as shown in table 5.1 - for a total amount of 23 recorded hours.

As already discussed in chapter 3, teacher A has taught at primary level for more than thirty years and she adopts a mainly communicative approach with some explicit teaching of vocabulary and use of focus on form activities. She follows the guidelines of the National Curriculum as well as the alternate thematic/ semantic progression of the topics suggested in the course books. Also, she often gets the children involved in hands-on activities - like, for example, making a Halloween pumpkin or acting out a story - that employ the use of a total physical response approach. While Italian is allowed in the classroom, children are encouraged to deal with tasks and to answer in the target language. Teacher A meets each year-group twice a week, for a total of 55-hour instruction per grade, per school year. There is no structured language re-enforcement outside the classroom - other than the piece of homework children are typically expected to deal with, autonomously, for the following class.

5.3.2 The course books

Part two of the present study deals with the analysis of three course books, *Storyland 3* (Read and Soberon, 1999), *Storyland 4* (Read and Soberon, 1999) and *Sunny Hours! 5* (Angeletti-Meirano and Fugiglando-Cumino, 1996). They make up the teaching material in use in grades 3, 4 and 5, respectively. The only other source of input for learners comes from the audio-tape that accompanies the teacher's textbook and that is played, during the lesson, when required. It should be noted that the input from the tape appears in our data, together with the input the children receive from their English teacher. As extensively described in chapter 3, the course books I consider for the present research give no indications of the criteria adopted for the selection of vocabulary. They are organized into units, which cover a flexible number of class-periods, moving from an initial emphasis on listening activities and receptive knowledge to the introduction of more substantial passages of written text.

Storyland 3 and *Storyland 4* (Read and Soberon, 1999) are both divided into five units. Each unit starts with a story or a song and ends with a *cultural* section that introduces the learner to a social/ cultural event typical of the foreign country (for

example, *Halloween* or *Pancake Day*). The books also include extra activities, which can be used as homework, some cut-outs and a final, so called, *wordlist*. The latter is, in fact, a list of sentences, rather than words, that appear in the same order as they have been introduced in the book (for example, *Food, delicious food*; *Yes, I do*; *delicious*; *cheese*- see appendices). For each sentence or word, its Italian translation equivalent is also supplied, as well as the page number where it first occurred.

Sunny Hours! 5 (Angeletti-Meirano and Fugiglando-Cumino, 1996) is also divided into units which start with a short story. The course book is made of ten units altogether and each section contains songs, activities, games and cultural insights. Units are regularly spaced out with revision as well as assessment sections. With reference to the final wordlist, the same indications apply as for *Storyland 3* and *4*, with the only differences that words or sentences are listed, here, in alphabetical order and emphasis is laid on whether items are met receptively or used productively.

5.4 Instruments

1. *Range* (Heatley et al., 2002).

As extensively illustrated in chapter 4, this program finds its natural application in comparing written texts against the frequency lists developed by Nation (1986). It is worth repeating that Base-list 1 includes the first 1,000 most frequent words in English; base-list 2 is made of the second 1,000 most common words in the language; base-list 3 includes the vocabulary (570 word-families) in the Academic Word List (AWL), that is the words that are not among the first 2,000 but that are frequent in upper secondary school and at university level. Text corpora analysed with *Range* are divided into four blocks. Blocks one, two and three correspond to the word-families listed in each of the base-list mentioned above; block four is made of the words in the text not included in the first 2,500 most common words in English (NoL), and therefore more infrequent and as such arguably *unusual*, in the language.

2. V_Tools v 6.0 (Meara, 2003). This programme was mainly used, in this study, to convert text-files to wordlists as well as to compare lists. Compiling lists by type also proved a useful piece of application in order to clean texts from errors and adjust the spelling of words according to the criteria employed for word-counts (see section 5.5).

3. Web VP v 2.7 Classic (also see chapter 4) produces lexical profiles of texts, according to the frequency lists developed by Nation (1986). It counts words in a way that matches the methodology adopted in this study (see section 5.5).

5.5 Methodology

Criteria for counting words were kept the same as in experiment 1. That is, all proper nouns were categorized as such and placed in base-list 1, as well as numerals. Names of geographical places (i.e. England, Scotland) were treated as ordinary word-items. Contractions (i.e. *it's*, *didn't*) were replaced by their extended forms (*it is*, *did not*), the same procedure applies to lexical items like *let's* changed into *let us* and genitive cases were changed into nominative cases (i.e. *the teacher's pen* becomes *the pen of the teacher*). Finally, classifying multi-word units (MWU) meant some hard decision-making (for a discussion, see McCarthy, 1990). For example, compound words like *pencil-case*, *drawing-paper* or *skate-board* are more often spelled hyphenated. On the other hand, if this rule were applied, the words would be read, by Web VP v 2.7 Classic, as two separate units (e.g. *pencil + case, drawing + paper, skate + board).* This is not what I wanted. The theoretical framework that guided the methodology adopted in this study was the following – compounds that were taught to the children as one, long word were spelt so (e.g. *pencilcase*, *drawingpaper, skateboard*) and counted as one item; while MWUs that were introduced to the learners as different concepts/ referents merged together (e.g. *tennis racket* or *Christmas cards*) were spelt and treated by the programme as separate words (e.g. *tennis + racket*, *Christmas + cards*).

An issue that was considered in the previous study, but which I felt was still open to discussion, deals with the question of which unit of measure to employ when counting words in a corpus. Should *lemmas* be counted or should I rather count words by *types*. Bauer and Nation (1993) suggest that a child who has just started to study a foreign language may require that words like *play, plays, played* are treated as three separate lexical items; on the other hand, by the time he has received a certain number of hours of instruction, he may be ready for words like the above to be considered as morphological variations of the same base form, and therefore account for one word. The children, who took part in the present study, would have had an exposure to the

foreign language that ranged from virtually zero to just over 100 hours, spread over a period of two academic years. It is reasonable to expect that a typology of lexical input that contains words like *go, goes, going, went* may be substantially heavier and more demanding on learners at a low proficiency level than input only exposing the listeners to the base form *go*. Therefore, an analysis that counted lemmas might substantially underestimate the vocabulary load of learners in the low-level class. Nevertheless, an analysis that only counted words by *type* would be hardly comparable with the range of data reported in the literature and it risked therefore to be disconnected from the core studies in this area of investigation, thus compromising the substantial contribution to research it could otherwise offer.

The data come from both the speech uttered by teacher A in three different proficiency levels and from the vocabulary available in the course books. In the light of the considerations emerged above, the methodology implemented in the experimental study reported in chapter 4 will also be adopted here. Therefore, word-counts will be based on categorizations by both *types* and *lemmas,* in order to allow for a fair account of the vocabulary available to young learners in the low-level class and to be able to adequately discuss the outcomes of the present investigation in the light of the broader scenario dealt with in the literature review (chapter two). This methodology will remain constant throughout chapters 6 and 7.

The working assumptions remain the same as in the previous study – that a large percentage of low-frequency/ unusual words would qualify a *rich* lexical environment, while a small proportion of these words would define a poor lexical input.

More proficient learners are expected to be exposed, by both class-teacher and course books, to a richer vocabulary than their younger peers. Also, course books – as *written texts* - are expected to contain a greater proportion of infrequent vocabulary than the one found in the teacher's *spoken output.*

5.6 Results

Results dealing with teacher speech will appear in part one. Data related to the course book will be presented in part two. The questions raised in section 5.2 will be answered in a re-arranged order.

5.6.1 Part 1 - Teacher speech

This first part will illustrate the results obtained from the analysis of the input, in the foreign language, produced by teacher A and addressed to three different proficiency groups – grade 3, grade 4 and grade 5. It is worth remembering that group 3 is composed of pupils in their third year of compulsory education, who study English for the first time; while children in group 5 will already have received over 100 hours of FL instruction, spread over a period of two academic years (see chapter 3, for discussion on school systems in Italy and San Marino).

What is the *amount* of vocabulary learners are typically exposed to, in class?

In order to address question one, a total of 28 classes were taped and transcribed, for a total of just over 23 hours of recordings. Nine of these classes were taken in grade 3, another nine in the successive level, grade 4, and ten in grade 5. Each teaching-session lasted about 50 minutes. The experiment covered a period of five weeks, between October and December, which corresponds to half the number of hours of English instruction that make up the first term of the school year. In compiling the corpora, the only input that was taken into account was the teacher's production in the foreign language; all data from the children were discarded as well as any utterances in Italian.

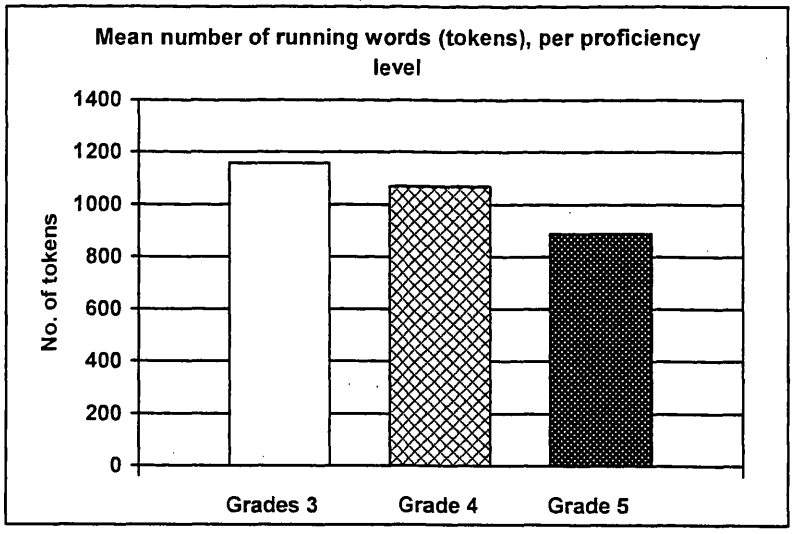
Table 5.1: Number of tokens, types and lemmas per lesson-unit, per grade.

		Grade 3	Grade 4	Grade 5
Class 01	Tokens	1194	2076	907
	Types	*179*	*285*	*179*
	Lemmas	*153*	*248*	*157*
Class 02	Tokens	1369	499	884
	Types	*149*	*113*	*167*
	Lemmas	*133*	*103*	*147*
Class 03	Tokens	2127	1303	681
	Types	*194*	*174*	*154*
	Lemmas	*169*	*151*	*138*
Class 04	Tokens	1284	1090	903
	Types	*119*	*199*	*127*
	Lemmas	*100*	*166*	*111*
Class 05	Tokens	1349	591	883
	Types	*147*	*118*	*132*
	Lemmas	*122*	*109*	*118*
Class 06	Tokens	1285	1421	677
	Types	*172*	*199*	*129*
	Lemmas	*143*	*164*	*109*
Class 07	Tokens	340	850	1632
	Types	*52*	*131*	*229*
	Lemmas	*49*	*114*	*199*
Class 08	Tokens	957	935	659
	Types	*107*	*120*	*151*
	Lemmas	*96*	*106*	*132*
Class 09	Tokens	517	853	570
	Types	*69*	*138*	*101*
	Lemmas	*63*	*119*	*90*
Class 10	Tokens	_	_	1082
	Types	_	_	*167*
	Lemmas	_	_	*147*
Mean	**Tokens**	**1158**	**1069**	**888**
	Types	**132**	**164**	**154**
	Lemmas	**114**	**142**	**135**

As shown in table 5.1, teacher A seems to produce a substantially different amount of speech, per class-period. Children, at the outset of learning, have classes where they

hear over 2,000 running words in English, while in other sessions they are exposed to only few hundred words. Although the differences between lessons, as to the volume of words produced in class, is slightly reduced in grade 5 - and by the time learners reach their final year of primary education - it is still relevant. It ranges from a minimum of nearly 600 tokens to a maximum of 1,500 running words. There is no evidence in the data that more proficient learners receive a greater *volume* of input than their younger peers. In fact, figure 5.1 shows quite the opposite – the more skilled the learners, the smaller the amount of input they seem to receive (i.e. the mean number of tokens per class period per grades 3, 4 and 5 seems to decrease and is of 1158, 1069 and 888 running words, respectively). These unexpected results may be due to a number of factors. For example, a higher degree of interaction in the FL among children in the more proficient groups, length of time spent on feedback on homework and discussions. Indeed, going back to the recordings, the data that seem to emerge is the increasing amount of interaction children are involved in, the more proficient they become. That is, pupils in grade 5 typically spend a greater amount of time interacting in English, in class, than children in grade 3.

Figure 5.1: Mean number of tokens per level of proficiency.



A measure of non-parametric statistics, Mann-Whitney U Test was conducted in order to compare learners' proficiency level and vocabulary exposure in the foreign language class. Mann-Whitney U tests A, B and C (table 5.2) showed the differences between the two variables to be not significant (U=29.0; p=.31; U=32.5; p=.48;

U=39.0; p=.89) for tests A; B; C, respectively. There is no statistically significant difference in the *amount* of vocabulary children of difference proficiency levels are exposed to in class and the variation in teacher speech between grades appears to be of a descriptive type.

Table 5.2 Non–parametric statistics

A: Test Statistics(b)

	Score
Mann-Whitney U	29.000
Wilcoxon W	74.000
Z	-1.015
Asymp. Sig. (2-tailed)	.310
Exact Sig. [2*(1-tailed Sig.)]	.340(a)

a Not corrected for ties.
b Grouping Variable: Grade (3;5)

B: Test Statistics(b)

	score
Mann-Whitney U	32.500
Wilcoxon W	77.500
Z	-.707
Asymp. Sig. (2-tailed)	.480
Exact Sig. [2*(1-tailed Sig.)]	.489(a)

a Not corrected for ties.
b Grouping Variable: Grade (3;5)

C: Test Statistics(b)

	score
Mann-Whitney U	39.000
Wilcoxon W	84.000
Z	-.133
Asymp. Sig. (2-tailed)	.895
Exact Sig. [2*(1-tailed Sig.)]	.931(a)

a Not corrected for ties.
b Grouping Variable: Grade (4;5)

The degree of variation in the *amount* of teacher speech made available to students in the classroom environment also reflects in the number of *types* and *lemmas* produced by the teacher, as illustrated in figure 5.2. Pupils of all grades are exposed to a minimum of 52 to a maximum of over 250 types per lesson-unit and to a minimum of 49 to a maximum of 248 lemmas per unit of teaching (table 5.1). Again, there is no evidence in the data that older children have access to a consistently wider range of vocabulary than their less proficient peers. On the other hand, comparisons between figures 5.1, 5.2 and 5.3 seem to suggest that, while there is no clear progression in the *range* of vocabulary (i.e. number of *types* and *lemmas*) children of different proficiency levels are exposed to (figure 5.2), it appears equally evident that more proficient learners seem to be exposed to a consistently lower number of repetitions in teacher speech than their younger peers (figure 5.1 and 5.3).

With reference to the point raised above, a number of studies have investigated the speech produced by teachers and addressed to students of English as a second language at different levels of proficiency (Gaies, 1979; Richards and Malvern, 2000). It was suggested that learners' degrees of competence in the foreign language

proved a statistically significant predictor of the complexity of teachers' speech. Richards and Malvern, 2000 also indicated lexical diversity as the aspect of teacher's speech that proved most responsive to learners' linguistic competence. Finally, Gass, 1997 suggested that vocabulary addressed to non-native speakers tends to be simpler than the vocabulary used in conversations with fluent speakers. Despite the data reported in this study show no evidence of more proficient learners being typically exposed to a broader range of vocabulary per lesson-unit, the data in figure 5.3 seem to suggest that a certain degree of variation in teacher's output between levels of proficiency does seem to occur, with particular reference to the number of repetitions per lexical item, which decrease as learners' linguistic competence increases.

Figure 5.2: Mean number of types and lemmas per level of proficiency.

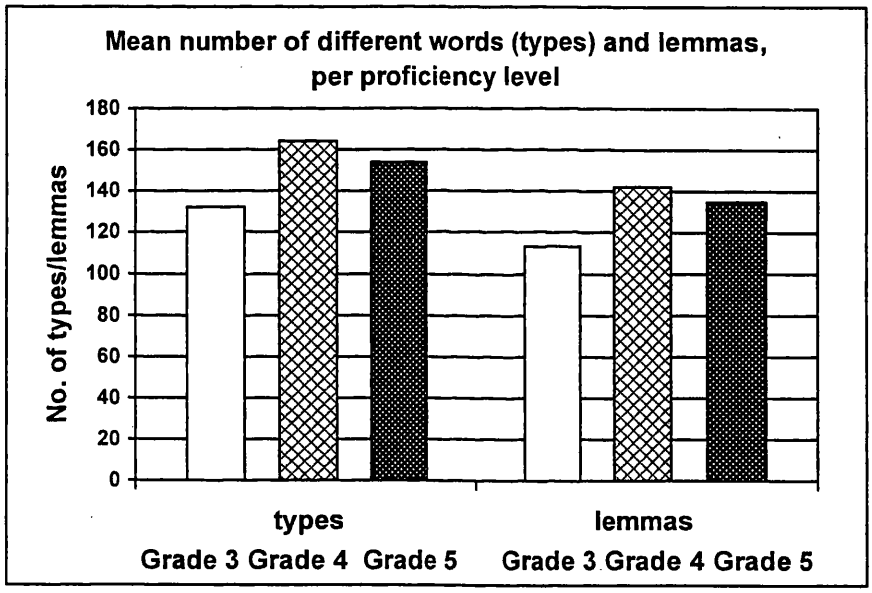
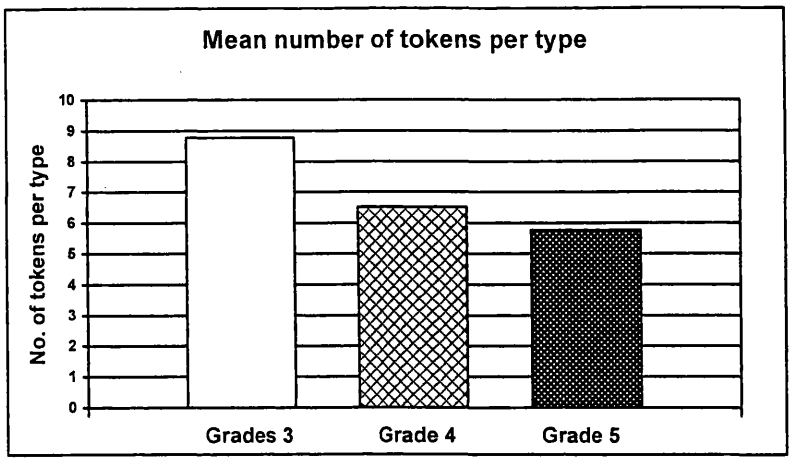


Figure 5.3: Degree of repetitions, per level of proficiency.

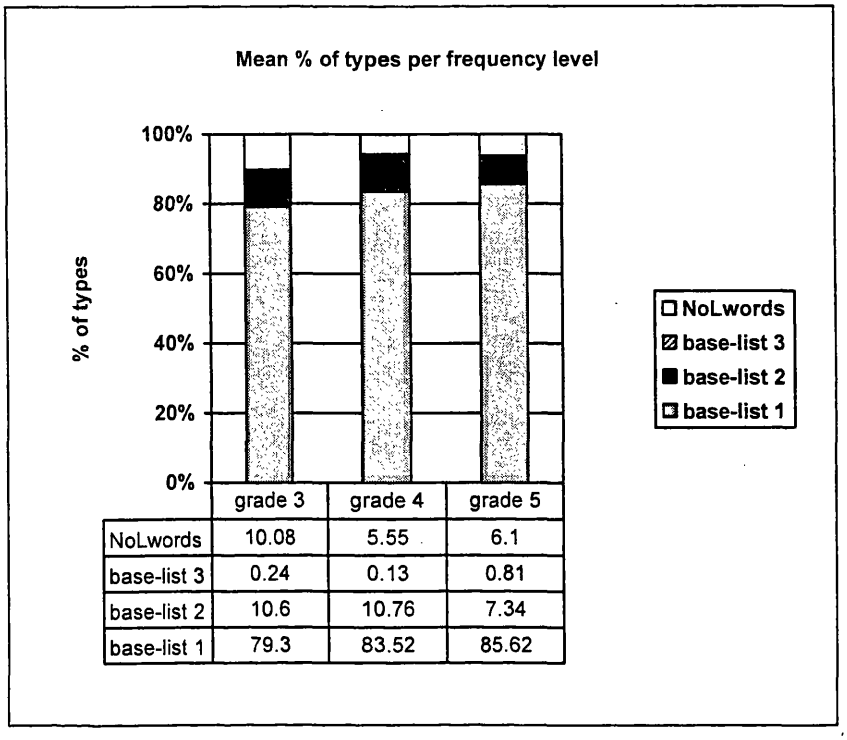


Are more proficient learners exposed to a higher proportion of infrequent words?

In addressing this question, the attention was shifted from the *amount* of exposure on to the *richness* of the lexical input available to learners in class. Contrary to expectations, figure 5.4 shows that the proportion of lexical items not included in the first 2,500 most frequent words in English is not presented in class in accordance to the level of proficiency of the learners. In fact, children in their first year of study are exposed to around 10% of unusual words while, for pupils with over 100 hours of instruction, only 6% of the words available to them consists of infrequent vocabulary. What appears from these data is that the degree of richness of the classroom environment seems to be directly proportional to the volume of speech produced by the teacher, in class. The students who receive greater *quantity* of input are also exposed to a richer vocabulary.

In order to test this new hypothesis, I repeated the procedure illustrated above sampling each transcription down to a size of 500 tokens each (thus using the same unit of measure employed in chapter 4). The data thus obtained were very similar to the ones above. That is, the mean percentage of unusual vocabulary introduced in grade 3 is 8.26% of the total exposure; in grade 4, 6.63% and in grade 5, 5.82%. Once again, there is no evidence in the data from teacher A that more proficient learners are exposed to a richer vocabulary input, despite the *quantity* of input produced.

Figure 5.4: Mean percentage of types, per frequency level.



	grade 3	grade 4	grade 5
NoLwords	10.08	5.55	6.1
base-list 3	0.24	0.13	0.81
base-list 2	10.6	10.76	7.34
base-list 1	79.3	83.52	85.62

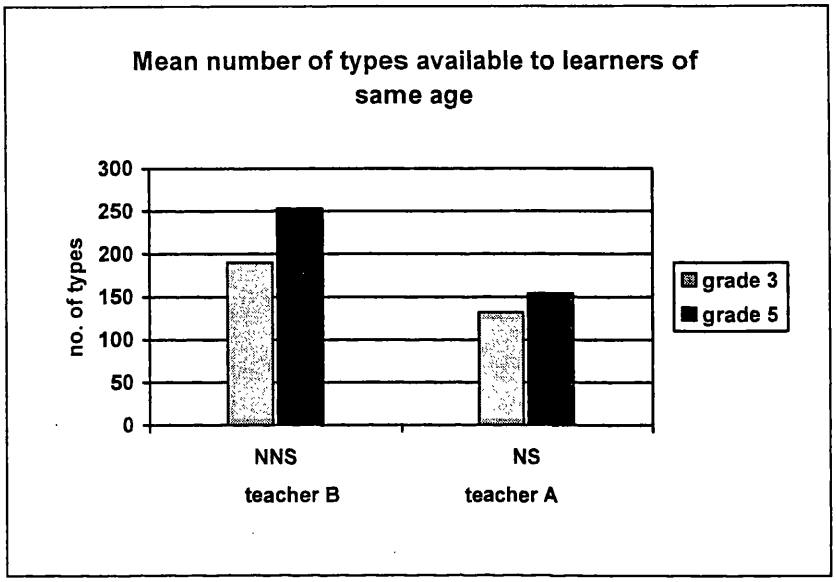
At this point in the analysis I would like to compare the results obtained so far from our native speaker teacher, with the outcomes of the input produced by teacher B (non-native speaker), in the previous experiment (chapter 4). The following questions will be addressed as two aspects of a single investigation:

Are equally proficient learners exposed, in class, to an equal amount of words? and **Do NS teachers typically expose their students to richer lexical environments than their NNS colleagues?**

Due to the differences between Italy and San Marino - as far as the education system is concerned - there are no two groups of learners who are exactly comparable. For example, grades 1&2 in Italy (chapter 4) would study English for the first time as well as grade 3, in San Marino. Nevertheless, they are differentiated by a relevant age-factor; the former group is made of children of 6 years of age, and therefore at their first year of compulsory education, while in the latter, children are eight years old and already skilled in reading, writing and working with numbers. Besides, in the National Curriculum for primary schools, targets are typically set and assessed by academic year. Therefore, I decided to pair up grades by age of learners, as follows:

- Teacher B (NNS) grade 3 ⟶ teacher A (NS) grade 3
- Teacher B (NNS) grade 5 ⟶ teacher A (NS) grade 5

Figure 5.5: Mean number of types produced by NS and NNS teachers, per class-period.



Once again, unexpected results were obtained here. The NNS teacher seems to expose learners to a greater amount of vocabulary than the NS teacher. A Mann-Whitney U Test was conducted to compare the vocabulary that learners at seemingly equivalent levels of proficiency are exposed to by the two categories of teachers (table 5.3). Mann-Whitney U test for grade 3 showed the differences between the two variables to be not significant ($U=2.0$; $p=.27$) while Mann-Whitney U test for grade 5 showed the differences between the two variables to be statistically significant ($U=1.0$; $p\leq.05$). The NS teacher exposes more proficient learners to a statistically different proportion of input. The fact that a level of significance has not been obtained for the teachers' output to grade 3 learners might be due to the fact that these groups of learners are in fact to be considered as not directly comparable as, at the time of test, they would be exposed to a different number of teaching hours (see chapter 4).

Table 5.3 Non–parametric statistics. The vocabulary children in grades 3 and 4 are exposed to by their NS and NNS teachers.

Test Statistics(b)
Grade 3

	score
Mann-Whitney U	2.000
Wilcoxon W	8.000
Z	-1.091
Asymp. Sig. (2-tailed)	.275
Exact Sig. [2*(1-tailed Sig.)]	.400(a)

a Not corrected for ties.
b Grouping Variable: Teacher

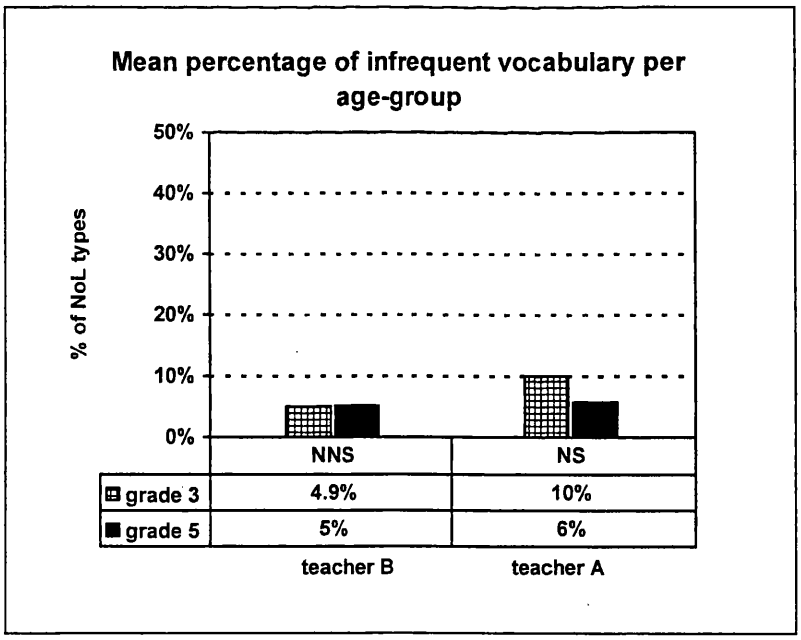
Test Statistics(b)
Grade 5

	score
Mann-Whitney U	1.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100(a)

a Not corrected for ties.
b Grouping Variable: Teacher

I will now investigate the proportion of infrequent vocabulary that the two categories of teachers produce. How many lexical items uttered by the NS and NNS teachers belong to the infrequent (NoL) word-category?

Figure 5.6: Mean percentage of infrequent types per age-group.



Despite a substantial difference between the proportion of low-frequency words produced in grades 3, by NS and NNS teachers, the data show no clear evidence that

NS teachers typically expose learners to richer lexical environments than NNS teachers (see discussion). Also, no evidence was found that equally proficient learners are typically exposed, in class, to an equal amount of words (figure 5.5). In fact, it could be argued that, in the low-level class, the *amount* as well as the *richness* of the vocabulary available to students, are variables which are more likely to be related to teachers' individual differences, or to the topic discussed in class, rather than to the level of proficiency of the learners or to the teachers having, or not, a native command of the language in exam.

In order to investigate this point further, a descriptive analysis of the infrequent-word category was carried out. I selected the infrequent vocabulary produced by teacher A, which only appeared in grade 4 – and not in grade 3 – and only in grade 5 – and not in the other two groups. The aim of this investigation was to take a closer look at such word-items, in order to analyse whether they appear to be all equally infrequent, not common and therefore *unusual*, or if some of them may in fact be considered more familiar to the learners than others. Table 5.4 groups such words into thematic clusters, like describing the weather, animals, cultural festivals, school routine, Halloween, sports and hobbies. Only a small proportion of infrequent items seem to be presented in isolation. Words like *glued, triangular* refer to activities going on in class, others like *closet* were suggested to the children to explain the meaning of WC (*water closet* – the first part of the word was placed in base list 1, where it belongs). *Silly* and *disruptive* have been extrapolated from sentences where the teacher rebukes the pupils who are behaving silly and being disruptive. It should be noticed that, despite the limited volume of input available to children in grade 5, if compared to grades 3 and 4 (figure 5.1) children in their final year of primary education continue to be exposed by the teacher to a relevant amount of new words (see discussion).

Table 5.4: Infrequent words only appearing in grades 4 and 5 respectively (teacher A)

Types only in grade 4	Types only in grade 5
Barometer	Cardinal
Centigrade	Changeable
Dew	Forecast
Diary	Geography
Foggy	Highs
Humidity	Lows
Meadow	Greenery
Rainy	Minus
	Misty
	Ordinal
Candies	Precipitation
Monster	Satellite
Multi-coloured	
Skeleton	
Slimy	Snack
Spooky	Squash
Scary	Stickers
Pulp	Thirsty
	Timetable
Hen	Dialogue
Rooster	Dictation
Wolf	Recreation
Mask	Notebook
Crawling	
Chick	
	Athletics
	Badges
Adjectives	Bike
Comma	Hobbies
	Volleyball
Bathroom	
Classroom	Closet
Glued	Granny
triangular	Postcards
	Rhythm
	Silly
	Skyscraper
	Subjects
	Swan
	Welsh
	Disruptive

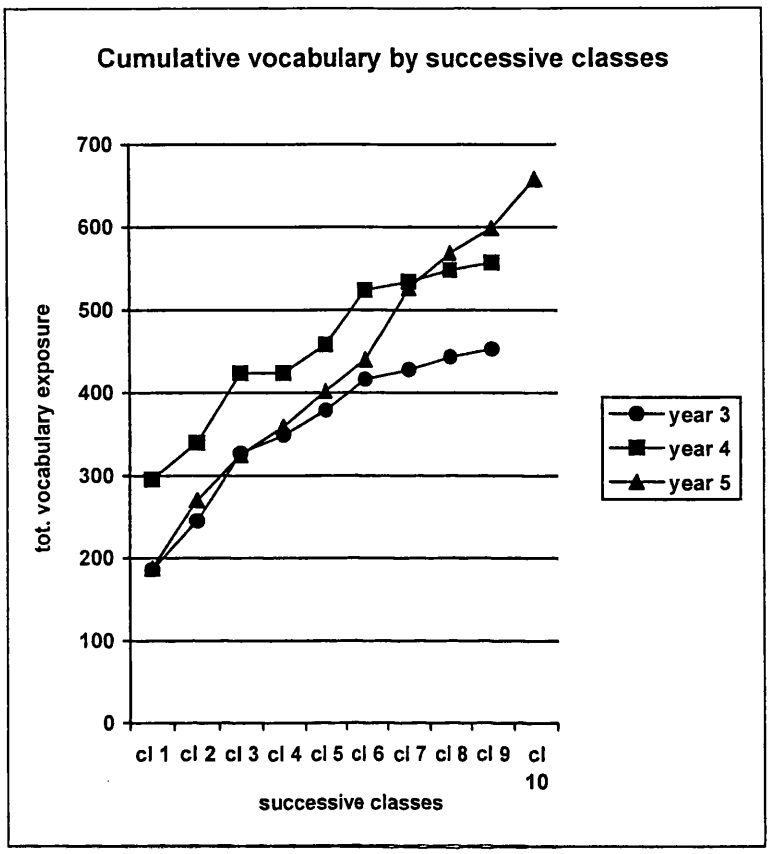
Taken together, the vocabulary-selection illustrated above seems to suggest that teacher A does not differentiate between more or less proficient learners, as far as the choice of vocabulary is concerned. On the other hand, there is an indication in the

data that some kind of differentiation does occur in the *way how* such vocabulary is introduced to the class. For example, the teacher repeats words she makes available to the less proficient learners a substantially higher number of times (figure 5.3). On average, she produces only 5.77 tokens per type in grade 5, and 8.77 tokens per type in grade 3. This leads us to the next question.

How many *new* words do learners typically encounter per class-period?

In order to answer this question, I set up a cumulative study that analyses the number of new words per teaching-session, per grade - as shown in figure 5.7. Words contained in the first recording, for each of the age-groups, were all treated as new. Corpora were merged and compared against every following class-period by means of V_Tools (Meara, 2003). There are clear indications in the data that the foreign language addressed to pupils in the first two years of instruction seem to stabilize very early in the academic year and by the end of term one. On the other hand, more proficient learners – who are senior students in the school and who have already had over 100 hours of English instruction - seem to be exposed to a lexical input which continues to grow steadily and rather substantially. Children of all grades seem to have access to a high number of new words per class-unit. More specifically, pupils in grades 3 and 4 typically meet 33 new types (28 lemmas) per lesson; learners in grade 5, one and a half times as many, that is 52 new different words (45 lemmas) per 50-minute session. Finally, the trend between class 3 and class 7 shows that some of the lesson-units contain a consistently lower proportion of new words than others. This seems to suggest that a good proportion of the school year is spent by the teacher in planned activities of vocabulary recycling (see discussion).

Figure 5.7: Cumulative vocabulary by successive classes, per grade.



This first, and main part of the study, has attempted to qualify the teacher speech in the foreign language class. The data suggest that the *amount* of exposure as well as the *richness* of the lexical input available to learners are not strictly related to the level of proficiency of the children. It could be argued, therefore, that the teacher does not select the vocabulary she uses according to criteria of frequency, but rather according to indications that emerge from course books.

5.6.2 Part 2 – Course books

In this second part of the study, the relationship between the speech produced by the teacher and the input, in the foreign language, made available to learners from the course book has been investigated. The three text-books analysed here are, *Storyland 3* (Read and Soberon, 1999) – for grade 3, *Storyland 4* (Read and Soberon, 1999) - in use in grade 4 and *Sunny Hours! 5* (Angeletti Meirano and Fugiglando Cumino, 1996) – for grade 5. The corpora obtained from the classroom transcripts cover the

second 5 weeks of the first term. The sections of the books selected for this investigation consist of the units that accompany the learners until Christmas. This fraction of the books will cover a period of around ten weeks of teaching. Therefore the figures corresponding to the total vocabulary have been divided by 10, thus obtaining the mean number of words, available from the text-books, per teaching session. The input from the book was compared against the input offered by the teacher (table 5.5).

Table 5.5: Mean number of tokens, types and lemmas per lesson-unit.

		Teacher A	Course books
Grade 3	**Tokens**	1158	98.6
	Types	132	24.6
	Lemmas	114	20.8
Grade 4	**Tokens**	1069	146.9
	Types	164	35.8
	Lemmas	142	31.8
Grade 5	**Tokens**	888	173.6
	Types	154	36.8
	Lemmas	135	32.1

The teacher seems to expose the learners to a much greater amount of vocabulary than the course books which is to some degree an expected result due to the difference in nature between *oral* and *written* language. Nevertheless, given the high degree of repetitions that typically occur in the low level class (figure 5.3 shows that each word is repeated on average 7 times, per teaching-session) it is important to focus on types rather than tokens. Figure 5.9 shows the number of different words that are available to learners from the two sources of input (teacher and course books). It is striking how similar the two blocks appear, particularly in the amount of FL exposure children in grades 3 and 4 receive from teacher and course books, respectively. The data seem to suggest that the teacher relies heavily on course books, as far as the *choice* of vocabulary is concerned, but also extends such input, substantially, and amplifies it.

Figure 5.8: Comparison between number of running words, in teacher speech and in course books.

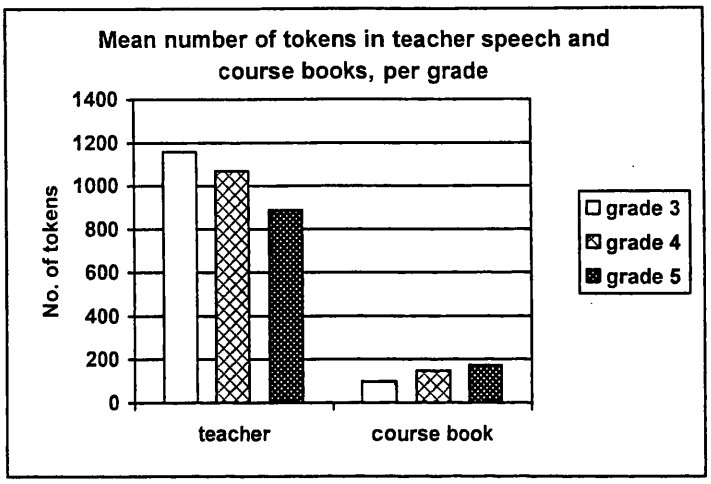
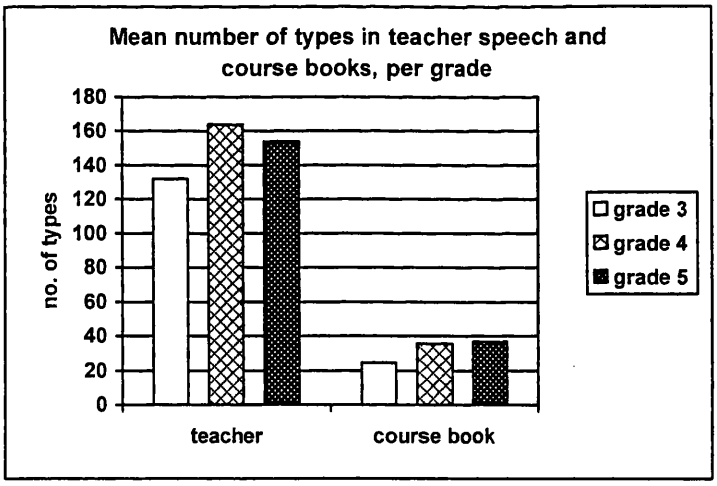


Figure 5.9: Comparison between number of different words, in teacher speech and in course books.

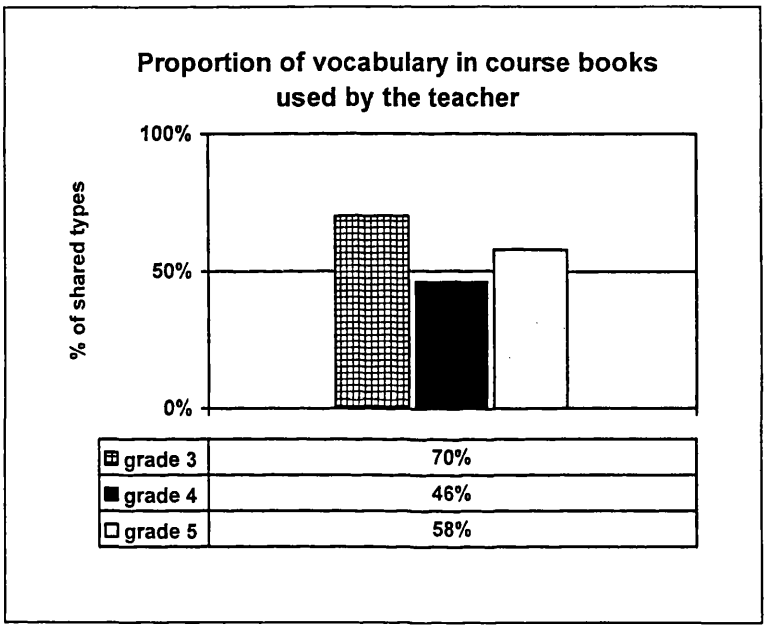


Finally, the proportion of vocabulary that the teacher shares with the course book was calculated. No or little correspondence between the words in the two sources of input would indicate a strong degree of lexical autonomy by the teacher; while a substantial amount of *borrowing* may signify that the language is rigidly controlled to meet the demands of the syllabus. Hence the following question:

What proportion of the total vocabulary is shared between the teacher and the course book?

The total vocabulary exposure for the teacher and for course books was calculated. As illustrated above, the length of the recordings covers a period of five weeks, which corresponds to the second half of the first term. The total vocabulary, in the selected sections of the course books, covers approximately the whole of the first term. Figure 5.10 shows the proportion of vocabulary from the course books that the teacher uses – and *brings to life* – in class.

Figure 5.10: Proportion of types shared between teacher and course books.



On average, only around half of the material contained in the course books is actually used by the teacher in class. On the other hand, it is important to remember that while the teacher only speaks for 5 weeks, the course books are meant to accompany a period of approximately 10 weeks of instruction. Hence, it could be argued that virtually all of the vocabulary in the course books is *given a sound* and covered by the teacher, in class. To summarize, there are indications in the data that the semantic fields of the language produced by the teacher are rigidly selected to meet the demands of the syllabus.

On the other hand, the teacher also seems to extend such input, substantially, and enrich it with a wider range of words (figure 5.9). She does so by relying on her own lexical knowledge and linguistic skills. Table 5.6 illustrates the characteristics of some of the words which only appear in the input by the teacher and not in the course books. As mentioned above, the teacher seems to rely on the text mainly for ideas and in order to introduce a new topic. She then extends the vocabulary in thematic clusters and by means of hands-on activities (i.e. create your own weather forecast or make a Halloween pumpkin). Another category of words, which only appears in input by the teacher, includes lexical items that refer to school day-routine (i.e. *blackboard, desk, toilet*). Also, given that vocabulary in Italian schools is often taught as "grammaticalized lexis" (Lewis, 1993: 149) - particularly with young learners - attention is explicitly drawn to morphological characteristics of individual lexical items and on their relations to others parts of the sentence. The teacher dedicates a substantial amount of time to the teaching of words like *am* and *was*, *do* and *does* or *I* and *I'll*. It is interesting to notice how she anticipates tenses like *past tense* and *simple future* that have not been dealt with in the course books.

Table 5.6: Descriptive analysis of words appearing in books and in teacher speech only.

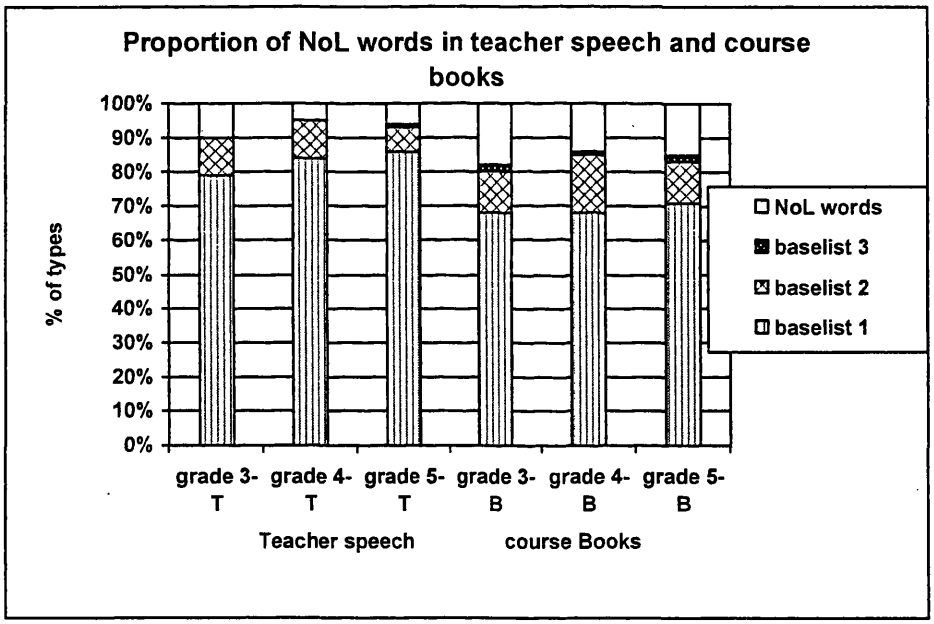
Course books	Teacher speech only
December, February, season, melt, snowman	Barometer, dew, highs, lows, foggy, map, forecast, centigrade, degree, precipitation
Halloween, orange, spider, scared, superstition, skeleton	Candies, Dracula, mask, costume, monster, devil, pulp, slimy, smell
Put, sing, scissors	Paper, pen, rub, shape, blackboard, desk, date, toilet
Bring, do, does, am, be,	Brought, did, done, was, were, I'll

The data presented above suggest that the teacher offers the learners a much greater *amount* and *range* of vocabulary than the course books. But what proportion of the language made available to learners, by both sources of input (teachers and text-books), consists of infrequent words? The two following questions have been addressed:

Is the vocabulary in the texts, addressed to more proficient learners, made of a greater proportion of infrequent words? And **Do course books expose learners to a lexically richer input than their class-teachers?**

In order to investigate these questions the proportions of infrequent vocabulary were calculated for both teacher input and course books. Lexical items occurring in base lists one and two are vocabulary items found in the West's General Service Wordlist (GSL) (West, 1953). Base list three comprises words in Coxhead's Academic Wordlist (AWL) (Coxhead, 2000). Base list four comprises words which fall outside these three lists. The results drawn from these calculations are shown in Figure 5.11.

Figure 5.11: Proportion of infrequent (NoL) words in teacher speech and course books.



There is no indication in the data that course books for more advanced learners contain a richer range of vocabulary than texts for students with little or no previous exposure to the foreign language. On the other hand, text-books seem to typically include a higher proportion of infrequent vocabulary, thus qualifying as richer lexical environments than teacher speech.

5.7 Discussion

The data in the present study show that teachers seem to expose learners to a much greater amount of vocabulary than the one available from course books. Hence, it is likely that evaluations of the foreign language used in class, based on written materials, only, may seriously underestimate the lexical qualifications of the low-level classroom. Studies have suggested that the number of times a word is repeated in the micro-environment highly correlates with its degree of learnability. More specifically, words repeated more than 7 to 16 times are more easily acquired than those repeated a fewer number of times (Kachroo, 1962; Saragi et al., 1978; Beck et al., 1987; Nation, 2001 – for a review of studies). A study by Nagy (1997) also suggests that chances of learning and retaining words from a single exposure are very low (between 5% and 14%). Re-elaborating the data in the present study, it was calculated that, in course books, a word is repeated on average 6 times, while the input produced by the teacher shows a mean ratio of 15 tokens per type. Besides, Nation (1990: 45) emphasizes the importance of *recycling* and *consolidation* of vocabulary. He suggests that if recycling is neglected, many words that are only partially known may be forgotten. The cumulative study illustrated above (figure 5.7) suggests that the teacher alternates vocabulary loaded classes – where she exposes the learners to substantial amounts of new words - with activity-centred classes – where pupils are involved in hands-on activities, role-plays and projects and where they are required to transpose the *input* they have received into *output*, thus encouraging acquisition and consolidation of grammatical structures as well as of vocabulary. This kind of methodology that combines a mainly communicative approach with elements of the TPR method is broadly encouraged in the syllabus guidelines in Italy, for the teaching to young learners. Whether or not children seem to be learning from it, is a question that will be addressed in the next chapter.

Another aspect I would like to comment on is the *number* of new words the teacher produces, per proficiency level. Students with 100 hours of English instruction are typically introduced to 55 new words per 50-minute session, while for learners in their first and second year of foreign language study the number decreases by nearly a half – 33 new words per class-period. These figures appear to me as extremely challenging, particularly if we consider the level of proficiency as well as the age of

our learners. Having to cope with a proportion of new words per class of 20% to over 30% of the total exposure appears as a rather demanding task for a child of eight to ten years of age and with so little *experience* of the foreign language. Scholfield (1991) suggests that a figure of 9 to 12 new words per class period is recommendable. Gairns and Redman (1986) indicate 8 new words to be a fair measure. Finally, Milton and Meara (1998) found that British secondary school students of French as a FL tend to learn from a minimum of 3.8 to a maximum of 6.0 words per hour. After allowing for the fact that these figures were obtained working on lemmatized lists - while *types* were used in the relevant section of the present study - the volume of new words still appears as very *heavy*. Reformulating Krashen's *Comprehensible Input Hypothesis* (1985, 1989) it could be argued that when the input is too much in advance of the learners' existing knowledge, it is possible that a great proportion of this vocabulary gets lost on the way and never becomes acquired. On the other hand, a study by Vassiliu (2001: 257), that analyzed the vocabulary uptake of young learners attending private education in Greece, suggests that the larger the lexicon to which students are exposed, the more vocabulary they eventually learn. In this case, Cameron's (2001: 90) plea for more stimulating teaching material and sources of learning would be even more correct.

As for course books, Cameron (2001) criticized their predictability both in the content as well as in the way vocabulary is presented to learners. According to our data – and given the fact that our NS teacher seems to employ all of the vocabulary in the text and then extend it by approximately three times its volume - it could be argued that the inclusion of a greater *amount* of vocabulary would be recommendable. Vassiliu (2001) found that low-level courses typically expose learners to a vocabulary of 1000 to 1700 different word forms. Taken together, the three course books analyzed in this chapter cover just over 600 types. Considered that Milton and Meara (1998) indicate that around 200 to 225 lemmas are learned per school year, and given that it is unlikely that all the vocabulary taught is also acquired by students, 600 word-types seem too limited an input to prove a stimulating lexical environment.

The comparison between teacher B (NNS) and teacher A (NS) produced some unexpected results. No evidence was found that the latter exposed the learners to a wider range of vocabulary neither that her classes were richer lexical environments

than the ones managed by the former. On reflection, and despite initial disappointment, it can be argued that the data showed no consistent differences between the lexis produced by the two teachers because such differences were simply not there. As discussed in chapter 3, both teacher A and B have in fact a very similar background. One is a qualified educationalist, the other has many years experience in the primary sector. They both know well the *planet child* and they both are highly proficient in the language they teach. My underestimation of the vocabulary available in teacher B's input originates in the impressions received from the recordings. As a matter of fact, the speech produced by the Italian teacher sounded, at times, artificial and grammatically inaccurate. For example, she would often ask the children to keep quiet and to focus on the task by formulating utterances like, "no silence, no English", or she would give directions like, "First time no music. Second time, the music". Also, she happened to supply the pupils with the wrong piece of grammatical information, like when teaching indefinite articles, she said, "It's *a* cow-boy. It's *a* sandwich. It's *an* hamburger, it's *an* hamburger". Obviously, the kind of investigation that was carried out in this study, by focusing on vocabulary, it de-structured the sentence and simplified it into lexical units thus disguising and breaking down the grammatical structure of teachers' speech. On the other hand, this non-native like kind of discourse could, in fact, master a native-like range of vocabulary and this is the aspect of teacher talk that the present study was able to bring to light and to analyze.

5.8 Conclusions

The present study aimed at qualifying the *total* amount of input received by young learners in formal instruction environments. It compared the *spoken* vocabulary produced by the teacher with the *written* language available from course books. Besides, it offered an insight in differences and similarities between two typologies of classes – earlier start, at six, and later start, at eight - and teachers - native and non-native speakers of English.

The following questions have been addressed:

- What amount of vocabulary are learners exposed to by their class teacher and course books?

- What proportion of the total vocabulary, produced per level of proficiency, is shared between the teacher and the course book?
- How many new words do learners typically encounter per class-period?
- Do NS teachers typically expose their students to a more *challenging* lexical environment than NNSs?
- Do course books expose learners to a richer lexical environment than the class teacher?

These are the findings from the present investigation:

- There is evidence in the data that the language produced by the teacher is, initially, strictly selected to meet the demands of the syllabus - by covering the same topics suggested in the texts. On the other hand, she seems to use the course books as a *source* of ideas – as a basic outline – from which to expand and substantially amplify the range of vocabulary she makes available to learners. On average, the vocabulary from course books only covers a proportion of around 30% of the total FL production by the teacher.
- Children of all grades seem to have access to a high number of new words per class-unit. Nevertheless, more proficient learners seem to be exposed to a *continuously* growing amount of new words, while the amount of new vocabulary, presented to children in their initial years of English instruction, stabilizes after a certain number of classes.
- There is no evidence in the data that NS teachers expose learners to a *wider* or *lexically richer* range of vocabulary. On the other hand, the data seem to suggest that course books typically employ a substantially richer vocabulary than teachers.

The questions I would like to address in the next chapter are the following:

- What proportion of the vocabulary covered in class is acquired by learners?
- Are words that appear in both sources of input (teacher speech and course books) more easily acquired by learners than words that only occur either in the text or in the language produced by the teacher?

Chapter 6

Experiment 3

Children at the outset of English instruction

Their journey from *input* to *uptake*

6.1 Introduction

The previous chapter has focused on the analysis of diverse sources of input available to young learners in the foreign language classroom. The *amount* as well as the *lexical richness* of the vocabulary found in course books was compared against the vocabulary produced by the teacher. Some evidence was found that the former typically employ a substantially richer vocabulary than the latter. On the other hand, it was suggested that attempts to qualify the vocabulary exposure of learners, in the foreign language class, based on the number of words contained in course books may seriously underestimate the amount of lexis available in formal instruction. As to the rate of introduction of new vocabulary, it was found that learners of all proficiency levels are exposed to a high proportion of new words per class period (typically 20% to 30% of total input – approximately 1 new word every 3/4 running words). The literature recommends much lower figures that range from 8 (Gairns and Redman, 1986) to around 12 (Scholfield, 1991) new words per teaching session, and indicates that fewer lexical items will in fact be learned by students (e.g. Milton and Meara, 1998). In consideration of the points raised above, I wanted to investigate how many words of the total lexis encountered our young learners seem to acquire.

Hence, the present study will try to gain an insight into this area of research that has risen many questions but given to date very few answers - the relation between *input* and *uptake*, as occurs in the foreign language classroom. Ellis (1994a: 287) states that, despite some understanding of the central contribution of input and interaction in the learning experience,

> We are still a long way from explaining how input interacts with the learner's internal cognitive mechanisms to shape the course of language acquisition and even further from being able to assign any weighting to external as opposed to internal factors.

Therefore, *input* interacts with a number of factors (i.e. learners' cognitive abilities, age, L1 - for a discussion, see chapter 2) while carrying out his *metamorphosis* into acquisition. Words become known or are left unnoticed for a variety of reasons.

A number of studies investigated the effect of repetition on vocabulary learning and it has been suggested that the exact number of repetitions needed for learning to occur varies from learner to learner and ranges from 5 to 20 repetitions per lexical item (Kachroo, 1962; Crothers and Suppes, 1967; Tinkham, 1993, cited in Nation, 2001: 81). Saragi et al. (1978) indicated a number of ten repetitions as a likely threshold for learning from written material. Nagy (1997) found that chances of learning and retaining words from a single exposure are very low (between 5% and 14%). Nevertheless, the gap between the two percentage values seems to suggest that word-repetition is, in fact, only *one* of the factors affecting learnability. Among others, Bergam et al., (2006) have investigated the effects of *word-length* on young learners. They found that longer words also take testees longer to process and to identify - despite the fact they often show a high degree of morphological transparency (Laufer, 1997b). Also, *phonological* and *orthographical correspondence* (Henning, 1973) as well as word-*imageability* (Ellis and Beaton, 1993, Lewis, 1993) have been found to facilitate acquisition of lexical items. Other factors playing an important role in the learning process are related to learners' *personality* (Wong-Fillmore, 1979), a*ttitude* and *motivation* (Gardner and Lambert, 1972) and *intellectual abilities* and *learning styles* (for a review of studies – Ellis, 1994a; Reid, 1995).

6.2 Aims and objectives

The present study aims at investigating the relation between *input* and *uptake*, as experienced by two groups of young learners studying English as a foreign language in primary state schools, in the Republic of San Marino. Grade 3 and grade 4 pupils are respectively eight and nine years of age. The former are in their first year of English instruction – with as little as ten weeks of exposure prior to the present investigation, for a total of approximately 20 fifty-minute teaching sessions. The latter are in their penultimate year of primary education, with approximately 70 hours of foreign language instruction.

The study will be divided into two parts. Part one will analyze the English vocabulary children *hear* from their teacher and *read* in the course books. Part two will investigate the relation between the total input available to learners in class and the proportion of vocabulary that they seem to acquire. To say it with Corder's (1967: 165) words, I will focus on the interaction between "what is available for going in" and what actually finds access to the child's mental lexicon and does *go in*.

Part one has the following objective:

- To quantify the exposure, in the foreign language, made available to young learners in class, from both course books and teacher.

These are the questions that will be addressed:

1a. Are more advanced learners exposed to a greater amount of input?
1b. What proportion of vocabulary is shared between the two proficiency groups?
1c. Which sources of input - between teacher speech and course books - characterize a richer lexical environment?

Part two has the following objective:

- To design a test based on the vocabulary employed in the classroom
- To investigate the effect of input on uptake.

The following questions will be addressed:

2a. Do more advanced learners typically acquire a higher number of words per class period than their less proficient peers?
2b. Are words heard closer to the date of test easier for learners to remember?
2c. Which are the factors that seem to better correlate with learners' uptake rate?

6.3 The data

The data collected for the present investigation consist of:

i. The input, in English, produced by the teacher in class and addressed to third and fourth graders.
ii. The course books used in the respective year-groups.
iii. Two batteries of Yes/No tests, one per grade.

6.3.1 Input from teacher

The teacher in this study is the same as in the previous chapter – NS of American English, with over thirty years of experience in the primary sector. She adopts mainly a communicative approach with some explicit teaching of vocabulary and use of focus on form activities. She follows the guidelines of the National Curriculum, although she articulates her teaching with the inclusion of hands-on activities that employ the use of a total physical response approach. Again, there is no language re-enforcement outside the classroom - other than a reasonable amount of homework, assigned by the teacher for the following class, which is normal procedure in all Italian schools, and that typically occupy one to two hours of children's after-school time.

As mentioned above, the subjects in this experiment are pupils in grades 3 and 4 of primary school and, therefore, in their first and second year of English instruction. It is important to notice that grade-4 learners, in the present study, are the same group of children as grade 3 pupils, in the previous chapter. This will allow us to access information on the students' exposure in the foreign language from *ab initio*.

The present corpora comprise three classes per grade – class A_3, B_3 and C_3 for grade 3, and class A_4, B_4 and C_4 for grade 4. Teaching sessions A and B are the last two classes before the end of term one and therefore before the Christmas break; teaching session C is the first lesson in January and it has been planned by the teacher as a revision class of the topics covered in the initial ten/eleven weeks of the school year.

6.3.2 Input from course books

The course books considered for the present investigation are *Storyland 3* (Read and Soberon, 1999) and *Storyland 4* (Read and Soberon, 1999). The text-books are organized into five units. Each unit comprises a variety of activities which range from role-plays and games to grammatical exercises and focus-on-form activities. All

explanations are given in the target language, the L1 (Italian) only appears in the bilingual wordlist at the end of the book where English lexical items are in bold.

The portion of text that will be considered for the present investigation comprises the first two units, plus the Christmas section, that cover the first part (approximately, ten weeks) of the school year.

6.3.3 Yes/No Tests

In this section I intend to illustrate a number of issues to be taken into account when assessing young learners; where the latter may differ from adults; and what are the reasons why I believe that Yes/No formats may be suitable for assessing children at the outset of learning a foreign language.

The literature (Meara, 1996b; Read, 2000) reports on the absence of a comprehensive and generally accepted single test able to measure vocabulary knowledge - even more so when dealing with young learners with only few hours of instruction and a vocabulary of no more than few hundred words, to say much. The latter are exposed to a variety of lexical contents that derive partly from the course books used in class and, more substantially, from the linguistic skills and teaching styles of individual teachers (see chapter five). Measuring the vocabulary size of learners at such low level of proficiency is a hard task. The theory that learning and vocabulary frequency are strictly related would indicate frequency material as a reasonable source for selection of word-items to include in tests addressed to the low level class (Meara and Jones, 1990; Meara, 1992; Nation, 1990, 2001; Schmitt, 2000). On the other hand, it has been suggested that a great proportion of vocabulary children are exposed to in class is made of lexical items not included in the first 2,500 most common words in English (Vassiliu, 2001; Donzelli, 2007). Therefore, despite the low level of proficiency of these learners, they seem to have access to a substantial amount of infrequent vocabulary. Hence, tests that rely on a basic 2,000-word vocabulary range may, in fact, underestimate the actual lexical knowledge of this category of learners.

For the reasons illustrated above, and in order to gain a better picture of the learners' achievement as well as of the complex relation between input and uptake at the offset

of learning I decided to assess our subjects by means of tests based on the actual vocabulary covered in the course.

Once a decision had been made on the nature of vocabulary to be implemented as *stimuli* a further issue needed to be addressed, that is the type of assessment measure that could better suit our purpose, which is that of assessing receptive vocabulary knowledge in young learners. Cameron (2001: 214) clearly states that the business of assessing young learners differs from practices in other foreign language situations for a number of reasons:

- The *age* factor becomes of paramount importance and brings with it a number of aspects that need to be taken into account when designing and implementing assessment with children, namely children's social, conceptual and linguistic development;
- In order for assessment to offer a true picture of learners' vocabulary knowledge in relation to the lexical content they have been exposed to in class it is essential that the test-construct focuses on lexical items that have been dealt with in the lesson-unit. Also, in consideration of the fact that a focus on oral skills is emphasized in young learners' teaching environments (Gilzow and Branaman, 2000; Cameron, 2001) it could be argued that testing formats based on oral skills are more likely to reflect the linguistic knowledge of test-takers, while the method of assessment of paper-and-pencil tests contrasts vividly with the classroom experience of today's young learners (also see general discussion, section 8.4);
- A test-format which contains simple and straightforward instructions as well as accessible tasks becomes a condition *sine qua non* when assessing young learners.

Moreover, with reference to more practical issues that can limit the range of options available to researchers when assessing young children I would like to emphasize the many administrative difficulties that researchers are likely to experience when entering the classroom environment with particular reference to formal permissions to be obtained, limitations on time schedule due to the requirements of the National Curriculum as well as to Child Protection regulations, teachers' availability and children's absences.

In consideration of the points raised above, the Yes/No vocabulary test format seemed to incorporate most of the requirements necessary when assessing young learners in the low-level *ab initio* class. In particular, by implementing a Yes/No format simple procedures could be followed; the subjects could be assessed on the exact range of vocabulary they were introduced to in class; a greater number of words could be tested in a limited amount of time; the lexical items could be presented by means of oral input which had the further advantage that test-takers could be constantly monitored by the test-administrator/s for what concerns their ability to focus on the task, level of fatigue, motivation, degree of assertiveness.

The literature that deals with the applicability of this type of assessment measure to young learners is scarce. The study by White et al. (1989) which investigates the validity of Yes/No tests with children in the low-level class reported a significant correlation between two test formats, a Yes/No test and a multiple choice test. He also found that successive interviews on the tested word-items showed that the Yes/No test was accurate in estimating the word knowledge of children in the initial stage of primary education, being at the same time slightly more accurate than the multiple choice test.

To our knowledge there are no studies in the literature to date which specifically focus on the suitability of the Yes/No test-construct with *ab initio* young children. On the other hand, a number of studies which have analyzed the vocabulary uptake of young learners in the low-level class by means of Yes/No vocabulary tests have come to strikingly similar results (Vassiliu, 2001; Donzelli, 2007).

Eyckmans et al. (2007) investigated the relationship between tested construct and test takers' response behaviour. They emphasized the importance of presenting items to test-takers one by one in order to avoid the possibility for testees to have an overview of the complete test thus remaining *in control* of their scores. In this study the authors argued in favour of a more controlled testing environment where variability in scores is more likely to relate to knowledge of the tested construct.

A final point I would like to raise focuses on the idea of self-assessment and on the ability of children of similar age as the ones involved in the research presented in this thesis to self-assess their knowledge of words. Traditional Yes/No vocabulary tests ask testees whether they think they *know* a set number of words. As discussed in chapter two (section 2.4) *knowing* a word has different meanings for different types of learners as well as for different types of words (Laufer, 1997b). One learner may associate the concept of *knowing* a word with his/her ability to use it productively; others may feel they need to know how to spell the word or to be aware of its multiple meaning and collocational patters or to be able to produce its translation equivalent in their L1. Eyckmans et al. (2007) claimed that task descriptions/direction to test-takers that are simple and straightforward are likely to encourage more consistent decision behaviour. This indication was taken into account in the process of designing the test format implemented in these studies. Subjects were not asked whether they *knew* a word but rather whether they thought they had *heard that word before*. Thus the task was effectively reduced from a test of receptive knowledge to a test of word recognition, addressed in the literature as one of the initial stages of word knowledge itself (Nation, 2001). By completing either task learners are requested to evaluate their lexical competence and self-assess their vocabulary knowledge. Cameron (2001) addresses the issue of the role of self-assessment with young learners of foreign languages. She indicates peer-assessment as a good half-way stage towards a final, self-assessment target but she also claims that, within the limitations of children cognitive development, the practice of self-assessment when adequately trained can be a successful exercise even in classes of five-year-olds. The teaching practice conducted by teacher A in this thesis regularly incorporates class activities that aim at enhancing children's ability to set their own goals and assess their own work; in Vygotskyan terms (1962) pupils are, here, regularly encouraged to move from being *other-regulated* to becoming *self-regulated* and autonomous.

In the light of the points discussed above, the assessment measures implemented in the present research consist of Yes/No vocabulary tests, conducted in their oral format and administered to students individually. Learners were tested on the exact vocabulary they were exposed to in class. A more controlled test environment allowed for a closer monitoring/observation of participants' response behaviour. This

last point will be dealt with in the methodology section (6.4.2. Also see discussion in chapter eight) in relation to the use of *pseudo-words*.

6.4 Methodology

I will divide this section into two parts, one concerning the input and the other dealing with assessment measures.

6.4.1 Part 1 – Input from teacher and course books

Criteria adopted in this study for counting words in teacher speech as well as in course books were consistent with the procedures employed in chapter five. To summarize, proper names, cardinal and ordinal numbers were all placed in base-list one – that is among the 1,000 most common words in English. Simple contractions (e.g. *it's, I've, don't*) typical of spoken discourse as well as syntactic forms - like *let's, John's car* – were changed into their constituent forms (e.g. *it is, do not, let us, the car of John*). Compound words, like *pencil-case* or *skate-board*, were spelt as one word, if referring to one single concept. On the other hand, compounds (e.g. *tennis racket, Christmas card*) which merged multiple concepts were treated as separate words.

The unit of measure for counting words was also kept consistent with the previous study and words are categorized by type and lemma.

The data collected comprise two sets of three successive classes each. One lot was recorded in grade 3 and another in grade 4. As mentioned above, recordings for both groups were taken; two in the last week of the first term and one in the first lesson after the break in January. It was estimated that third graders had had ten weeks of exposure, prior to the present investigation, for a total of approximately 15 hours of instruction, while children in grade 4 had had around 70 hours of foreign language instruction.

Class recordings were transcribed. The children data were removed and final corpora only contained the oral input produced by the teacher, in English. Two sets of transcriptions were thus obtained - one for each of the proficiency groups and each set comprised three sub-corpora, corresponding to individual lessons, as follows:

- Grade 3: class A_3, B_3 and C_3
- Grade 4: class A_4, B_4 and C_4

From each class a list of 20 word-items was derived, on whose knowledge learners were tested (see section 6.4.2).

The vocabulary from course books was limited to the units dealt with in term one. Each text constituted a lexical corpus. The corpora were analysed by means of *Web VP v 2.7 Classic* and according to the lists developed by Nation (1986). Information was obtained on the amount of vocabulary available to learners per level of proficiency; proportion of infrequent words; frequency of occurrence per type. These data were used to try and identify factors that seem to better correlate with learning (i.e. frequency of occurrence in the text/teacher speech, frequency in general English).

6.4.2 Learners' uptake - Y/N tests

In section 6.3.3, above, the suitability of the Yes/No format for young learners has been questioned and strengths and weaknesses of such test-format have been investigated and challenged. We acknowledged the difficulty reported in the literature (Meara, 1996b; Read, 2000) to identify a generally accepted single test that can find applicability in measuring the vocabulary knowledge of young learners with only few hours of exposure to the language and a vocabulary of as little as few hundred words.

Listed below are a number of factors and experimental conditions which have been taken into account in our attempt to identify a suitable assessment measure to be implemented in the analysis of learners' uptake:

a. learners are assessed on receptive vocabulary knowledge/ word recognition rate;
b. age of subjects remains an important factor. We deal here with children of 8 to 10 years of age who are still in the process of acquiring aspects of L1 orthography, morphology and syntax;
c. also, the fact that young learners' level of attention and motivation on task completion is likely to be limited if compared to adults resulted in the decision

to opt for an assessment measure which allowed me to test the greatest number of words in the shortest time possible.

d. in the light of the above, we aimed to test the knowledge of isolated lexical-items in order to prevent children's performance being favoured or hindered by contextual cues (see general discussion, chapter eight);
e. the words used as *stimuli* were to be selected among the actual vocabulary children were exposed to in class. In fact, given the low level of proficiency of our learners as well as the limited amount of vocabulary they are typically exposed to per lesson-unit (150 different words per 50-minute class, on average – see chapter five) it would be unreasonable to test their knowledge, for example, of the word *child* if the input they received only featured *children* or *swim* if they were only exposed to *swimming* (as in *I like swimming*).
f. simple testing procedures and straightforward instructions to test-takers needed to be implemented so that variability in scores could only be affected by subjects' knowledge rather than by the learners' different approaches in interpreting the task;
g. in consideration of the findings from the previous study that seemed to suggest that learners are exposed to a much greater amount of oral input from their class teacher than of written input from course books, I aimed at finding a test format that could be adapted for oral assessment;
h. finally, I aimed to implement an in-person testing format which allowed me to maintain complete control of testing procedures as well as to test subjects individually and *in-person.* A further and most relevant application of this type of administrative procedures was to allow me to *observe* the test-takers while in the process of accomplishing their task.

With reference to point *h.*, the centrality of *observation* in assessing young learners is emphasized by research (Cameron, 2001). Cameron (2001: 231) addresses observation as "one of the most useful assessment techniques to use with children". Observing is not just looking but it is rather to be intended as a specific and *goal-directed* way of looking and seeing which envisages a specific assessment focus that is attained by means of a particular set of information/criteria. For example, observation techniques can be used in evaluating testees' response behaviour (i.e.

degree of variation in response behaviour between subjects; learners' attitude towards task). The type of information that would give some evidence of test-takers attitudes can be found, for example, in their degree of assertiveness; subjects' commitment; participation; but also in a less *tangible* range of signals like, in the case of the present research, the children's face expression and/or body language (i.e. expressions of uncertainty; willingness to co-operate; shyness; fatigue) while in the process of completing the task.

The requirements of the National Curriculum which set a tight rhythm to teaching practices during the year together with the difficulties from the administrative point of view that independent researchers need to face in order to co-operate with primary schools, work with young children and test them did not allow me to *formally* include observation techniques (i.e. in the form of pre-planned activities recorded through checklists) as a valuable qualitative assessment measure and as part of the research presented in this thesis. Nevertheless, *informal* observation maintains a substantial role in the methodology implemented in these studies for a number of reasons. Firstly, informal observation was applied in the way how the test was administered (see section on *test design*, next), namely the class teacher administered the test while I kept records of the subjects' responses and general attitudes towards the task. When testees appeared uncertain, unreliable (i.e. quick responses given without paying much attention to *stimuli*) or tired I would note it down. Secondly, this type of informal observation contributed to creating a closely monitored testing environment one where subjects are likely to feel, for example, encouraged to keep a high level of attention throughout and reassured by the fact they can rely on eye-contact and emotional support from the test-administrators but also encouraged to produce truthful and honest responses and possibility discouraged to act otherwise. Finally, by creating a testing environment where the test developer can exercise as much control as possible over the way the testees proceed in completing the task we are likely to enhance the possibility that variability between scores "can only be attributed to knowledge of the tested construct and not to preconceptions or attitudes" (Eyckmans et al., 2007: 63).

Test design

The Yes/No format was believed to satisfy most of the requirements listed above. It was introduced to the students as a kind of self-assessment procedure, which they are accustomed to and feel familiar with.

Transcriptions were analysed by means of V_Tools (Meara, 2003) and changed into word-lists, by type. Three lists, in each grade, were thus obtained – list A_3, B_3, C_3 (in grade 3) and List A_4, B_4, C_4 (in grade 4) – corresponding to lessons A, B and C recorded during 3 successive classes, on Thursday 13th December, Tuesday 18th December and Tuesday 8th January, respectively. The tests were administered on the following Thursday (10th January). The 18th December was the last class before the Christmas break; 10th January was the first, after the holidays, and intended by the teacher as a revision class. Words only appearing in one list and not in the other two were identified and 20 stimulus-words were randomly selected, per list, among nouns, adjectives and verbs, for a total of 60 types tested per grade. The programme used for randomization was *Research Randomizer* (available free online at the following address, http://www.randomizer.org/form.htm). Subjects were presented with a selection of exactly the same *stimuli* they had been exposed to in class. Words such as *skiing* were left unchanged if the base form of the verb did not appear in the input; regular nouns only appearing in the singular/ plural forms were so reported; plural forms of irregular nouns were left unchanged; regular nouns with both singular and plural forms were lemmatized and the frequency of occurrence in the text was calculated as the sum of the two.

The class teacher and I administered the tests together. The former - native speaker of American English – read out the *stimuli* to the testees for consistency of pronunciation. She uttered the *stimuli* one by one and at regular intervals for each of the subjects. The latter kept records of the test-takers' responses and of any relevant behaviour which could be referred to the subjects' attitude towards the task (i.e. level of concentration; degree of assertiveness/uncertainty; production of translation equivalents in L1).

Pseudo-words – issues to be taken into account when testing young learners

Pseudo-words, as a measure to be implemented in correcting for guessing, generally comprise a substantial proportion (approx. 30%) of the overall number of *stimuli* used in yes/no vocabulary test formats (Meara, 1989). Testees, if unsure of whether they know a word, may in fact be induced to make guesses that may lead to a risk of alteration of data due to *response bias* (Eyckmans et al., 2007). Nevertheless, as addressed in chapter two, the application of formulas for scoring of tests may result problematic particularly in the case of testees answering *yes* to a high number of pseudo-words (Shillaw, 1996). Also, it has been argued (chapter two) that while it can be reasonably straightforward for an adult with some knowledge of English to indicate which one of words like *red* and *lannery* actually exists and which one is a pseudo-word, for a young learner with no or little previous exposure to the foreign language and whose cognitive and L1 linguistic abilities have not yet fully matured (Ellis, 1994a) it may not be a clear-cut decision to make particularly if tested by means of oral *stimuli.* A child may in fact confuse the sound *lannery* with the word *Connery*, or *ight* with *light* or *height*. In both cases incorrect responses would result in lower scores as a reflection of the subjects' lack of knowledge. On the other hand, it has been argued that by associating *non-words* to *proper* words, the subjects give evidence of knowledge of extra word-items, despite the fact they may not recognize the pseudo-words as such. The point I would like to emphasize here is that while the implementation of pseudo-words has some clear advantages with particular reference to limiting the possibility for adult learners to overestimate their vocabulary knowledge (Meara and Jones, 1988; Meara, 1989) it is not clear whether similar advantages would also apply to younger learners.

Observation – as an alternative to pseudo-words when testing young learners

In consideration of the cognitive and meta-cognitive abilities of learners of similar age and stage of development as the subjects who contributed to the present research a different yes/no test format has been implemented in the studies reported in this thesis for the investigation of learners' uptake rate. Pseudo-words have not been included as *stimuli* and subjects have been tested on 60 word-items corresponding to an equal number of existing words in English (also see discussion). In order to monitor the degree of guess-work as well as the learners' attitude and response behaviour *informal* observation was implemented. This was possible due to the fact

that the class teacher administered the test and I assisted writing the answers and taking notes of children's behaviour and attitudes (i.e. degree of assertiveness; participation; expressions of uncertainty; fatigue - see point *h.* above and successive discussion).

It has been suggested in the literature (Eyckmans et al., 2007) that while the inclusion of pseudo-words and the implementation of related correction formulas is one way of dealing with the response bias issue, namely learners' attitude towards the task, which may compromise the validity of the test format itself, another equally valuable way could be that of creating a testing environment where the test-developers 'exert as much control as possible on the way the testee proceeds in taking the test' ((Eyckmans et al., 2007: 63). In so doing the attained scores will be reflecting the subjects' actual knowledge rather than the testees' individual attitudes towards the task.

The fact that in the present research subjects were tested *individually* (one by one and in a separate room while the rest of the class was carrying on with lessons as usual) and *in-person* (according to a 2:1 administrator/test-taker ratio) as well as by means of an oral test-format which set a clear and consistent pace within each test and across tests contributed, we believe, to creating a more controlled test environment one which allowed for a closer monitoring of participants' response behaviour, thus disambiguating the tested construct and making it independent of learners' attitudes.

Finally, the scores on Yes/No tests were compared by the teacher with the learners' average attainment level in general English.

It should be noticed that classes in Italy typically comprise a low number of students, compared to UK. There are 18 3rd graders in all, and only 14 pupils in grade 4. One subject in the latter group was excluded from the present study due to the production of unreliable answers.

In order to check the reliability of these tests a calculation of Cronbach's alpha was made using the three lists as the basis of the calculation. The results suggest the tests are reliable. For grade 3 $\alpha = .725$ and for grade 4 $\alpha = .837$.

Instructions to children

The instructions given to the children were simple and straightforward. They were asked to reply *Yes* or *No* to the question "Have you heard this word before?" They were told that some of the words they would recognize as known, while others would sound new. The teacher explained that I was writing a book on their school and on the way how Italian children learned English. Only those who acted honestly and responsibly could take part in the project.

6.5 Results

Results dealing with lexical exposure will be presented in part one. Data related to students' uptake will constitute part two. The results of the present study will be reported in the same order as the questions raised in section 6.2.

6.5.1 Part 1 – Input available to learners in the low-level class

This first part will illustrate the results obtained from the analysis of the input received by pupils in class. It is worth remembering that teacher speech consists of three successive teaching sessions per grade, taken at the very end of term one, in the academic year. Input from course books, on the other hand, comprises the initial two units of the texts, which would cover the whole duration of the same term.

Are more advanced learners exposed to a greater amount of input?

To answer the first question, I calculated the mean number of types produced by the teacher in grade 3 and grade 4, respectively and I compared it with the exposure from the course books.

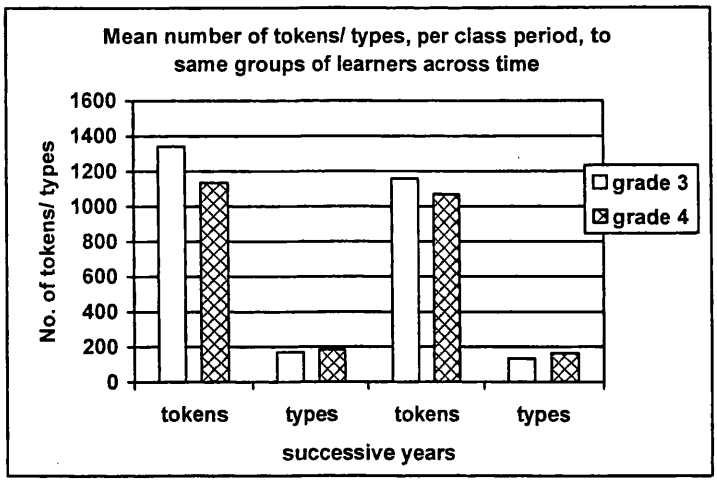
Table 6.1: Mean number of tokens, types and lemmas in teacher speech and course books.

	Teacher speech **Mean no. of tokens, types and lemmas** ***per class period***	**Course books** **Mean no. of tokens, types and lemmas** ***per term***
Grade 3	1342	987
	168	246
	148	208
Grade 4	1133	1469
	183	358
	156	318

It is important to notice, how the data in the course-book column use the school term as a unit of measure (figures ÷ 10 = token, types and lemmas per teaching unit), while the amount of speech produced by the teacher has been calculated per class-unit. The data seem to suggest that both sources of input expose learners of both proficiency-groups to a fairly similar amount of vocabulary. Nevertheless, the vocabulary available from teacher speech, per 50-minute lesson, seems substantially *larger* (as to number of running words) and *wider* in range (as to amount of different words) than the vocabulary children have access to in course books. These results confirm the findings of the previous study.

In order to find out whether similarities in the *number* of different words, uttered by the teacher in the two level-groups, also reflect similarities in the *choice* of vocabulary, the degree of overlap between the language available in grade 3 and grade 4 was calculated, as shown in figure 6.1. An accurate analysis, on this point, should be based on longitudinal observations. Nevertheless, due to the difference in length of the recordings taken for the previous and the present experiments, and considered that the course books used by the teacher in both studies are the same – hence similar oral exposures to same level-groups across time, as shown in figure 6.1 – I have compared input in grade 3 and grade 4, by means of data collected in the same school year.

Figure 6.1: Longitudinal study of teacher speech in grade 3 and grade 4.



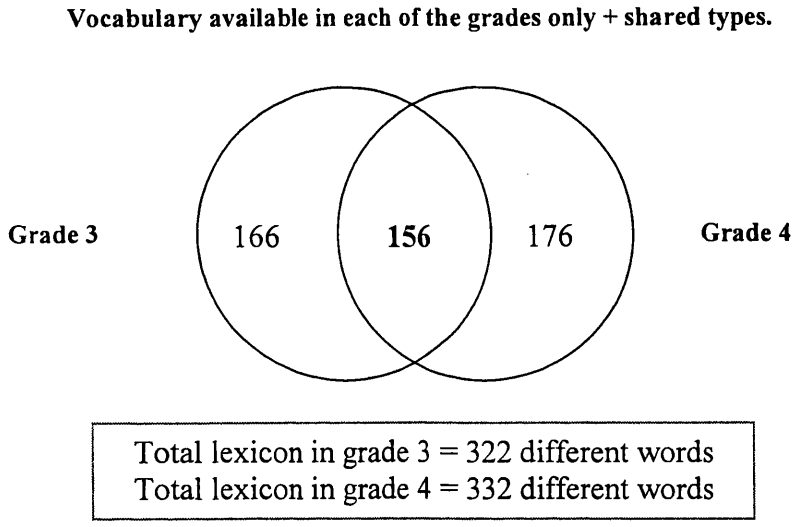
As mentioned above, the data in figure 6.1 seem to suggest that learners at equal proficiency levels are taught in a very similar manner and exposed to substantially the same range of vocabulary, across time.

The next question will investigate the lexical relationship between successive years of study, grade 3 and grade 4, in order to analyze whether vocabulary is recycled from one year to the next, or if different semantic contexts are dealt with in different level-groups.

What proportion of vocabulary is shared between the two proficiency groups?

To answer this question, the input from the teacher, in classes A, B and C, in grade 3, was grouped together and constituted a single corpus. It was then analyzed by means of *V_Tools v 6.0* (Meara, 2003). The same procedure was employed for grade 4. Lists of word-types were thus obtained. Words only occurring in each of the two files were calculated as well as shared vocabulary was identified.

Figure 6.2: Shared vocabulary between grade 3 and grade 4.



A good proportion (around 50%) of vocabulary used in grade 4 has been recycled from the lexical availability of the previous year and a fair amount of them comprise content words, namely animal names, objects in the classroom, numbers, verbs. Figure 6.2 seems to confirm our reading of the data in table 6.1, namely that the teacher appears not to differentiate between more proficient and less proficient learners, with regard to vocabulary load.

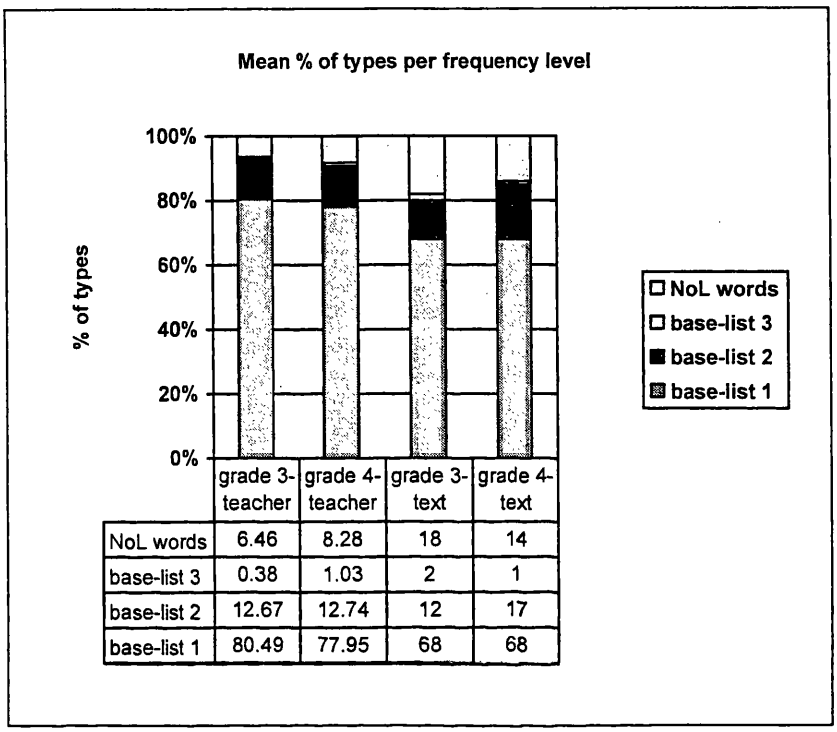
The next step forward is to investigate the lexical richness of the vocabulary available to children in the two year-groups, and it is addressed in the question that follows.

Are more advanced learners exposed to a richer lexical environment? And is the input of written sources (course books) richer than the input from spoken discourse (teacher)?

For this purpose, the corpora collected for the present study were analyzed, using *Web VP v 2.7 Classic* - online version of *Range* - and according to the frequency lists developed by Nation (1986). The same procedure employed in the previous experiments (chapters 4 and 5) was repeated here. The vocabulary in the corpora was classified into four frequency levels. The working assumption was that a small proportion of infrequent vocabulary would qualify a poor lexical environment, while

a greater amount of unusual words will constitute a richer lexical scenario. The analysis is illustrated in figure 6.3.

Figure 6.3: Mean percentage of word-types per level of frequency.



	grade 3-teacher	grade 4-teacher	grade 3-text	grade 4-text
NoL words	6.46	8.28	18	14
base-list 3	0.38	1.03	2	1
base-list 2	12.67	12.74	12	17
base-list 1	80.49	77.95	68	68

As expected, course books (written texts) present a much lower proportion of common vocabulary (68% versus 80.49%, in grade 3, and 77.95%, in the next level up) than teacher speech (spoken discourse). Therefore, confirming the results discussed in the previous chapter, the former seem to characterize richer lexical environments than the latter. Nevertheless, the difference between the lexis introduced to the least experienced pupils and to the more advanced children is, in fact, small. Besides, learners with just over a year of foreign language instruction seem to be exposed by their teacher to a marginally richer lexical input than their younger peers. Opposite results, for the same year-groups, were obtained in the previous study, where unusual vocabulary in grade 3 was calculated at around 10% of the total input, while words belonging to the same frequency level, in grade 4, only reached a figure of 5.55%. On reflection, these differences may be partly due to a change in the group of children attending the same year-group (e.g. change in

enrolment numbers, subjects' academic skills, support teacher joining in or leaving the group) as well as to a variation in length of the corpora taken into account.

Having qualified the language available in class, in this first half of the study, part two will now try and shed some light on the complex relation between what learners hear and read in class and what they actually learn, between "what is available for going in" and what actually does *go in* and finds access to the child's mental lexicon and becomes acquired (Corder, 1967: 165).

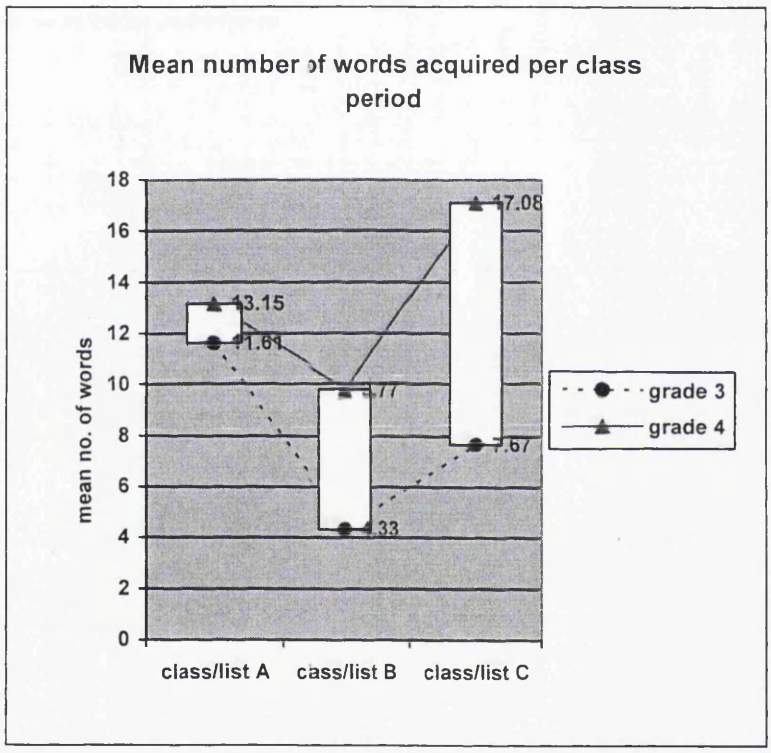
6.5.2 Part 2 – Learners' uptake

The test-format as well as the procedures adopted for its administration have been extensively dealt with in the methodology section. For convenience of reading, the main points will be summarized. One check-list test was compiled, for each of the two grades involved in the study. It contained 60 stimulus words, in total, subdivided into three lists of 20 word-items, each – list A_3, B_3, C_3 (for grade 3) and List A_4, B_4, C_4 (for grade 4). Every list comprised words only occurring in the respective lesson, and not in the other two classes. The teaching sessions in question took place between the 13th December and 8th January. The tests were administered on the following Thursday, 10th January, for both year-groups. The class closer to the date of test was intended, by the teacher, as a revision session and therefore words available to learners in this teaching session were expected to be better acquired by pupils than words included in the other two lists. Students were tested individually. Stimulus words were read out, at a regular pace, by the class teacher so that the pronunciation would be kept the same as the one the subjects had been exposed to, during the school year. The administration of tests lasted approximately five minutes, per child. Pupils were instructed to answer *yes* or *no* to the question "Have you heard this word before?" Items heard closer to the date of test are expected to be better remembered. Also, fourth graders – with an extra academic year of foreign language exposure - are expected to somehow qualify as better listeners and, thus, to acquire a more substantial number of words than children in grade 3. This leads us to our next question.

Do more advanced learners typicaly acquire a higher number of words per class period than their less proficient peers?

In order to address this issue, the mean number of *Yes* answers (*hits*) per level of proficiency was calculated. Each child was given a score that was summed up with the others and then averaged by the number of subjects (18, in grade 3; 14, in grade 4). The highest total score possible, per child, is 20 *Yes* answers, per list, that is a final highest test-score of 60 (20 stimulus-words x 3 lists, corresponding to the three successive classes recorded).

Figure 6.4: Mean number of *yes* answers per list, per grade.



As expected, more advanced learners seem to typically acquire a greater amount of vocabulary than children with fewer hours of exposure to the foreign language (figure 6.4). On average, pupils in grade 3 remembered 7.67 words per class-period (almost 5% of the vocabulary they had been exposed to in the same time unit), while their older peers were able to identify nearly twice as many words, that is, 13.3 items per list/ lesson (7.3% of vocabulary heard per lesson-unit).

An independent-samples t-test was also conducted to compare the Yes/ No test scores for the two levels of proficiency (i.e. grade 3 and grade 4), as shown in table 6.2. Significant difference in scores was obtained for third graders (M=23.61, SD=5.008), and fourth graders (M=40.00, SD=7.948; t(29)=-7.046, p=.000). The magnitude of the differences between the groups was calculated. A large group-effect size of .63 was estimated (eta squared=.63), which indicates that 63% of the variance in the number of words, identified by subjects as known, is explained by learners' level of proficiency. Therefore, as expected, more advanced learners seem to acquire a substantially higher number of words than children at the outset of learning. The group-effect sustains even when the difference between the two proficiency levels is based on just few hours of formal instruction (e.g. pupils in grade 4, in the present study, will have had around 70 hours of English instruction, while pupils in grade 3, less than 20 hours).

Table 6.2: Mean number of *yes* answers for third and fourth graders.

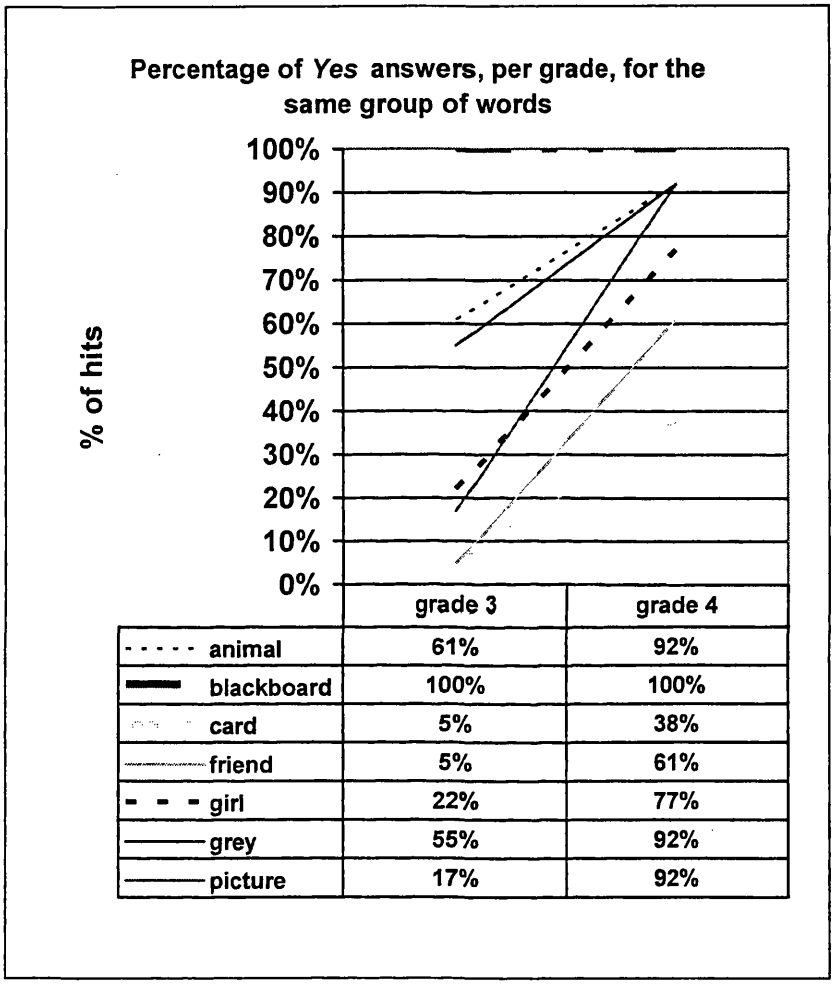
Group Statistics

	group	N	Mean	Std. Deviation	Std. Error Mean
YES	3rd graders	18	23.61	5.008	1.180
	4th graders	13	40.00	7.948	2.204

Besides, the scores of third and fourth graders on a group of seven items, which appeared in the test-formats of both level-groups, were compared. As illustrated in figure 6.5, learners in grade 4 outperformed their younger peers in their ability to identify, as known, a selected number of words. The only exception is *blackboard* – a supposedly salient and highly frequent word in the classroom environment – which reaches a ceiling effect, with 100% of pupils claiming to recognize it as familiar in both grades. It is interesting to notice how all words in figure 6.5 - apart from one, *card* – had already been available to learners, presently in grade 4, in their previous year of English instruction that is when they were still attending grade 3. Significant differences in the mean scores were obtained, for grade 3 (M=37.86, SD=35.44) and grade 4 (M=78.86, SD=22.2; t(12)= -2.59, p=.02). Nevertheless, an independent samples t-test, which compared the mean scores for two groups of words - where group one comprised the new items in grade 4 and group two included the words

already available to the same group of learners in the previous year of English instruction - indicated no significant differences between the means (new words, M=8.32, SD=3.75 and recycled words from previous year, M=9.40, SD=4.49; t(58)= -.98, p=.33).

Figure 6.5: Percentage of word-recognition of third and fourth graders.



	grade 3	grade 4
animal	61%	92%
blackboard	100%	100%
card	5%	38%
friend	5%	61%
girl	22%	77%
grey	55%	92%
picture	17%	92%

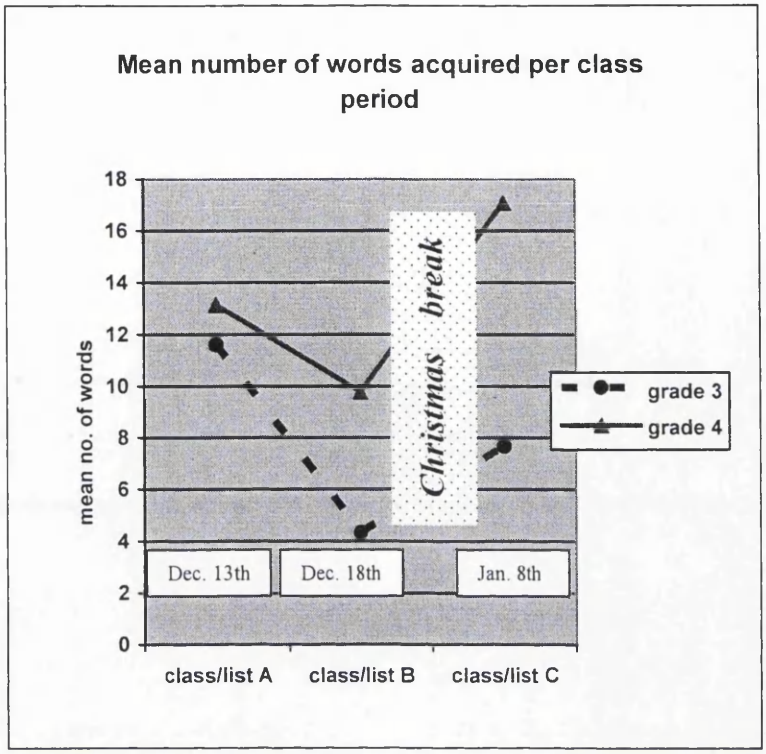
Taken together these results seem to suggest that, despite the importance of recycling and consolidation of vocabulary (Nation, 1990; Willis, 1990), such activities, per se, may not necessarily lead to acquisition. Different words or categories of words may need different amounts or ranges of recycling and consolidation strategies. A more consistent number of items than the ones available in the present study, would be required to test this hypothesis.

The next question will shift the attention from the *amount* of vocabulary learnt to the interaction between learning and time of exposure.

Are words heard closer to the date of test easier for learners to remember?

Before answering this question, it is important to review some information regarding teacher input and test administration in order to be able to accurately pin-point them in a time scale. Tests, for both groups, were administered two days after class C. Classes A and B were held within a week, while class C was delivered after the Christmas break and, therefore, after approximately three weeks from lesson B (figure 6.5). Also, teaching-unit C was intended as a revision class for the topics covered in the first term. Given the fact the items selected for each of the lists in the tests were extracted from the respective class-corpora, the time interval - between the date learners had come across words included in the first list (list A) and the actual date of test – was of approximately four weeks. Taken together, these considerations led the researcher to expect that words heard only two days before the date of test would be more easily remembered by learners than words heard almost one month before. On the other hand, the data in figures 6.4 and 6.6 show no evidence of this. In fact, third graders – that is children with less than 20 hours of foreign language instruction – remembered the highest number of words among those uttered by the teacher in the most remote lesson, from the date of test (stimuli reported in list A). Similarly, fourth graders' uptake rate does not seem to follow an exact time-pattern - 13.15, 9.77, 17.08 stimulus-words were remembered, on average, from list A, B and C, respectively. Both groups acquired the least number of words from list B – an average of 4.33 hits in grade 3 and 9.77 in grade 4 (also see table 6.3 and qualitative analysis on word-saliency in lesson-context, in this section).

Figure 6.6: Mean number of *yes* answers per list, per grade.



In order to find out whether the differences between the lists - list A (words extracted from class held on 13th December), list B (from class held on 18th December) and list C (from class held on 8th January) - are statistically significant, with reference to the number of words recognized as familiar by learners of both levels of proficiency, repeated paired-samples t-tests were conducted. This methodology was considered the most suitable for the analysis of this set of data. The presence of three conditions implies a relatively simple design and, statistically, the probability of making a type I error is estimated as not severe. The means and standard deviation for grades 3 and 4 are presented in table 6.3. Words in lists B proved the least learned by pupils of both proficiency levels and the ones with the highest standard deviation (SD=2.3 and 4.04 for grade 3 and 4, respectively). This indicates that, on average, learners found the lexical items produced by the teacher in the last class of term harder to familiarize with and, therefore, more difficult to acquire and it also shows the degree of *diversity* and fluctuation in learners' responses to individual word-items (relatively high standard deviation figures, compared to the means). For both groups, the three successive lists of words proved to behave significantly differently in terms of scores

elicited, as shown in table 6.4. The eta squared statistic for each of the three pairs, per group-level, indicated a large effect size (table 6.4).

Table 6.3: Descriptive statistics for grades 3 and 4.

Paired Samples Statistics

Grade 3		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	listA	11.61	18	1.577	.372
	listB	4.33	18	2.301	.542
Pair 2	listA	11.61	18	1.577	.372
	listC	7.67	18	2.275	.536
Pair 3	listB	4.33	18	2.301	.542
	listC	7.67	18	2.275	.536

Paired Samples Statistics

Grade 4		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	listA	13.15	13	2.641	.732
	listB	9.77	13	4.045	1.122
Pair 2	listA	13.15	13	2.641	.732
	listC	17.08	13	2.139	.593
Pair 3	listB	9.77	13	4.045	1.122
	listC	17.08	13	2.139	.593

Table 6.4: Summary of paired samples test for grade 3 and grade 4, respectively.

Group 3	list A – list B	t(17)=14.64	p<.0005	eta squared=.93
	list A – list C	t(17)=7.32	p<.0005	eta squared=.76
	list B – list C	t(17)= -6.97	p<.0005	eta squared=.74
Group 4	list A – list B	t(12)=3.91	p<.005	eta squared=.56
	list A – list C	t(12)= -6.08	p<.0005	eta squared=.75
	list B – list C	t(12)= -11.34	p<.0005	eta squared=.91

To summarize the outcomes to this point, it was established that while there was no indication in the data that words heard closer to the date of test are better learner by students than lexical items encountered earlier in time, there is some evidence of the

fact that more proficient students seemed to typically acquire a much greater number of words per class period than their younger peers (an overall average of 7.67 word-items, in grade 3, and nearly twice as many, 13.33 words, in grade 4). Surprisingly, the data for children in their second year of English instruction show only little difference in the mean number of new words acquired compared to the number of recycled items from previous year. The difference was not significant (see discussion on this point). Finally, stimulus-words from list B were the hardest to remember for both level-groups and those where learners obtained significantly lower scores.

In order to investigate this point further as well as to try and identify some of the factors that seem to hinder or enhance the acquisition of selected vocabulary in young learners, a qualitative analysis of the items in lists B was carried out and stimulus-words from each of these lists were compared with the stimuli from lists A and C, in the correspondent proficiency group (table 6.5).

Table 6.5: Word-stimuli per successive lists, per grade.

grade 3		
list a	**list b**	**list c**
blackboard	dog	flower
sharpener	night	ladybird
window	photocopy	tree
desk	children	pink
insect	snake	school-bag
white	boy	school
door	magician	penny
book	**girl**	ant
animal	big	bee
bat	ball	duck
grey	cage	back
nice	classroom	train
open	leg	caterpillar
plant	mice	owl
name	poster	repeat
bag	snow	sheep
close	**card**	worm
picture	sheet	little
friend	teeth	page
table	tongue	shirt

grade 4		
list a	**list b**	**list c**
blackboard	nine	brother
factory	**picture**	butterfly
field	map	copybook
jacket	next	family
nose	**girl**	fish
beard	**friend**	frog
grey	rain	hair
gloves	storm	hand
magic	Scotland	**animal**
bike	first	body
boots	pair	coat
toys	snowman	dragon
park	skiing	eleven
fat	swim	crisps
time	put	clothes
card	weather	eye
mittens	circle	cotton
mountain	ask	finger
exercise	survey	dream
thumb	example	blouse

Stimuli are reported in order of acquisition – and not in the same order as in the tests – with better learned items listed first. The words that appeared in the test-formats of both groups are in bold (also see figure 6.5).

The literature indicates that a plurality of factors may interact and differently contribute to learners' perception of words as being hard or easy to acquire (also see chapter two). Laufer (1997b) suggests that intra-lexical factors - that is the intrinsic properties of a word (i.e. length, pronunciation, morphological complexity, synformy, idiomaticity, multiple semantic identity) - may influence the degree of learnability of lexical items. Also, it has been argued that imageable words - that is words which arouse a mental image – may be easier to learn than abstract vocabulary (Ellis and Beaton, 1993, Lewis, 1993). Similarly, nouns may be easier than verbs, particularly when dealing with younger learners (Phillips, 1981; Gentner, 1982). In consideration of the above, the qualitative analysis of words in lists B was based on criteria of length, part of speech and degree of imageability. As shown in table 6.6 - and according to criteria of word-difficulty set in the literature and reported above - the test-format addressed to learners in grade 4 seem to comprise a higher proportion of verbs in list B (20%) than in the other two lists, as well as a lower percentage of highly imageable words (60% versus 75%). On the other hand, the test-format addressed to third graders consists of easier word-items in list B than in the other two lists. 90% of lexical items, in list B, are made of highly imageable words - compared to 75% in lists A and C. 95% of them are nouns – compared to 77.5% in lists A and C. Also, an equal proportion of one/two-syllable words appear in list B (75%+15%) and list A and C (62.5%+27.5%), respectively. Disappointingly, grade-3 set of data gives no indication on the reasons why items from list B proved the hardest for learners to acquire. Nevertheless, taking a closer look at the items in lists A, B and C, it can be noticed how list A contained a relevant proportion of words related to the classroom environment (e.g. *blackboard, door, desk, open, close, window*). Similarly, 50% of stimuli in list C comprised names of animals (e.g. *ant, owl, caterpillar*), while words in list B seemed harder to group into semantic categories. At this point, I went back to the respective recordings, in order to identify the topics covered in each of the three lessons. All classes started off with a brief revision task and moved on to some specific teaching of vocabulary, grammar or set of activities. The teaching-point for lesson A, were *actions* and *objects* in the classroom. The teacher would utter

sentences like *open the door, close the window, touch the table* and children are expected to act out the actions. Pupils also had a go at formulating instructions for peers. *Animals* were the teaching-point, for lesson C. Specifically, children were asked to guess the correct animal name, while the teacher was producing a description of it (e.g. *it has eight legs, it's hairy, it has two eyes*). Finally the teaching-point for lesson B were *numbers*. Going back to the stimuli presented in the Yes/No test, for grade 3, it can be noticed that, while the words comprising list A and C matched the teaching-points of the correspondent class, lexical items in list B did not. A similar pattern was also noticed for grade 4 test-format. The qualitative data seem to suggest that word-saliency in spoken discourse may play an important role in the relation between input and uptake, particularly when dealing with young learners, in the low-level class. As it is evident from the data collected for this book on teacher speech, children at primary level are typically exposed to words in meaningful contexts. They become familiar with ready-made sentences, like *what's your name?* or *how old are you?* well before they are able to recognize *name, you, old* as self-standing and autonomous lexical items. From the class recordings, one can often hear the teacher reminding the children of a word they should know, which they seem not to remember. The teacher says something like, "do you remember the song...?" She thus creates a meaningful context for the word in question, or places the word in the very context where the children have encountered the item. By doing so, she somehow highlights and *locates* the item-domain, thus allowing the learner to identify the correct *route*, in the maze of the foreign language vocabulary. The child is now able to gain access to the target word.

As discussed in chapter two, the literature reports on differences in learning strategies adopted by adults and young learners (for a review of studies see Ellis, 1994a). Similarly, Chesterfield and Chesterfield (1985) investigated the way how children's strategies appear to change in accordance with their level of proficiency in the foreign language. The data collected in the present study seem to suggest that some differences occur between third and fourth graders, as to factors affecting learnability of lexical items. A one-way between-groups analysis of variance was conducted to explore the effect of part of speech on uptake rate. The *stimuli* in the tests were divided into three groups – *nouns, verbs* and *adjectives*. There was no statistically significant difference for the three parts of speech, for grade 3 [$F(2, 57)=.78$, $p=.46$]

but significant difference, at the $p<.05$ level, was obtained for grade 4 [$F(2, 57)=3.5$, $p=.03$]. The effect size was estimated as large (eta squared=.11). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for nouns ($M=$ 9.02, $SD=4.01$) was significantly different from verbs ($M=$ 3.75, $SD=1.89$). Adjectives ($M=$ 9.20, $SD=2.59$) did not differ significantly from either nouns or verbs.

Table 6.6: Qualitative analysis of items in lists B.

Grade 3	**Length**			**Part of speech**		**Imageability**	
	1-syllable words	**2-syllable words**	**3+-syllable words**	**nouns**	**verbs**	**high**	**Low**
List B	75%	15%	10%	95%	-*	90%	10%
List A & C	62.5%	27.5%	10%	77.5%	10%*	75%	25%
Grade 4	**Length**			**Part of speech**		**Imageability**	
	1-syllable words	**2-syllable words**	**3+-syllable words**	**nouns**	**verbs**	**high**	**Low**
List B	60%	35%	5%	65%	20%*	60%	40%
List A & C	52.5%	30%	17.5%	90%	-*	75%	25%

*Remaining proportion, comprising *adjectives*.

A further analysis was conducted to compare the learnability scores of items with a high or low degree of imageability. There was statistically significant difference in scores, for the acquisition of imageable ($M=9.36$, $SD=3.66$ - $M=7.73$, $SD=6.58$) and non-imageable words ($M=7.1$, $SD=4.43$; $t(58)=2.04$, $p=.04$ - $M=4.5$, $SD=3.45$; $t(58)=2.35$, $p=.03$), for both grade 3 and grade 4, respectively. The effect size, for all group-level, was moderate.

Imageability is only one of the factors that seem to influence learnability of vocabulary, particularly with younger learners. Moreover, a generally accepted assumption is that *frequency of occurrence* in the general language is likely to have an impact on acquisition, so that words that belong to a higher frequency band may be learned before words that belong to lower frequency bands. Therefore, lexical items like, *artist, letter* or *question* - which belong to the first 1,000 most common words, in English, are likely to be perceived, by the majority of language learners, as easier to acquire than words like *aggregate, inspect* or *reverse* - that are not among the 2,000 most frequent words in the language, although they may not differ greatly in aspects

such as length, pronunciation or morphological complexity. Unfortunately, similar criteria of *lexical difficulty* have been often evaluated in experimental conditions which involved adult learners. To date, we still have little knowledge of the way how words - made available by teachers in the foreign language classroom - get isolated from the stream of speech, *encoded* and successively *retrieved* by young learners; on the criteria that guide such process and on whether, as mentioned above, different criteria apply to learners of different proficiency levels.

The next and final question has no pretension to answer these issues at once, but will try and investigate how factors like general frequency in the language, frequency of occurrence in spoken discourse as opposed to number of repetitions in text-books seem to interact with learnability, in the low-level class.

What factors seem to best correlate with learners' uptake rate?

In discussing table 6.6, three factors affecting learnability were taken into account, word-*saliency*, degree of *imageability* and parts of speech. As expected, pupils of both proficiency levels (grade 3 and grade 4) seemed to acquire a greater proportion of vocabulary of imageable words as well as from items which matched the teaching point of individual lessons. In fact, lists B, which comprised the highest proportion of *instrumental* vocabulary (that is, words used by the teacher in class but which were not strictly relevant to the teaching point of the lesson-unit) obtained the lower significant scores. As to the difference in scores for nouns and verbs, it only reached statistical significance for pupils in grade 4.

Independent samples t-tests were conducted to compare the scores for cognates and non-cognates, in both grades. Despite the latter showed similar differences between the means for cognates (grade 3, $\underline{M}$=8.86, $\underline{SD}$=4.45; grade 4, $\underline{M}$=10.8, $\underline{SD}$=2.2) and non-cognates (grade 3, $\underline{M}$=6.85, $\underline{SD}$=6.39; grade 4, $\underline{M}$=8.26, $\underline{SD}$=4.16), only more advance learners seemed to distinguish, significantly, between the two categories of words [$\underline{t}(58)$= -2.79, $\underline{p}$=.01].

Also, the stimuli in the tests were grouped by semantic category. Table 6.7 reports the descriptive statistics for grade 3 and grade 4, respectively. The first striking result is that while teacher input addressed to 4th graders could be grouped into six groups of

word, plus the mixed category of miscellaneous words, the language available to 3rd graders only comprised two distinct groups – *instrumental* vocabulary and animals. The mean number of *yes* answers per word-category in grade 3 were almost identical and there was no significant class effect [F(2, 57)=.003, p=.99]. A one-way between-groups ANOVA conducted on grade 4 confirms the difference between the means are not significant [F(6, 53)=1.34, p=.25], possibly due to restricted number of items per class, as well as to the variation in scores within groups. Nevertheless, lexical groups 1 (parts of the body) and 6 (animals) made the easier words for learners to acquire, while group 3 (*instrumental* vocabulary) and 4 (weather) were the hardest.

Table 6.7: Mean scores, by semantic categories.

Grade 3				Grade 4			
Group*	**Mean**	**N**	**Std. Deviation**	**Group***	**Mean**	**N**	**Std. Deviation**
1	-	-	-	1	10.00	9	3.97
2	-	-	-	2	8.33	9	3.60
3	7.00	22	6.54	3	7.46	13	5.14
4	-	-	-	4	7.43	7	3.50
5	-	-	-	5	8.44	9	3.17
6	7.13	15	6.07	6	12.60	5	.54
7	7.13	23	6.22	7	8.50	8	4.14
Total	7.08	60	6.20	Total	8.68	60	4.01

*Group 1=parts of the body; group 2=clothes; group 3=*instrumental* vocabulary (that is the vocabulary used to co-ordinating the teaching – objects in the classroom, actions); group 4=weather; group 5=cultural sections (Christmas, Halloween); group 6=animals; group 7=miscellaneous.

Finally, the present study aimed at investigating the relationship between learnability of lexical items and the following three variables:

1. frequency of occurrence in general English;
2. frequency of occurrence in the micro-environment of the foreign language class, specifically, in course-books as well as in teacher speech.

Pearson product-moment correlation coefficients were calculated for both third and fourth graders. There was a positive correlation between frequency of occurrence in

teacher speech and learnability, for grade 3 [$r(60)=.26$; $p<.05$], with high levels of teacher's repetitions of lexical items associated with higher learners' uptake rates. Nevertheless, the overlap between the two variables is weak, with only 7% of the variance shared. No significant correlations between learnability and number of repetitions in course-books, nor in general English - for either proficiency level.

Table 6.8: Pearson product-moment correlations between different frequency factors and learners' uptake rate.

	Frequency of occurrence in teacher speech	**Frequency of occurrence in course-books**	**Frequency of occurrence in general English (Nation, 1986)**
Grade 3	.263*	.149	.080
Grade 4	-.078	-.180	.047

*. Correlation is significant at the 0.05 level

Given the rather small sample of words we are dealing with in the present study it would be unfair to draw general conclusions or to make strong statements regarding which factors are better predictors of learnability of vocabulary, in formal instruction. Nevertheless, the data seem to suggest that items occurring most frequently in teacher speech are more likely to be acquired, by younger learners, than words made available from course-books or included in the most common vocabulary in general English.

6.6 Discussion

The use or not, in the present study, of pseudo words was a methodological dilemma. A decision had to be made and I decided not to include them. I tried a similar version of the test with three English native speakers, of same age and level of proficiency in the foreign language as my Italian subjects. This version included pseudo-words. Children were read the stimulus-words aloud, individually, and they were also asked questions when they appeared to be uncertain and doubtful on whether they felt they had already encountered a word, or not. A number of misrecognitions occurred. The stimulus-word *pane* (bread) was confused with *panna* (cream), the non-word, *spintali*, was recognized as a true Italian word – and thus mistaken for *stivali* (boots),

some items were identified as not-known when the subject could in fact recognize and understand them if embedded in meaningful contexts (for example, *anni* (years) as in *quanti anni hai?*(how old are you?). It is reasonable to believe that for learners with a vocabulary of only few hundred words, their ability to make sense of the volume of language produced by the teacher in class often relies on compensation strategies (Oxford, 1990), for example guessing intelligently from context. Therefore, learners of this age and proficiency group may, by mistake, associate lexical items of similar phonological characteristics (like *spintali* and *stivali*) to the same mental image. Answering *yes* to non-words negatively affects the test-score (Meara, 1992a). It could be argued that in similar circumstances the subject should, in fact, be credited with an extra point, having proved to know (although only partially) an extra lexical item, that was not included in the test. Whether errors of this type – which rely on specific compensation strategies – hinder or rather encourage, in the long run, the acquisition of vocabulary is an issue open to discussion.

Partial knowledge may lead to mistaken a pseudo-word for an actual lexical item, one which the subject is familiar with. Similarly, it may lead the testee to identify a stimulus-word as not-known, when in fact it would be easily recognized if embedded in meaningful contexts. For example, some children in the present study had no problem answering the question "*what's your name?*" at the beginning of the testing-session but they could not recognize the context-independent entry, *name*, few minutes after. This difficulty to de-contextualize vocabulary may partly be a reflection of a specific instructional emphasis. That is words taught in isolation (i.e. animal names or colours) are possibly also encoded and successively retrieved in isolation, while words like *name, old*, or *like* that tend to appear in formulas (i.e. w*hat's your name?*; *how old are you?*; *I like...*) may become exclusively accessible to learners if embedded in the *original* contexts where they have been previously encountered. Also, it could be due to the fact that learners of this age and proficiency level have too limited a range of vocabulary available, to allow them to see the separate elements of the language as separate and to use them independently and reorganize them, autonomously, in spoken discourse or written texts.

On the other hand, third and fourth graders in the present study seemed to behave significantly differently as to the amount of vocabulary acquired in class, in general,

as well as from the oral input received from their teacher, in particular. Children in their second year of English instruction learned, on average, twice as many words as pupils in grade 3. Interestingly, the latter appeared to rely more heavily on *spoken* input than their more advanced peers (table 6.8), whose uptake rate showed a weak, negative correlation with the amount of repetitions by the teacher in class [$r(60) = -.07$; $p > .05$, not significant]. The literature suggested that children's learning strategies appear to change in accordance with their level of proficiency in the foreign language (Chesterfield and Chesterfield, 1985). Similarly, Henning (1973) highlighted a shift from phase one to phase two of learning, that is from a concentration-on-form stage to a successive process, where the focus lays on meaning and use of words. It could be argued that children in grade 3 – with as little as fifteen hours of formal instruction, prior to the present investigation – are mostly involved with phase one, still struggling to isolate word-forms out of the speech stream. In doing so, they remain highly dependent on the language made available, in class, by the teacher. On the other hand, pupils in grade 4 seem to have acquired some degree of autonomy in the learning process, partly due to the fact that around 50% of the vocabulary they are exposed to, in class, consists of lexical items they had already encountered in their previous year of study.

From observations of children's attitude in answering either *yes* or *no* to the stimulus-word uttered by the teacher, it emerged that self-evaluation of vocabulary knowledge is a demanding task for subjects of this age group and proficiency level. The majority of them seemed to associate the idea of recognizing a lexical item as familiar with being able to produce its L1 translation equivalent. Whenever the corresponding item, in Italian, was not available to the testee, my impression was that the child felt, to some extent, less confident as to whether she/he had already heard the word in question before, or not. It is reasonable to believe that such *conceptual* as well as *emotional* dependence of the foreign language from the L1 may also have an impact in the learners' perception of word-difficulty.

A final point I would like to raise deals with the unexpected results on learnability of new and already encountered vocabulary. On average, children in grade 4 seemed to acquire a fairly similar number of *recycled* words (that is the words they had already encountered in the previous year of study, when attending grade 3) compared to *new*

words (that is the vocabulary they had met in grade 4 for the first time). Also, the difference in the means did not reach statistical significance. My first reaction was disappointment, particularly because a parallel analysis - focused on a restricted number of items on which learners of both levels of proficiency were tested – had highlighted an opposite effect. The extent, in time, of classroom observations I believe is the reason for the apparently conflicting results. In order to clearly distinguish new vocabulary from recycled vocabulary, we would need a full account of the language available to learners during a complete academic year. On the other hand, the data collected for the previous study only covered the second half of first term - that is a period of approximately 5 weeks. It is likely, therefore, that items that did not appear to be available to children, in class, from October until Christmas, were successively introduced by the teacher later on in the year. Hence, words identified as new, in our analysis, may in fact have been equally familiar to learners as the ones already encountered in term one.

6.7 Conclusions

The present study aimed at investigating the relationship between foreign language exposure and learners' uptake, in the classroom environment. It calculated the volume of overlap between teacher speech and course-book, produced a lexical profile for both types of input and finally attempted to identify the impact of specific intra-lexical factors (length, imageability, parts of speech) and context-related variables (word-saliency, frequency of occurrence in micro-environment) on learnability of lexical items.

The following questions have been addressed:

- Are more advanced learners exposed to a greater amount of input as well as to a richer lexical environment?
- What proportion of vocabulary is shared between teacher speech and course-book?
- Do more advanced learners typically acquire, per class period, a higher proportion of vocabulary than their less proficient peers?
- Are words heard closer to the date of test easier for learners to remember? And what are the factors which most strongly correlate with learnability of lexical items?

These are the findings from the present investigation:

- Confirming the findings of the previous study, there was again no evidence in the data that more advanced learners are exposed to a wider range of vocabulary than their less proficient peers. Similarly, no evidence was found that the teacher makes a clear distinction as to the amount of unusual vocabulary employed per proficiency level. Both grade 3 and 4 were exposed to a similar proportion of infrequent lexical items, per teaching lesson.
- Around 50% of the vocabulary made available to learners by the teacher has been recycled from the lexis employed in the previous year of instruction. Most relevant is the fact that a good proportion of this vocabulary comprises content words - namely animal names, objects in the classroom, numbers and verbs. A qualitative analysis on the learnability scores of a selected number of words, which appeared in both grade 3 and grade 4 Yes/No Tests, showed how the latter outperformed their younger peers in their ability to identify these words, as familiar. The difference in mean scores was significant, with a large effect size.
- Finally more advanced learners typically acquired a greater number of words, per class period, than their younger peers. There was no evidence in the data that words heard closer to the date of test were easier for either grade to remember. Stimuli in lists B, were the least acquired and a qualitative analysis of the class-recordings indicated that they also appeared to be the most semantically *peripheral* - that is the ones with the weakest contextual links to the thematic content of the related class-unit. No intra/inter-lexical factors were identified which significantly correlated with learnability, in both groups. Learners of different proficiency levels seem to behave differently as to the learning strategies employed. Subjects with the only few hours of English instruction relied more substantially on the oral input by the teacher while children in grade 4 seemed to distinguish between parts of speech - with nouns being easier to learn than verbs. The magnitude of the difference in the means was large.

Experimental studies in chapters 4, 5 and 6 have attempted to qualify classrooms as lexical environments, by analysing sections of the academic year. They offered, I believe, a meaningful insight into the *black-box* of the language classroom and, most important, they have shed some light on the *backstage* of learners' uptake. Nevertheless, something I have been unable to do is to produce a comprehensive picture of the lexical progression as well as of the rhythm that characterize the language teaching of a complete school year. This will be the focus of investigation of the next and final chapter.

Chapter 7

Experiment 4

From day one, until Summer
Words children hear, and read, in a full year of English instruction and words they learn

7.1 Introduction

The previous chapter has focused on the relationship between classroom exposure and learners' uptake. The spoken and written input received by the children in class was quantified and its effect on lexical acquisition was calculated. Evidence was found that more advanced learners typically acquire a greater amount of vocabulary than their younger peers. The two groups differed as to learning strategies employed. Children in their first year of instruction appeared to rely more heavily on teacher speech, than learners with around 70 hours of English exposure. On the other hand, among the factors which were suggested to equally influence learnability, for both proficiency groups, *imageability* and *word-saliency* – with reference to the thematic content of the lesson unit - were identified.

However, the study reported in chapter 6 does not allow for a precise picture to be obtained of the lexical progression within an extended period of time, even though it is informative in its outcomes and innovative in the approach it adopts to the analysis of the classroom as a tri-dimensional (i.e. book + speech, with its components of physical, inter-relational and emotional space) rather than bi-dimensional (i.e. the book's page) lexical environment. The observation of the classroom lexical environment over an extended period of time is an issue that is accounted for in the present study.

7.2 Aims and objectives

This study aims to investigate the total lexical exposure to children in their second, and middle, year of English instruction. It adopts a substantially quantitative approach in the analysis of the *amount* of *spoken* and *written* input, available to learners in class; it focuses on the way *how* such input is delivered and observes its rhythm, space and possible patterns, across time. Finally, it will offer some indications of

learners' uptake rate, and, in particular, of its relationship with teachers' *redundancy* of input.

The study will be divided into two parts. Part one will deal with an analysis of the lexical exposure from both course books and teacher speech, while part two will investigate the quantity as well as the quality of input that gets acquired.

Part one has the following objective:

- To quantify the exposure, in the foreign language, made available to young learners in class, from both text books and teacher, during the course of a complete school year.

These are the questions that will be addressed:

1a. what is the total amount of vocabulary available to learners from teacher speech and from the course-book?
1b. How many *new words* learners typically encounter in a class period?
1c. Which one, between *spoken* and *written* sources of input, comprise a richer lexical environment?

Part two has the following objective:

- To investigate the effect of input on uptake – during the complete course of an academic year.

The following questions will be addressed:

2a. What proportion of the total vocabulary available in class has been acquired by *all* learners?
2b. Are words heard closer to the date of test easier for learners to acquire?
2c. Is infrequent vocabulary, in general language, harder for learners to acquire?

7.3 The data

The data collected for the present investigation comprise the following:

- *Spoken* input, produced in class by a NS teacher of English, and available to learners during the course of their second year of foreign language study.
- Text book employed in the teaching of the same year-group.
- One battery of Yes/ No tests, based on the exact vocabulary available in class.

7.3.1 Input from teacher

The teacher in this study is the same as in the previous chapter. She meets the students twice a week, for sessions of, approximately, fifty minutes each, for a total amount of 50 hours, per year. It should be noticed, though, that with reference to the number of hours allocated to language teaching from September until June, those reported here are to be regarded, mainly, as indications. During the busy times of the academic year (for example, Christmas, in December, or Carneval, in February) it may happen that some of the lessons are taken for the organization of shows, school trips or discos. For the purpose of this study, a total of 55 class-recordings will be taken into account. The expression *teaching hours* should be intended as slots of fifty minutes, unless otherwise specified.

Subjects in this experiment are pupils in grade 4 of primary school and, therefore, in their second year of language teaching, with just over 100 hours of English instruction at the time of test. The only structured exposure to the target language is that which they receive in class. There is no consistent language re-enforcement outside the classroom - other than a reasonable amount of homework.

The classes comprising the present corpora were recorded for the duration of one academic year, for a total of 55 successive classes, for a total amount of 46 full teaching hours.

7.3.2 Input from course books

The course-book used in class and analyzed in the present experimental study is *Storyland 4. Corso di inglese per la quarta elementare* (Read and Soberon, 1999). It comprises five units, a wordlist/ glossary section and a final section with cut-outs and

photocopiable material for extra activities. Each unit will feed 10 to 11 successive teaching hours. The wordlist includes a mixture of individual word-items, multi-word items and prefabricated routines (e.g.: Father Christmas, I'm wearing, the treasure hunt, I like playing..., watching...), listed in order of appearance in the text (for further information on course book, refer to previous chapter and Appendix 7D).

7.3.3 Yes/No Tests

In order to gain a more accurate understanding of the lexical gain occurring in the low-level class, the battery of tests employed in this study was based - as in the previous chapter - on the specific vocabulary covered in the course.

7.4 Methodology

This section will reflect the content of the study and will, therefore, consists of two parts. Part one concerning the input and part two dealing with test administration and assessment procedures.

7.4.1 Part 1 – Input from teacher speech and course books, from September until June.

The 55-hour recordings were transcribed and an equal number of files were obtained. The corpora were analysed by means of *Web VP v 2.7 Classic* and according to the lists developed by Nation (1986). Information was obtained with regard to the *amount* of vocabulary, as well as to the proportion of infrequent words, available per teaching unit. With reference to the production of a frequency profile, four different word-lists were obtained. List 1 comprised the word-items from teacher speech which belonged to the first 1,000 most common words in English; list 2 included the second 1,000 most common words in the language, the third list grouped the vocabulary in the AWL and, finally, list 4 comprised the words not included in any of the other lists and, thus, not in the first 2,500 most common words in English. The same procedure was also used for the analysis of the lexis in the course book. In evaluating the lexical profile of teacher speech, our working assumption was that a large proportion of low-frequency, and therefore unusual, words will reflect a rich lexical input, while a small number of unusual vocabulary would indicate a poor lexical environment.

The same procedure was repeated for the analysis of the text book. In order to calculate the total vocabulary available to learners from written materials, sections in the book - including content and wordlist/ glossary - were not taken into account. The same criteria were employed with reference to investigations on number of types per thematic-unit and rate of new words per class period.

Criteria previously adopted for counting words were maintained unchanged and will equally apply to the data in this study.

7.4.2 Learners' uptake - Y/N tests

With the aim of generating comparable results to the previous study, a similar assessment measure and testing procedures were implemented, here. An important difference, though, lays on the fact that in the present investigation learners were tested at the very end of a fully-recorded year of instruction, after 55 rather than 3 successive sessions of English exposure. Such a consistent amount of data is likely to allow the researcher to gain access to some of the mechanisms which feed the relationship between input and uptake and which may have little chance to come to light in contexts of smaller scale investigations which may not reliably reflect the global scenario of the language classroom.

The three final lessons of the school year were isolated from the rest of the 55-unit corpus and the foreign language input made available by the teacher in class was transcribed. Three lexical corpora were obtained, which corresponded to the respective teaching sessions. The latter were named following a diachronic progression – class A, B and C – where C is the closest to the date of test. Specifically, class C was delivered 2 days before administration of test; class B, 1 week before; and finally, class A was recorded 2 weeks before the test. As in the previous experiment, 20 word-items were randomly selected from each transcription - mostly among nouns, verbs and adjectives. Function words were not taken into account. Class A, B and C thus generated list A, B and C - of the Yes/No test - which monitored a total of 60 word-items. Each list included words only appearing in that particular class and not in the other two. Not all of the word-items in the test were lemmatized in order to present the learners with exactly the same sounds/lexical items they had been exposed to in class. Words such as *skiing* were left unchanged if *ski* did

not appear in the input; regular nouns appearing in the plural form only were also reported unchanged; regular nouns appearing both in the singular and in plural forms were lemmatized and the frequency of occurrence in the teacher speech was calculated as the sum of the two individual frequencies. For consistency in pronunciation, the items in the test were read aloud by the class teacher. Children were tested individually. Each test-session lasted approximately 5 minutes. After being tested, learners would be organized into different groups, in order to prevent contamination of data. Once the testing session was completed, the class would be reunited. Instructions given to the children were the same as in the previous study. They were kept simple and straightforward. Learners were asked to answer *Yes* or *No* to the question, "Have you heard this word before?" The subjects taking part in this study are 17 out of 19, that is the total number of children in the class. One child was absent from school on the day of test, while another had just moved to Italy from abroad and was fluent in English. As mentioned above, the pupils were nine years old, at the time of test, and attending grade 4, that is the fourth and penultimate year of primary education and the second and middle year of foreign language instruction.

Subjects involved in this study are the same children attending grade 3, in the previous experiment. They were already familiar with the procedure of the test and appeared more at ease and highly motivated to accomplish the task according to instructions.

In order to check the reliability of this test a calculation of Cronbach's alpha was made using the three lists as the basis of the calculation. The results suggest the test is reliable $\alpha = .854$.

7.5 Results

This section reflects the structure of the study and comprises two parts. Results dealing with lexical exposure will be presented in part one. Data related to students' uptake will constitute part two. Outcomes will be reported in the same order as the questions, raised in section 7.2.

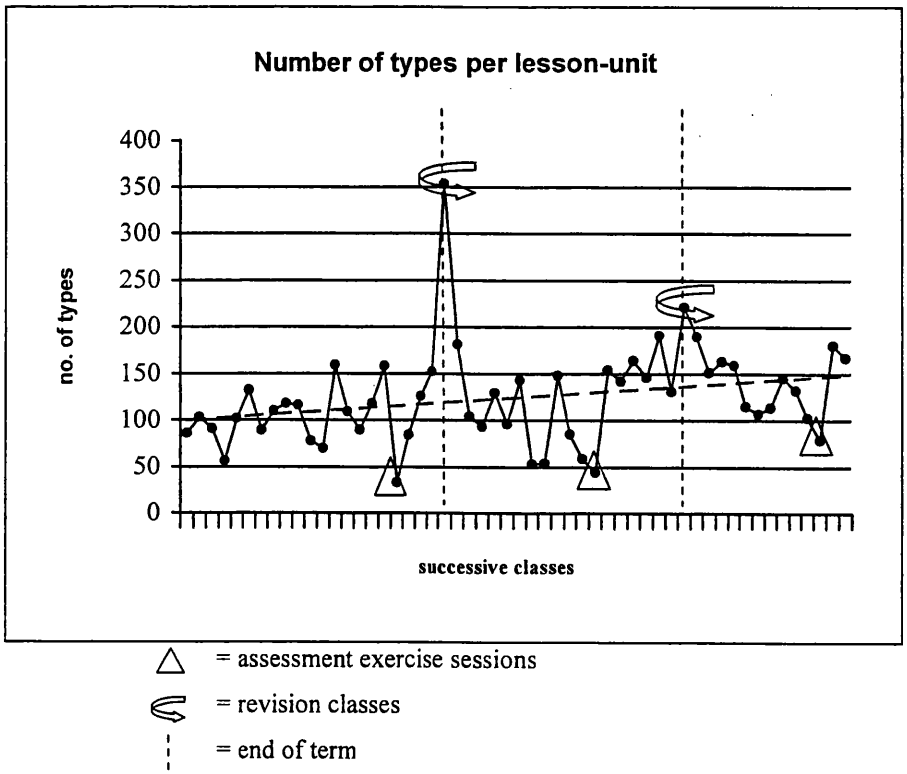
7.5.1 Part 1 – Total input available to learners in the course of a complete academic year.

This first part will illustrate the results obtained from the analysis of the input received by pupils in class. Teacher speech consists of 55 successive teaching sessions, covering a period of eight months of formal instruction – from September until May/ June. Input from written material comprises the complete lexical content of *Storyland 4. Corso di inglese per la quarta elementare* (Read and Soberon, 1999) organized into five thematic units and comprising a total of 96 pages.

What is the total amount of vocabulary available to learners from teacher speech and from the course book?

In order to answer this question, the number of word-types produced by the teacher, per class period, was calculated, as reported in figure 7.1. The same procedure was followed with reference to the course book. The number of types was indicated, per thematic unit (figure 7.2).

Figure 7.1: Teacher speech. Number of types, per lesson unit.

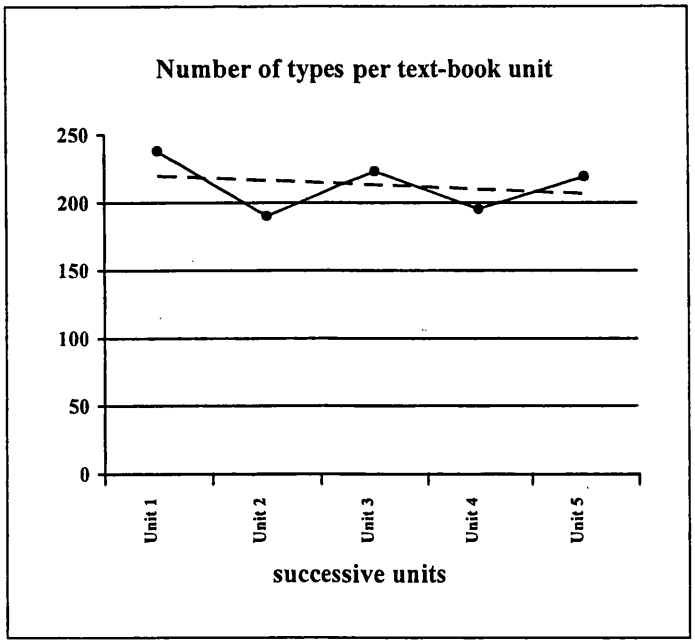


As shown in figure 7.1, there is a huge degree of variation in the amount of vocabulary the children are exposed to per class period. The number of different words made available by the teacher, per lesson, ranges from a minimum of 33 to a maximum of 353. Is this variation random or does it rather correlate with factors such as the implementation of a specific structural or methodological approach to language teaching? Can we identify any recurrent patterns in the way words are presented in class? Despite the centrality of issues of this nature, the literature, to date, seems to offer no *real-life* contribution in the direction of longitudinal observations of lexical progression within the classroom environment - with particular focus on the environment of the low-level class. In order to shed light on these issues as well as to try and qualify the peaks and troughs represented in figure 7.1, a qualitative analysis of the tape-transcripts was carried out. The triangular, circular and linear shapes, as represented in figure 7.1, are intended to symbolize the results of such investigation. The dotted lines, dividing the plot into three sessions, define the end of each term and the beginning of the next. The peaks, highlighted with a circular arrow, are the classes used by the teacher for revision work; finally the triangles identify the class-periods used for routine assessment exercises, which obviously resulted in classes with the lowest vocabulary exposure.

Our data seem to suggest that the teacher adopts a *term-pattern.* That is, from a regular alternation of vocabulary loaded classes (teacher-centred) and activity-centred classes (learner-centred) the teacher moves on slowly towards the planned assessment exercise session. Thereafter, the input seems to get heavier and the teacher concludes each term with a vocabulary loaded revision class.

The same method was implemented for the analysis of the vocabulary in the course book, and the results from the two sources of input were compared (figure 7.2).

Figure 7.2: Number of types per text-book unit.



The trend in the number of vocabulary introduced in the course book, per thematic unit, has become somehow reversed to the one identified for the teacher speech. While the input from the latter gets heavier as the year moves on the opposite seems to occur for the textbook where the later units show a lighter language load than the earlier ones. During one complete academic year, the textbook (including all sections) supplies the learners with 740 different words (657 lemmas). In the same length of time, the teacher produces nearly twice the amount of vocabulary - 1322 types (1071 lemmas). The gap between the two sources of input is even greater if the *volume* of speech/written material, and therefore the number of tokens, is taken into account. As reported in table 7.1, the teacher produced 7 times as many words as the course book, but only around twice the number of different words (types) – which indicates, as expected, a much higher repetition rate in *spoken*, rather than *written*, discourse.

Table 7.1.: Total number of tokens, types and lemmas in teacher speech and course book.

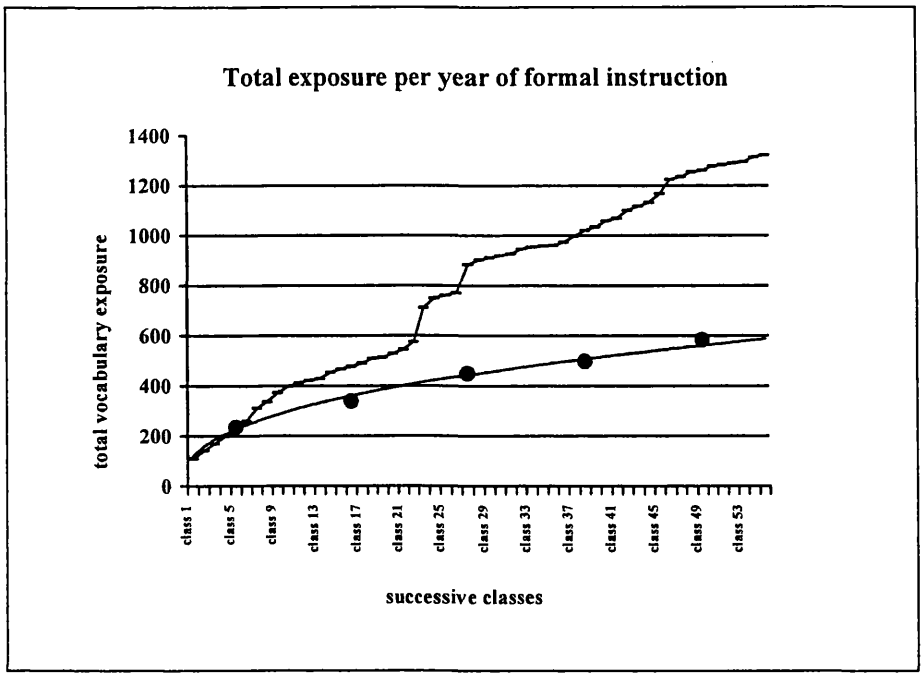
	total no. of running words	**total no. of different words**	**total no. of lemmas**
Input from teacher	32096	1322	1071
Input from course book	4218	740 (all sections) 583 (excluding glossary and content sections)	657 (all sections) 513 (excluding glossary and content sections)

It is important to identify the volume of speech or written material which is available in class, in order to quantify learners' total vocabulary load. On the other hand, an equally important issue is the rate at which lexis is introduced throughout the year. An issue which will be addressed in the next question.

How many new words do learners typically encounter in a class period?

In order to answer this question, I set up a cumulative study which analyses the number of *new words* available to the learners per teaching session, as shown in figure 7.3.

Figure 7.3: Cumulative vocabulary by successive classes.



• = new word-types per unit period (course-book)

- = new word-types per class period (teacher speech)

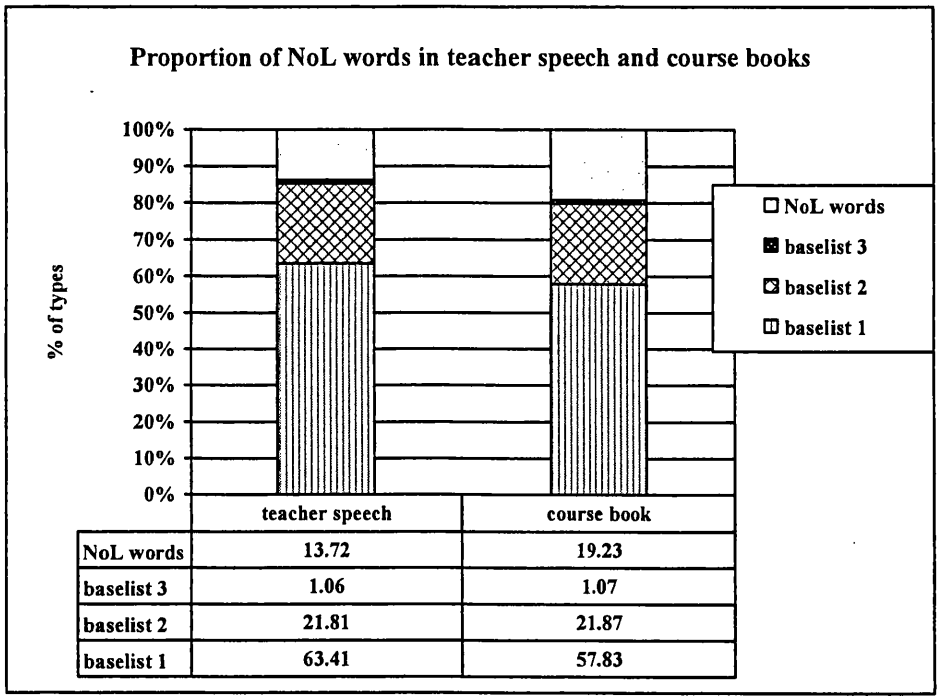
By the end of the academic year, the total vocabulary exposures from the teacher and from the text appeared as substantially different. The former typically produced 24 different words per class period - 1 new word every 24 running words, the latter only 11.6 types per class period – 1 new word every 6.6 running words, as shown in Table 7.1. The data seem to suggest that lexical evaluations of courses based on textbooks, only, are likely to lead to a severe under-estimation of the amount of new lexis available to students and therefore of the vocabulary load of the foreign language class.

The consensus is that the general frequency of words in the language is an indication of the degree of *usefulness* of such words. If some words are more necessary than others in allowing the learner to join in a conversation, read a book or watch a programme on TV, then it is reasonable to believe that these words should be among the first to be taught and learned. An analysis of frequent and infrequent vocabulary in teacher speech and course books is the focus of the next question.

Teacher speech and course book - which one of the two sources of input makes a richer lexical environment?

This question aims to investigate the lexical richness of the two types of input. The vocabulary in both teacher speech and course book was analyzed according to the frequency lists developed by Nation (1986). A large percentage of low-frequency words would be read as reflecting a rich lexical input, while a small number of low-frequency words was intended to characterize a poor lexical environment (figure 7.4).

Figure 7.4: Mean proportion of types per frequency level in teacher speech and course book.



	teacher speech	course book
NoL words	13.72	19.23
baselist 3	1.06	1.07
baselist 2	21.81	21.87
baselist 1	63.41	57.83

Confirming the findings of the studies, in chapter 4 and 5, written materials seem to expose learners to a richer lexical environment than teacher speech. 13.72% of the vocabulary uttered by the teacher in class comprises low-frequency words, compared to the 19.23% for the course book. The gap between the two sources of input reaches a figure of around 5% of the total exposure, for the year. As expected, most of the lexical exposure available in the low-level class consists of highly frequent vocabulary - that is among the first 2,000 most common words in the language.

7.5.2 Part 2 – Learners' uptake

As mentioned above, this second part of the study will focus on the relation between what is heard by children, in the low-level class, and what it is actually learned.

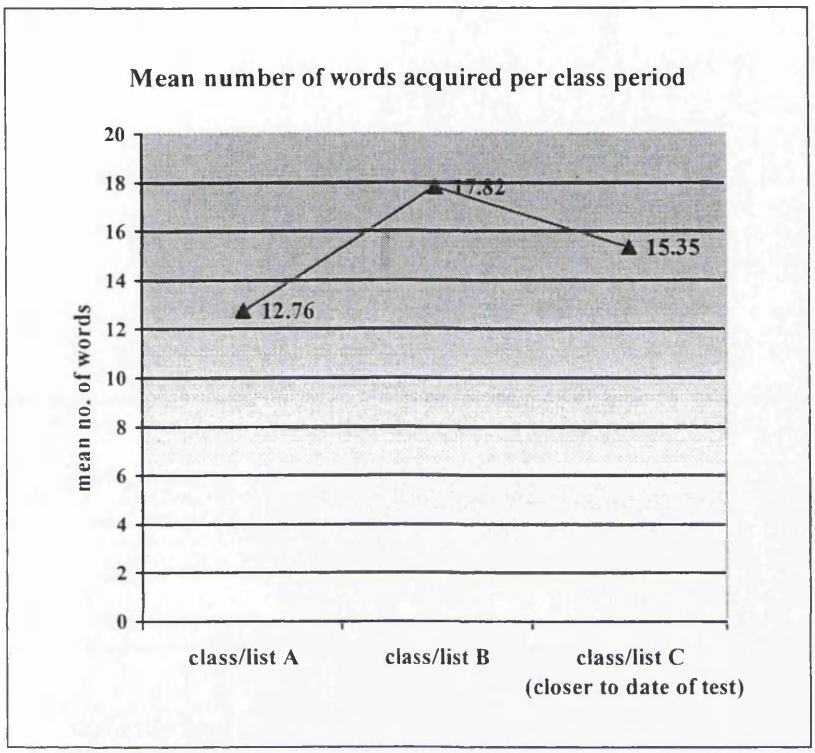
The subjects involved in the testing are 17 children attending grade 4 in San Marino. Their receptive knowledge of three sets of 20 word-items each was investigated – for a total number of 60 stimulus-words. The last three teaching session of the year were taken into account and isolated from the rest of the corpus. As reported in the previous chapter, class A, B and C generated test-list A, B and C – where C is the closest to the date of test and test-list A comprises words last uttered by the teacher two weeks before the administration of test. Words are not repeated throughout the lists. Each 20-item column only contains words produced in the corresponding class and not in the other two. Classes were recorded at the end of May, approximately one week before the end of the school year. Pupils were asked to answer *yes* or *no* to the question "Have you heard this word before?" Items heard closer to the date of test were expected to be better remembered.

Questions related to this part of the study will be addressed in a rearranged order to that above.

Are words heard closer to the date of test easier for learners to acquire?

In order to address this question, the mean number of *yes* answers, per list, was calculated – as shown in figure 7.5.

Figure 7.5: Mean number of types acquired per class period.



Children in their second year of foreign language instruction acquired, on average, 15 items per 50-minute class. The data show no evidence that words heard closer to the date of test are easier for learners to remember. Similar results were obtained in the study reported in chapter 6 where learners in grade 4 managed to acquire a very similar number of words per list/ class (i.e. 13.33). It is worth specifying that the stimulus-words selected for the two tests comprised different groups of items - extrapolated from a range of different lesson-units. Subjects are two separate groups of children.

The statistical significance of the difference between the means – as to the number of words identified, by learners, as familiar - was calculated. A repeated paired-samples t-test was conducted. The means and standard deviation are presented in table 7.2. The three successive lists of words proved to behave significantly differently in terms of scores elicited, as shown in table 7.3. The eta squared statistic for each of the three pairs indicated a large effect size (table 7.3). Words in list B proved the better known by this group of learners, while items in list A – which comprised the highest number

of verbs - appeared to be the hardest for the children to remember. In consideration of the results obtained in the previous experiment - which suggest that learners with a few hours of exposure to the target language (in contrast to absolute beginners) are likely to differentiate between parts of speech, favouring nouns over verbs – and in order to explore the behaviour of this group of learners, a one-way between-groups analysis of variance was conducted. The stimuli in the test were, again, divided into three groups – *nouns, verbs* and *adjectives*. There was a statistically significant difference at the $p<.05$ level, for the three parts of speech [$F(2, 57)=8.8$, $p=.000$]. The difference between the means was large, which resulted in a large effect size (eta squared=.24). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for nouns ($M=14.04$, $SD=3.93$) was significantly different from verbs ($M= 6.83$, $SD=6.31$). Adjectives ($M= 10.20$, $SD=4.81$) did not differ significantly from either nouns or verbs. Also, verbs as selected in the test appear to be the least acquired category of words and the one with the highest standard deviation, which indicates great variability within the scores – some verbs scored high, while others very low.

Table 7.2: Descriptive statistics.

Paired Samples Statistics

Grade 4		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	listA	12.76	17	2.137	.518
	listB	17.82	17	1.590	.386
Pair 2	listA	12.76	17	2.137	.518
	listC	15.35	17	3.239	.786
Pair 3	listB	12.82	17	1.590	.386
	listC	15.35	17	3.239	.786

Table 7.3: Summary of paired samples test

Group 4	list A – list B	$t(16)=-13.039$	$p<.0005$	eta squared=.92
	list A – list C	$t(16)= -4.547$	$p<.0005$	eta squared=.58
	list B – list C	$t(16)= 5.165$	$p<.0005$	eta squared=.64

The relationship between learnability scores and words' degree of imageability was also investigated. An independent-samples t-test was conducted. The results obtained for the present group of learners confirm the findings of the previous study. There was statistically significant difference in scores, for the acquisition of imageable (M=14.32, SD=3.62) and non-imageable words (M=10.87, SD=5.68; t(58)=2.60, p=.01). The magnitude of the differences in the means was large. Therefore, the data seem to suggest that word-items that more successfully elicit a mental image are more likely to be acquired by young learners. It should be noted, though, that *imageability* is not in fact an *absolute* attribute, but one that can relate to the context where the word is embedded as well as to learners' differences. For example, for the purpose of this analysis, I classified *dancing* as an imageable word-item. I did so in consideration of factors such as age of learners, cultural habits (dancing is a popular activity in school parties and social events in Italy). Nevertheless, if I wanted to analyze the vocabulary of younger children or toddlers with little exposure to this type of activity, it might have been more appropriate to classify the same item as a non-imageable word.

Despite the fact that some categories of words (e.g. nouns; highly imageable vocabulary; words more frequently repeated in the micro-environment) seem to be more easily acquired by learners than others, this does not imply that *all* verbs or more abstract vocabulary are necessarily harder to learn. This point will be discussed further in the next question. Nevertherless, before moving on with the analysis, I would like to consider a final aspect, with reference to degree of learnability of lexical items in the foreign language class.

Given the results of the previous study which suggest that children at the outset of learning acquire a higher number of words from teacher speech than from course books - compared to their more proficient peers - Pearson product-moment correlation coefficients was calculated for this group of learners, in order to investigate the degree of correlation between frequency of occurrence, in the input made available by the teacher in class, and learnability. No correlation was found between the number of oral repetitions of the single word-items and the number of subjects who knew the words [r(60)=.186; not significant] – which might suggest that the relationship between occurrences and learnability is not a simple and linear one.

However, a t-test on learnability scores shows a significant difference between the means for words that occur 10 times or less (M=12.48, SD=4.92) and those which occur 11 times or more (M=16.37, SD=1.41, t(58)=4.61, p<.05). The eta squared statistics (.27) indicated a large effect size, which indicates that 27% of the variance in the number of words, identified by subjects as known, is explained by frequency of occurrence in the text. There is an indication in the data that words repeated more than 10 times by the teacher are likely to be better known than those repeated fewer number of times. Surprisingly, in analyzing the data in chapter 6 - with reference to fourth graders' lexical acquisition from oral input - a threshold line, as to the number of repetitions required in order for a word to be learned, could not be identified. It could be argued that this might be due to a sample effect, and therefore to the items selected for the test. Or, simply, to the fact that the present study takes into account the lexical exposure of a complete academic year, while the data collected for the previous investigations rely on samples of input, which may not be fully representative of the whole.

Is infrequent vocabulary, in general language, harder for learners to acquire?

In order to address the issue of whether young learners with only few hours of exposure to the foreign language seem to differentiate, in the number of words acquired, between frequent and infrequent vocabulary in general English, the stimuli in the test were divided into two groups. Group 1 comprised the lexical items included in the first 2,500 most common words in the language; group 2 listed the words which did not fall into this category and that were, therefore, addressed as *unusual* (table 7.4).

Table 7.4: Infrequent vocabulary in Yes/No test.

List A		List B		List C	
Unusual words	***Yes* answers (out of 17)**	**Unusual words**	***Yes* answers (out of 17)**	**Unusual words**	***Yes* answers (out of 17)**
Soccer	14	Chant	8	Scarecrow	13
Chattering	1	Zebra	17	Geese	5
Homework	5	Shorts	16		
		Grasshopper	16		
		Lion	16		

An independent-samples t-test was conducted. There was no significant difference in scores for the two categories of lexis, namely frequent (M=13.23, SD=4.56) and infrequent vocabulary (M=12.08, SD=5.74; t(58)=.74, p=.46). With a very small size effect (eta squared=.009). There is no evidence in the data that words from lower frequency bands are harder for learner to acquire.

What proportion of the total vocabulary available in class has been acquired by all learners?

Some of the items in the test have been recognized and identified as familiar, by all learners. Table 7.5 reports them, in the same order as in the test.

Table 7.5: Word-items acquired by *all* learners.

List A	*Yes* answers (out of 17)	List B	*Yes* answers (out of 17)	List C (closer to date of test)	*Yes* answers (out of 17)
Basketball*	17	Legs	17	Book	17
Number**	17	Name	17	Mouse***	17
Fifty**	17	Clothes	17	Grey	17
Football*	17	Eighteen**	17	Bird***	17
Tennis*	17	Eleven**	17	-	17
Seventy**	17	Cheese	17	-	17
Forty**	17	Zebra***	17	-	17
Roller-skating	17	Pencil-case	17	-	17

*borrowed vocabulary; ** Numbers; ***Animals

21 words out of 60 were recognized by all learners, that makes a proportion of 35% - around 1 word-item acquired every 3 available. Assuming that the items appearing in the test represent a balanced proportion of the total vocabulary available in class (estimated in this study at 1322 types/1071 lemmas a year) by the end of the school year the subjects have acquired 462.7 different words (374.8 lemmas), that is a rate of 8.4 types/6.8 lemmas per contact hour (462.7 ÷ 55 recorded classes) – not much higher a figure from the one reported in Milton and Meara (1998), 200 to 225 lemmas per school year for students of EFL from different backgrounds.

Not surprisingly, words like *basketball, football, tennis* – addressed as borrowed vocabulary – were familiar to all testees. Also, very *popular* categories among young learners seem to be *numbers* and *animals*. In the previous chapter, no statistically significant correlation was found between words organized into semantic clusters and learnability. Nevertheless, such results might be due to the small number of items comprising each word-class.

An important issue to be taken into account is the fact that these learners are in their second year of studying the foreign language, therefore, it is reasonable to assume that they have already acquired a certain number of words during the previous course and that some of the word-items assessed in our study would in fact be learned during a previous exposure. In order to estimate the proportion of vocabulary only in use in the academic year when the students' uptake was measured, I compared the total vocabulary in the teacher's input with the total vocabulary in the previous year's course-book. The data suggest that 31% of the total vocabulary available to the learners in this study was recycled from the year before, while 69% of the word-types in the speech produced by the teacher were specific of the work carried out in grade 4 and would not appear in grade 3. Assuming that the stimuli in the test mirror the different proportions of recycled and new items comprising the input, the above figure of 8.4 types acquired per contact hour will decrease to a rate of around 5.80 lexical items – close to the figures indicated by Vassiliu (2001), of 5.9 to 8 different words acquired by first-year students of English in primary education.

The effects of two types of input - instructional *oral* input and instructional *oral* and *written* input - on learnability of lexical items, have been investigated. It would be reasonable to expect – particularly for students at the outset of learning - that words that become available in class in a variety of forms (namely, phonological and orthographical) are better acquired than those only *read* in the textbook or *heard* in class. In order to test this hypothesis, I divided the items in the Yes/No test into two groups of words. Group 1 listed the types only appearing in teacher speech and not in the course book; group 2 included words occurring in both types of input. The data suggest a statistically significant difference in the means (t=3.158, sig=0.003). The average number of hits for the words in group 1 was 10.88, while the types in group 2 were better acquired by the subjects with a figure of 14.51. Words appearing in

teacher speech as well as in course books - and therefore available to learners in both their phonological and orthographical forms - seem to be better learned than words only uttered by the teacher but not appearing in the text.

7.6 Discussion

The findings of this study suggested that children with 100 hours of English instruction, prior to date of test are typically exposed to 24 new words per 50-minute class. This seems a rather demanding task for learners of this age and level of proficiency. Scholfield (1991) suggests that a figure of 9 to 12 new words per class period is recommendable. Gairns and Redman (1986) indicate 8 new words to be a fair measure. Milton and Meara (1998) found that British secondary school students of French as a FL tend to learn from a minimum of 3.8 to a maximum of 6.0 words per hour. The figures produced in this study are not directly comparable. The figures quoted were obtained working on lemmatized lists. In this thesis I have decided to work with both types and lemmas for a number of reasons. Taking lemmas into account is important in order to allow comparability of results with other categories of learners as well as with the experimental studies reported in the literature. On the other hand, focusing on types, particularly when dealing with young learners, also becomes essential for a number of reasons. Our subjects have only just started to learn a second language and their lexical skills are likely not to allow them to recognize pairs such as, for example, *goose/ geese*, *walk/ walking*, *child/ children* as members of the same word-family. Vassiliu (2001) faced the same situation in examining the lexical uptake of beginners and also chose this methodology to reflect the real learning load of his students. Also, in the Italian school system the four language skills – listening and speaking, reading and writing – are normally introduced at the same time, so that a child, who is able to recognize the phonetic characteristics of a word, is also expected to have acquired its written form. In other words, it could be argued that for each word-item he learns he should be credited a double score, rather than one single point for every two, three or four words, as with countings by lemma. Laufer and Nation (1995) positively discussed the application of different lemmatization rules at different levels of proficiency. Children, with no or little exposure to the language, may not in fact be able to see the link between *go* and *going,* or *is* and *are*, nevertheless, the same child - after a certain amount of teaching is likely to have acquired the morphological competence necessary to establish such a

relationship. An analysis of data that takes into account both units of measure is able I believe to offer the best of the two worlds.

A further point for discussion - which particularly emerged from the outcomes of the present study - refers to the substantial difference in the amount of total exposure made available to learners from teacher speech and textbooks, during the course of a complete academic year. In the light of these findings, and taken into account the outcomes of the previous study – which suggest that children at the outset of learning appear to rely more heavily on *spoken* input than their more advanced peers and that repetition rates, in the micro-environment, positively correlate with learnability of lexical items. It could be argued that teacher speech ought to be a more relevant variable with reference to learners' uptake than written materials. These indications may seem to contradict the extensive literature on the acquisition of incidental vocabulary from reading. In fact, they do not. The children involved in the present investigation are primary school pupils with low literacy in their L1. Their knowledge of the foreign language is likely to be limited to a range of formulas, which include a vocabulary range of a few hundred words. Such a restricted degree of lexical autonomy is likely to prevent a relevant contribution of the written material, from course books, towards learners' ability to acquire the foreign language. These findings are likely to have important implications for language teaching in the low-level class in the Italian primary sector in particular. As discussed in the next chapter, primary education in Italy is moving towards a severe cut in the number of hours allocated to the teaching of the foreign language. This means that children in the near future will have access to less and less lexical exposure. Besides, the Government in office aims at employing primary teachers whose linguistic skills in the target language are typically limited to the attendance of intensive courses of 380 to 500 hours. The research reported in this thesis suggests that FL teachers, in the low-level class, need to produce a great amount of vocabulary per lesson unit and such linguistic exposure is likely to require a substantial degree of lexical autonomy from course books. The question is - will teachers who have learned the target language in immersion courses of no more than 500 hours (typically, 380 hours) be able to offer such a degree of autonomy and linguistic competence so to remain the main source of lexical input in the low-level class? Further research in this direction is of paramount importance for the future of language teaching and learning in the primary sector.

Related to the issue raised above, the lexical sophistication of teacher speech and course books, in chapter 5 we calculated the proportion of infrequent vocabulary in *Storyland 4* as well as in teacher speech for a section of the academic year namely term one. It was suggested that 16% and 7% of the selected corpora from the text and teacher's input, respectively, comprised infrequent/ unusual vocabulary. Calculations based on lexical exposure during a complete academic year showed that the percentage for the text raised from 16% to 19%, while the proportion of unusual vocabulary employed by the teacher, in class, nearly doubled, in this length of time (i.e. from 7% to 13%). An analysis of the frequency profile of word-lists (i.e. *The Maestra Marchigiana's Wordlist*) which comprise a good proportion of the vocabulary taught in teacher training courses, and which aim at covering most of the contents dealt with in children's course books, showed that only 12% of total lexis of *The Maestra Marchigiana's Wordlist* is made of infrequent vocabulary, compared to the 19% of *Storyland 4*. Due to the fact that wordlists typically present very high type-token ratios, it is reasonable to expect them to be a *condensate* of infrequent vocabulary. In the light of this, wordlists like *The Maestra Marchigiana's Wordlist* seem to introduce teacher-trainees to a very small proportion of low-frequency words. Vassiliu (2001) reported that 30% of the vocabulary of course books consists of infrequent (NoL) lexical items. The findings from the present research indicate an average just below 20%. Should these estimates be confirmed by further research, they would raise a much wider issue. Ellis states that "L2 acquisition can only take place when the learner has access to input in the L2" (Ellis, 1994a: 26). Hence, if the proportion of infrequent lexis taught to prospective language teachers comprises around 12% of the total exposure available in teacher training courses, this may result into language teachers not being able to get a grasp of the lexical contents of the very course books they are, in fact, expected to teach. Further investigations along this line are required in order to address the issue of lexical competence of FL teachers in the primary sector, and its degree of correlation with learners' vocabulary uptake take.

7.7 Conclusions

The present study reported on the total lexical exposure available to learners, during a complete academic year – from September until June. It also offered some indications of the relationship between the input children received in class and the proportion of

vocabulary they seem to acquire. Finally, it compared the results obtained from smaller-scale investigations (as in the previous chapters) of lexical availability, in the foreign language class, with the profile of classrooms as lexical environments, as resulted from observations of full-length teaching periods.

The following questions have been addressed:

- what is the total amount of vocabulary available to learners from teacher speech and from the course-book?
- How many *new words* learners typically encounter in a class period?
- Are words heard closer to the date of test easier for learners to acquire?
- What proportion of the total vocabulary available in class has been acquired by *all* learners?

These are the findings from the present investigation:

- Our data seem to suggest that the *amount* of vocabulary introduced by the teacher in class is much heavier than the lexis available to students from course books. The teacher uses twice the number of types that appear in the book – 1322 versus 740 – and this proportion would change to almost three times - 1322 versus 583 - if sections such as *glossary* and *contents* were excluded from the counting.
- As far as lexical richness is concerned, the teacher seems to substantially rely on the course book and therefore on the guidelines of the National Curriculum. The proportion of infrequent vocabulary is, in fact, similar in both types of input.
- With reference to the amount of *new words* introduced per fifty-minute class, the data seem to suggest that teacher speech makes available a mean number of 24 different words per lesson unit, compared to the 11.6 types as in course books. Besides, the cumulative vocabulary of the course book seems to stabilize quite early in the year, while the vocabulary introduced by the teacher continues to grow.
- There is no evidence in the data that words heard closer to the date of test are easier for the learners to acquire.

- A substantial proportion of words were acquired by all learners, 21 out of 60 – which makes a proportion of around 24% of total lexical exposure, after you allow for the amount of vocabulary they may have learned during their previous year of foreign language instruction.
- Finally, no evidence was found that infrequent lexical items in the general language are harder for learners to acquire than more common vocabulary. Nevertheless, there is an indication in the data that words repeated 11 times or more were better learned than words occurring 10 times or less. Also, words available to learners from both sources of input (teacher speech and textbook) are likely to be better acquired than words only uttered by the teacher, in class.

Chapter 8

General discussion and limitations

8.1 Introduction

There is still little agreement in the literature with regard to the role of input in the acquisition of a foreign language. In the case of L2 input in formal instruction in particular, Ellis (1994a: 287) emphasized the need of experimental studies that reliably sampled input data. Attempts have been made to qualify classrooms as lexical environments with reference to the vocabulary contained in course books and written materials (Scholfield, 1991; Vassiliu, 2001). Nevertheless, we have no or little idea of the nature and volumes of vocabulary used by the teacher in class. This gap in the literature may be partly due to procedural and practical difficulties in collecting and processing data of this type when compared to the accessibility of information on written texts. On the other hand, on account of the fact that written sources of input seem to comprise less than 50% of the total lexical exposure available to learners in the low-level class (Donzelli, 2007), teacher speech is likely to result in the main source of input for young, primary-age learners, who are still developing their lexical knowledge, as well as their writing and reading skills, in the L1 and who have typically reached only a limited degree of autonomy in the learning process.

This dissertation, therefore, has set out to fill some of these gaps. Specifically, it has assessed the content of selected teaching materials which accompanied the course of study of a complete primary-school cycle (from grade 3 to grade 5 - last year of primary education, in Italy); it has compared the characteristics of the written source of input with the vocabulary actually spoken, used and *brought to life* by the teacher in class; it has investigated patterns in the distribution of lexical input by course books and teacher speech throughout the academic year, it has confronted the lexical environments created by two different teachers, namely a NS and a NNS of English, and finally it has attempted to qualify the learning at the very low level, by investigating its complex, multi-dimensional relationship with the input available in class.

These issues were approached with specific reference to the low-level EFL class, in Italy and in the Republic of San Marino. These two countries, despite fairly similar school systems and National Curriculum, differ as to the time children are first introduced to the study of a foreign language. It must be said that, at present, a radical reform of the primary sector is being discussed by the Government in office as well as by all political parties. Major changes will envisage – among others – the re-introduction of the single class-teacher (*insegnante unico* - after more than 10 years of the so called *modular approach*, *organizzazione modulare*, where three or four teachers are typically involved with two or three class-groups, respectively) who will be in charge of all the teaching throughout the year. To date, no indication has been given as to the way how, if passed, this bill may affect the overall teaching of the foreign language. With particular reference to issues such as number of languages taught at primary level, age of introduction of FL instruction, number of hours per week, and, most importantly, professional development of language teachers – will they have to be qualified linguists (that is graduates in the FL they want to teach) or rather educationalists, willing to attend made-to-measure intensive language courses? This dilemma seems to have accompanied the last thirty years of history of language teaching at primary level in Italy. The present research has no pretension to solve it at once; nevertheless, by analyzing the vocabulary produced by the teacher in class and investigating the relationship between lexical production and learners' uptake, I believe it will offer an informed contribution to an open discussion. Finally, this thesis emphasizes the need for more experimental research to be carried out in this direction, with a particular focus on studies that 1) are longitudinal, 2) can compare the impact of *spoken* lexical input – produced by different categories of teachers - on learners' rate of acquisition, and 3) look at developing accurate and demonstrably reliable vocabulary tests, suitable for validly assessing lexical knowledge of young learners in the low-level class.

This section will be divided into three main parts. Part 1 will focus on classrooms as lexical environments. It will discuss the differences and similarities between the vocabulary available to learners from course books and teacher speech. Also, it will comment on the lexical performances of two different types of teachers – a native speaker, of American English, and a non-native speaker of English. Part 2 will deal with the relationship between input and uptake, with particular reference to the

amount of learning taking place, in formal instruction, as well as to the *factors* that seem to enhance the chances of acquisition to occur. Finally, strengths and weaknesses of the assessment measures employed in the series of studies comprising this book will be discussed in part 3.

8.2 Part 1 – Classrooms as lexical environments

The literature reviewed in chapters two and three highlighted the lack of experimental studies that investigate the lexical resources available to foreign language learners in formal instruction. The amount as well as the type of vocabulary presented in class has often reflected the indications of specific theoretical approaches to language teaching. The grammar-translation method, for example, focused mainly on morphological and syntactic accuracy, giving no emphasis to communicative competence, and to vocabulary in use. Similarly, in the 1960s, the *stimulus-response* theories, together with oral-drilling practice, as means for acquisition, gave birth to the audio-lingual methods, which suggested lexical exposure to be limited to the very minimum, in order to allow learners to familiarize with the structure of the language (Brooks, 1968). At present, language learning typically aims at enhanced communication and cultural awareness. Children around the world are taught English from very young through songs, games, television programmes and by visiting the foreign countries. Course books and teaching materials available today and addressed to young learners clearly reflect a multi-dimensional world and one where the child learns through experience while being read a story, or while singing a song, acting a role-play, or making a Halloween costume. On the other hand, Cameron (2001: 90) criticizes the *predictability* of the vocabulary presented in text-books and she stresses the importance of introducing young learners to more stimulating material and sources of learning. She suggests that traditionally course-book centred classes might not be challenging enough lexical environments for the younger generations of *globalized* learners who are used to travelling, interacting with peers from different countries, who speak different languages and who come from different social backgrounds. Cangià (1998) also shares this view and indicates *computer-enriched* instruction and *hyper-scripts* as the way forward in language teaching and learning in the primary low-level class. Nevertheless, one should not forget that the instructional environment Cangià deals with is that of private education, where the amount as well as the type of vocabulary available for acquisition is not limited by strict syllabus

guidelines that are likely to hinder teachers' production of a lexically rich output (Tang and Nesi, 2003).

In the attempt to shed light on the controversial role of written material in the foreign language classroom, the present research has analysed the vocabulary of an EFL course addressed to children of state primary schools in Italy. The course comprised three volumes, one for each grade - from grade 3 to grade 5, which represent the first and last years of formal instruction, respectively. The investigation has estimated the number of different words typically introduced per class-period, the degree of overlap between proficiency levels and the relation between written input and teacher speech.

8.2.1 How much vocabulary is taught in the low-level class

The literature indicates a huge degree of variation in the amount of vocabulary available in text-books addressed to learners *ab initio* (Scholfield, 1991; Vassiliu, 2001). Vassiliu suggests that pupils in their first year of course are exposed to an amount of lexis that ranges from 1,000 to 1,700 different words – which corresponds, according to 9 to 15 words per lesson unit. Scholfield reports a huge degree of *intra-material* (within units) and *inter-material* (between books) variation - the number of new types typically encountered per unit period varied enormously: from a minimum of 21 to a maximum of 58. Contrary to these indications, the materials analyzed in the present research suggest that children are exposed to a fairly similar amount of lexical input, throughout the course of primary education. The study in chapter 5, which investigates the vocabulary employed by written teaching materials, for the duration of one academic term (approximately 10 weeks), indicates that pupils in their first year of English instruction are taught, on average, 24 types (20.8 lemmas) per fifty-minute class, compared to 35 types (31.8 lemmas) in grade 4, and 36 (32.1 lemmas) in grade 5. The study in chapter 7, which focused on the lexical exposure of fourth graders, and covers the whole course of the school year, suggests a figure of 740 different words (657 lemmas) available to learners from the text-book – which makes approximately 11 different words per class period. The anomaly is heightened by the fact that such different estimates have in fact been produced from data referring to the same course-book. In chapter 5, the duration of one school term only was taken into account, and the estimate was based on the assumption that the total exposure for the academic year was the sum of the vocabulary available per term (for example, 1

school year = term 1 + term 2 + term 3, that is 900 words = 300 + 300 + 300). A similar outline was suggested by Scholfield (1991) who hypothesized that an ideal course vocabulary input would be spread evenly across the course of learning. In the case of this course book, addressed to children in their second year of English instruction, term one comprises 358 word-types (318 lemmas) while the total exposure for the year only covers 740 different words (approximately 650 lemmas). This discrepancy between the two figures highlights the consistent degree of repetitions within the texts which limits the overall range of vocabulary available to learners. This aspect, together with the fact that texts addressed to more advanced learners do not seem to employ a substantially greater amount of vocabulary than course books for children in their first year of study, seem to reinforce Cameron's plea for less predictable and broader lexis (Cameron, 2001) to stimulate and interest groups of young learners at increasingly higher levels of proficiency.

The difficulty of dividing a complete course into teaching units is a problematic methodological issue that, to my knowledge, has not been accounted for in the literature. Books are organized by semantic-content units, which typically deal with a range of topics and semantic fields. Some courses comprise 5 units (the *Storyland* series) while others contain as many as 10 sections (the *Sunny Hours!* series). No indication is given as to the recommended duration of a unit. The only reference for the teacher is likely to be the progression by term and, certainly, the total exposure per year. It may occur, for example, that the teacher is unable to cover the whole content of her lesson plans, during a week, and she tries and catch up the week after. This seems to happen more and more often in Italy as well as in European primary schools (as reported by Early Language Learning in Europe [ELLiE, http://www.londonmet.ac.uk/research-units/iset/projects/ellie.cfm] research team – private conversation) where the teaching of the foreign language is radically changing, and likely to move towards a *second-class* position in the school timetable. More and more often, the time allocated to the English class – or to Physical Education, or Information Technology - is nibbled away at by the teacher in order to complete a topic left behind in other subject areas like Italian, History or Maths. Similarly, vocabulary loaded classes (when new semantic contents are introduced, or a story is read aloud to the children) are likely to alternate, during the year, with activity-centred classes (learner-centred) or assessment sessions, where very little

vocabulary is produced (Donzelli, 2007). Donzelli pointed out that children may encounter as little as 4 new types in one lesson, and as many as 136 new items in another – that is a rate of 3 new types per minute of speech. The latter appears a challenging task, indeed, particularly for 9 year olds with only few hours' exposure in the FL. The literature suggests that, on average, learners seem to be able to acquire between 3 to 4.3 lemmas - approximately 4.8 to 7 different words - per lesson unit (Vassiliu, 1993; Milton and Meara, 1998). Krashen's (1985, 1989) Comprehensible Input Hypothesis postulates that language is acquired through exposure to linguistic forms slightly in advance of the learner's existing knowledge. 136 new items, per fifty-minute class, are likely to be far too *heavy* an input even for the most proficient learner. Therefore, a good proportion of the lexis presented in class may, in fact, be lost in the stream of speech, and never be able to gain the state of *input* (that is the vocabulary that does gain access to the learner's mental lexicon, as intended by Corder, 1967: 165).

The question is how can the actual vocabulary rate plot of the foreign language class be identified through an analysis of course books? And what are the implications for research? The answer to question one is, simply, that it cannot. It is not possible to reliably qualify classrooms as lexical environments by investigating the language available from course books only. By definition, teaching materials are there to be taught. The words they contain have no life of their own, for a variety of reasons. They are addressed to children who are still learning to read and write in their L1; in English there is - more often than not - little phonological and orthographical correspondence therefore English is an example of a *phonologically opaque* writing system (Cook and Bassetti, 2005), unlike Italian which has a phonologically transparent writing system because "letter-to-sound and sound-to-letter correspondences are almost always one-to-one" (Cook and Bassetti, 2005: 7). Pupils studying English for the first time in Italy would have had no previous exposure to the language and, thus, no knowledge of English lexis. Therefore, written words in English would have, for Italian children, the same effect that Chinese ideograms would have had, on most of us, before the 2008 Olympic Games! Thus, course books *need* to be taught and their vocabulary to be brought to life by the teacher. For this reason, I believe, investigations of learners' uptake that focus on course books as the only source of lexical input face important methodological problems. Implications for

research would highlight difficulties in the investigation of the relationship between input and uptake, where the lexical exposure to learners is, in fact, calculated on a limited proportion of the vocabulary available in class – thus reducing the analysis to a mere *course book*, rather than *classroom* environment. An example of methodological problems which may, to some extent, invalidate the outcomes of a study is represented by repetition rates of lexical items. It has been suggested that more than half of the total vocabulary load, in the low-level class, is likely to be encountered only a limited number of times (namely, from 1 to 5 times), during the course (Vassiliu, 2001). If this is true for course books, does it mean it is equally true for teacher speech? If the word *dolphin* only occurs twice in the text, does it mean the teacher only utters it twice? Or could it not happen that being the teaching point of a lesson unit *animal names*, *numbers*, or *actions*, these words are, in fact, repeated a much greater number of times within the fifty-minute session? (See 8.2.2, next, for more in-depth analysis of this point). As pointed out at the beginning of this book, when dealing with young learners who are in the process of acquiring their L1 orthographic system and who are not yet familiar with the L2 orthography, investigating the lexical environment of this type of classroom by focusing on books, only, is like watching a film with shortened subtitles and the volume set to zero.

Moreover, intrinsic differences between *oral* and *written* language also need to be taken into account when comparing and evaluating the two sources of input in the foreign language class. Ellis (Ellis, 1994a) emphasized the fact that written language is typically *de-contextualized*, whereas oral language is typically *contextualized*. In the case of the latter the meaning is supported by the context (i.e. shared physical context, and here-and-now topics), intonation and gesture provide additional channels of information and there is the possibility of feedback. The former, on the other hand, is language in which the meaning is not supported by the context and word choice and word order are the only channels of information (Halliday, 1985). There is evidence in the literature (Halliday, 1985; Biber, 1988; Cook and Bassetti, 2005) that reading materials are richer in vocabulary content and relatively more complex than oral language. The former typically offer a higher lexical variation and are likely to use more complex vocabulary (Halliday, 1989). The data reported in the present research (i.e. chapter four) show some evidence of the fact that TTR in written texts is higher than that of spoken texts of the same length. Also, the data reported in chapter

five seem to suggest that the vocabulary of course books typically include a higher proportion of infrequent lexical items compared to teacher speech. This gives some evidence of written texts being richer lexical environment than spoken texts. On the other hand, there are indications in the data (i.e. chapter five) that the relationship between written and spoken texts in the foreign language class is not a simple and linear one, where the teacher rigidly follows the pace *dictated* by the course book. In fact, the data illustrated in chapter five seem to suggest that while the course books for more proficient learners also comprise a more substantial amount of words, the amount of teacher speech gradually decreases as the level of proficiency of learners becomes higher, thus leaving more time and space for teacher-to-learner's, learner-to-teacher's or learner-to-learner's interactionally modified input (IMO).

It is in this underexplored area of research that lays the true contribution of this book - that is, in its attempt to offer a comprehensive picture of classrooms as lexical environments, one that takes into account both the oral and the written sources of input available to learners and that focuses on the classroom as the *emotional* as well as the *physical* space in which the teaching is carried out.

8.2.2 Lexis available from course books and teacher speech

The study illustrated in chapter 7 offers an in-depth investigation of the relationship between the two sources of input available to learners in the foreign language class: course books and teacher speech.

The present research seems to confirm Vassiliu's (2001) assumption that the low-level class is to be intended as mainly course book led. The studies discussed in chapters 5 and 7 clearly show that the language produced by the teacher is rigidly selected to meet the demands of the syllabus. Therefore, virtually all of the vocabulary in the course books seems to be *given a sound* and to be brought to life by the teacher in class. Nevertheless, these outcomes do not contradict the claim that an analysis of both course books and teacher speech is necessary in order to accurately and reliably qualify the lexical environment of the classroom. In fact, this research seems to suggest that while the teacher relies heavily on course books as far as the *choice* of vocabulary is concerned, she also extends such input, substantially, and amplifies it. Thus learners have access to a much broader range of *spoken* vocabulary

than *written* text. On average, only 22% of this teacher's lexical production per lesson-unit comprises vocabulary taken from the text. The remaining proportion of speech consists of lexis autonomously chosen by the teacher and that either shares the semantic fields of the items suggested in the book or is used for directing teaching activities. Another important factor, which relates to acquisition, is the repetition rate within the vocabulary input. Research suggests that words repeated more than 7 to 16 times are more easily acquired than those repeated a fewer number of times (Kachroo, 1962; Saragi et al., 1978; Beck et al., 1987; Nation, 2001 – for a review of studies); that chances of learning and retaining words from a single exposure are very low (Nagy, 1997) and that a lack of recycling and consolidation activities may lead to the loss of a proportion of vocabulary, comprising words only partially known (Nation, 1990: 45). The series of studies presented in this thesis indicate a substantial difference in repetition rates of spoken discourse and written texts. In course books, words are repeated on average 4 times – maintaining similar rates throughout the three grades - while for the teacher the rate nearly doubles and reaches an average of 7 repetitions per word. With the latter, words uttered in the least proficient grade are repeated 8 times, 6.5 times in grade 4 and only an average of 5.8 times when spoken to the more advanced learners. Besides, words like *sharpener, window, blackboard*, which showed low repetition rates in course books resulted in the most frequently repeated items – among content words - in teacher speech. This may be partly due to the difference between oral and written input. A word like *window* for example only appears in the course book addressed to fifth graders (more advanced learners) within the chapter which deals with house and furniture. On the other hand, the same lexical item already appears in teacher speech in grade 3 in a number of occasions, when the teacher asks a child to *close the window*; when she complaints for a noise coming from *outside the window* or when she repeatedly tells the children not to be distracted by looking *out of the window*. Taken together, these considerations suggest that estimates of vocabulary knowledge based on course books as a unique source of input risk to seriously misinterpret the complex relation between the lexical availability of the foreign language class and the vocabulary actually acquired by learners.

In consideration of the rapidly changing scenario within foreign language teaching in Europe, a section of the present research aimed at investigating the vocabulary produced, in class, by equally qualified teachers of different linguistic background (a

NS and a NNS of English). The lexis, made available to learners of different age and proficiency level, was analyzed. Lexical profiles of the vocabulary produced by NS/ NNS teachers were obtained and the proportion of low-frequency vocabulary, per class-group, was calculated. The comparison produced some interesting and, indeed, unexpected results. There was no evidence in the data that NS teachers expose learners to a wider range of vocabulary and to an overall richer lexical environment. In fact, it was suggested that the *amount* as well as the *richness* of vocabulary available to young learners, in the low-level class, are more likely to relate to teachers' individual differences, or to the topic dealt with in the lesson-unit, than to the proficiency level of learners and/or teachers – the latter having or not a native command of the language. It should be noticed, though, that the data collected here consist of a set of two case studies (teacher A and teacher B) which may not typically represent the general background of primary education in Italy and San Marino. Besides, the overall lexical ability, in the target language, of both our teachers proved strikingly similar, despite the different educational and L1 backgrounds.

With reference to teacher's accommodation to learners' degree of linguistic competence, the data in this thesis suggests that while some teachers are likely to accommodate their speech to the level of proficiency of learners (i.e. NNS teacher in chapter four), this is not always the case and that the *quantity* and *quality* of the vocabulary available in the foreign language class are variables which are only partly related to the learners' general level of linguistic competence. As suggested above, other factors that seem to interact with the vocabulary children are exposed to in class are teachers' individual differences and the semantic/ thematic contents of the lesson-unit.

A final point I would like to address, here, is *grammatical accuracy*. It only marginally relates to vocabulary – and therefore to the core of this book. Nevertheless, it was the cause of an initial underestimation of lexical variation and richness in the vocabulary produced by the NNS teacher. Despite the fact that the latter employed a similar proportion of infrequent lexis to the NS teacher as well as an equally wide range of vocabulary, she exposed the learners to a substantial number of ungrammatical input. For example, she would use artificial sentences like "no silence, no English"; "First time no music. Second time, the music." or give the

children contradictory information, like "It's *a* cow-boy. It's *a* sandwich. It's *an* hamburger, it's *an* hamburger". Research suggests that ungrammatical input has a direct effect on acquisition (Gass and Lakshmanan, 1991 – reported in Ellis, 1994). On the other hand, it is also suggested that non-native speakers are likely to be more severe in their judgements than native speakers (Santos, 1988). This became very obvious while listening to the recordings of the lessons conducted by the NNS teacher, involved in the present research. She tended to correct most of the grammatical mistakes made by the children, when interacting in the foreign language, contrarily to the NS who appeared more tolerant and focused on communicative skills. Further studies are necessary in order to gain understanding of the relationship between teachers' ungrammatical input and learners' ungrammatical uptake and whether the formal is likely to have an impact of some kind not only on learners' syntactic proficiency but also on their knowledge of vocabulary. Outcomes in this direction will certainly contribute to inform decisions and actions in the quickly changing scenario of language teaching in primary education.

8.3 Part 2 – Foreign language input, in formal instruction, and learners' uptake

The first thought that occurred to me, at an early stage of the present research, when I was still transcribing the hours and hours of class-recordings was how difficult I found it, at times, to hear the voice of the teacher, as she moved around the class and passed from one child to another and from one desk to the next. It has happened I had to replay the same bit of tape over and over again. Sometimes, I needed to consult native speaker colleagues, in order to make sense of a particular word or sound and sometimes, even they, could not help me. At that stage, I was pleased I did not opt to use one of those clever, pocket-size recorders, which you clip on your shirt and just moves with you. By working with an old fashioned tape recorder, I too – like the children - experienced the difficulty of isolating familiar sounds from the stream of speech; I, too, felt lost at times and had to give up on one sentence and move on to the next. It was instructive, indeed. It was then that I first realized what an artificial and limited experience of the lexical environment within the language classroom one may gain from an analysis of written texts, only - caretakers knocking at the door to give a notice to the class; children giggling or getting distracted by something outside; the teacher interrupting the lesson to recall pupils' attention or moving around the room. The classroom is the physical and emotional space where learning occurs. Therefore,

all that which happens in the language classroom, lexical exposure through spoken discourse, written texts but also interruptions and background noise, is likely to have an impact on learners' ability to move from input to uptake.

A study conducted on L1 learners (Caselli et al., 1995) suggested that native Italian children seem to learn new vocabulary at a lower rate than their English and French speaking peers. The literature (see Meara, 1987 for a review of studies) tells us that despite a few differences in the way children acquire their first and a second language (mainly due to the fact that L1 children mostly acquire language in different settings with different exposure to language than L2 learners and that they are at different stages of mental and social maturity, Cook, 1969) there are also many similarities between L1 and L2 learning. Hence it could be argued that children who seem to acquire vocabulary at a lower rate in their L1 are likely to also adopt a similar rate in the acquisition of lexis in a second language. The data illustrated in the present research show no evidence of the fact that Italian learners of English as L2 acquire a fewer number of words, per lesson-unit, compared to their French and Greek peers. Vassiliu (1993) reported that Greek students of English, at an intermediate level, seem to acquire 3 new lemmas per 50-minute class. Milton and Meara (1998) suggested that British students seem to learn around 3.8 to 4.3 lemmas per hour lesson, while students from different backgrounds a figure of 1.7 to 4.4 lemmas – possibly not a very different attainment (once you allow for the difference in word counting as well as for the difference in methodology – vocabulary recognition rather than vocabulary acquisition - implemented in the studies) compared to our primary school children at the outset of learning. The studies dealt with in chapters 6 and 7, of this book, indicate a figure of 7.8 types per 50-minute class, identified as familiar by learners in their first year of foreign language instruction, and a mean number of 14.32 different words per contact hour recognized by two groups of fourth graders (namely, 13.33 types, for children in chapter 6, and 15.31 types per lesson-unit identified as familiar by subjects in chapter 7). The most striking result was in the similarity between the number of words recognized as familiar by learners at equal proficiency levels - namely children attending grade 4 in chapters 6 and 7, compared to the acquisition rate for their younger peers, in their first year of English instruction. Calculations of the number of items acquired by *all* learners in both groups of fourth graders – under the assumption that the items comprising the tests represented a

balanced proportion of the total vocabulary available in class - indicated that 1 word-item was acquired every 3 (chapter 7) or 4 (chapter 6) running words; a substantially different figure from the 1 word every 10 running words recognized as known by their younger peers, in grade 3.

Moreover, children at the outset of learning were found to substantially improve their performance from one year to the next. Chapter 6 and 7, contain data collected during two successive academic years. Therefore, pupils attending grade 4, in chapter 7 are the same children attending grade 3 in the experiment carried out in the previous year (and reported in chapter 6). From one year to the next – and with as little as 55 hours of exposure difference, spread over a period of 33 weeks of formal instruction – third graders improved their word-recognition rate from an average of 7.8 types to nearly twice as many words (15.31) per 50-minute class – which translates to an annual increase of around 800 words. As suggested, Nation (1990) reviewed a number of studies on young foreign language learners and he indicated that pupils in India and Indonesia tend to acquire, roughly, 200 items a year. Cameron (2001) identifies a figure of around 500 words a year, which, she admits, may be rather optimistic. Compared with the indications above an acquisition rate of 800 words a year appears certainly higher than previously thought. Nevertheless, it should be noticed that approximations of this kind ought to maintain their status of *approximations* and therefore to be treated with some degree of flexibility. For example, it is likely that a proportion of the 14 words per teaching unit, identified as known by fourth graders, consist of lexical items pupils may have already encountered in their previous year of study, and possibly partially acquired. On the other hand, learners in grade 3, with no previous exposure to the language and no reinforcement outside the classroom - once you allow for a set amount of weekly homework – managed to recognize as familiar a surprisingly great amount (7.8 words) of vocabulary per teaching session.

It was also suggested that learners at different proficiency levels seem to employ different strategies in their attempt to acquire vocabulary. There were indications in the data that the least proficient learners, if compared to their more proficient peers, are likely to rely more heavily on teacher's input than on the lexical input from written material. The data also seem to address a further difference between *ab initio* and more advanced learners. The latter (i.e. pupils who have already received at least

55 hours - one school year - of exposure in the foreign language) appear to be at a different level of progression in language processing, if compared to their less proficient peers, with particular reference to their ability to differentiate between parts of speech, with nouns being easier to learn than verbs. The difference in the means was statistically significant and a large effect (Eta squared) was calculated. This category of learners seems to have progressed from an initial phase of *word recognition* where lexical items were stored in isolation and with no grammatical information, to a successive phase where words progressively acquire a grammatical identity and become interrelated within a phrase (see chapter 2.6 for discussion on progression in processing pre-requisites and structural target language outcomes predicted by processability theory, Pienemann and Håkansson, 1999).

An implication for the teaching that might be drawn from the present data is that children at the outset of formal instruction may largely benefit from homework and consolidation activities which rely on oral input and, therefore, on sounds and phonological knowledge (like, listening to tapes, working with songs, rhymes, story-telling or drama). More advanced learners, on the other hand, are likely to benefit from a more structured teaching approach, where teacher speech remains central but, most importantly, an approach which stimulates learners' metalingual knowledge (thus focusing on both competence and performance) as well as explicit teaching and learning of vocabulary.

Further factors which have appeared to significantly correlate with learnability – for learners of both proficiency groups – are imageability and word-saliency. It has been argued that imageable words - that is words which arouse a mental image – are likely to be more easily acquired than abstract vocabulary (Ellis and Beaton, 1993, Lewis, 1993). The research reported here seems to confirm these findings. Besides, children of different proficiency levels seem to equally differentiate between words that are likely to appear more or less salient, within the semantic context of the language classroom. By *salient* I intend, here, the vocabulary which more strictly relates to the teaching-point, to the semantic environment of a specific lesson-unit. It was found, for example, that where animal names, or objects in the classroom, or actions, were the main focus of the fifty-minute session, learnability of such lexical items was

likely to be enhanced and these words better learned than the rest of the vocabulary implemented in class – which I have addressed as *instrumental* vocabulary.

Finally, I would like to question here the applicability of the generally accepted assumption, with particular reference to young learners in the low-level class, that frequency of occurrence in the general language is likely to have an impact on the acquisition of vocabulary, so that words that belong to a higher frequency band may be learned before words that belong to lower frequency bands. Therefore, lexical items like, *artist, letter* or *question* - which belong to the first 1,000 most common words, in English, are likely to be more quickly acquired by the majority of language learners than words like *aggregate, inspect* or *reverse* that are not among the 2,500 most common words in the language although they may not differ greatly in intra-lexical factors, such as length, pronunciation or morphological complexity. Unfortunately, similar criteria of *lexical difficulty* have been often evaluated in experimental conditions which involved adult learners. To date, we still have little knowledge of the way words are *identified* in the stream of speech, *encoded* and successively *retrieved* by young learners; on the criteria that guide such a process and on whether different criteria typically apply to learners of different proficiency levels. The studies reported in the present research indicate no significant correlations between frequency of occurrence in the general language and learnability. On reflection, the fact that young learners, with little or no previous exposure to the foreign language may treat words from a high frequency bands (like, *letter* or *question*) in the same manner as words occurring less frequently in English (like, *zebra* or *skates*) - and therefore may find them all equally hard or difficult to learn – should not surprise us as it is, possibly, a rather predictable result. The only general language these children have come to familiarize with is not the English, spoken in UK, in the United States or in any other countries in the world; it is, in fact, the English spoken by their teachers in class and available to them from course books. Therefore, if *zebra* or *skates* happen to occur only a limited number of times in general English but rather often in the micro-environment of the classroom, then it is likely that such words will be more easily acquired by learners. Outcomes from chapter 7 indicate that words occurring 10 times or less in teacher speech are more easily remembered than those repeated 11 times or more, regardless of the frequency band they occupy in spoken discourse or written texts around the English speaking

world. It should be pointed out that a great proportion of the vocabulary contained in course books and available from teacher speech, belongs to semantic fields which can be addressed as *children-friendly* – namely, numbers, school and home, hobbies, family. With few exceptions, most of lexical items which fall into these categories are likely not to be included in the first 2,500 most common words in the language, and therefore they are likely to be treated as *unusual*, if not as sophisticated, and harder to acquire than the more frequent words (Meara, Lightbown and Halter, 1997). This stresses the need for the compilation of frequency lists targeted to specific typologies of learners – be they *young* learners, students with *no* or *little proficiency* in the language, or frequency models of the vocabulary most often employed in the foreign language classroom.

8.4 Part 3 – Assessing vocabulary knowledge of young learners, in the low-level class.

The literature has often reported on the absence of a comprehensive and generally accepted method for the assessment of vocabulary, and particularly for investigating the lexical knowledge of the low-level class (Meara, 1996b; Read, 2000; Schmitt and McCarthy, 1997).

Assessment measures, which are based on the frequency model of learning, produce estimates of testees' vocabulary size by sampling a certain amount of lexis from each of the frequency bands of a word-list (i.e. EVST - Meara and Jones, 1990, *Vocabulary Level Tests* – Laufer and Nation, 1999; Nation, 1983, 1990, 2001; Schmitt, 2000). Despite the fact these tests seem to work particularly well in investigating areas of receptive knowledge (with the exception of Laufer and Nation, 1999, intended to measure productive knowledge), it has been questioned whether frequency-based tests are equally applicable to an audience of young learners - with no or little proficiency in reading and writing in the foreign language as well as with a *lexical storage* of no more than few hundred words (Meara, 1994a) - as they are to more proficient adult learners. Due to the fact they work on restricted samples of items selected from each of the frequency-bands, it is likely that learners with only a limited vocabulary – that may not include the selected words - may see their knowledge underestimated by a similar type of tests. This leaps to the defence of

assessment measures – like the one used in the present research – based on the exact vocabulary taught.

Further difficulties related to assessing the low-level class lay on the issue of core vocabulary. As reported in the literature (Scholfield, 1991; Vassiliu, 2001), studies which have investigated the vocabulary shared by a number of course books addressed to learners of similar proficiency levels, found very little correspondence between texts. Similarly, an analysis of the oral input in the FL, produced by two different teachers (a NS and a NNS) and addressed to primary school children - over a selected period of time, per year of instruction - suggested that only a proportion of approximately 50% (298 types) of the total exposure, available in class, is shared between the teachers. Besides, it is likely that the greater the number of teachers involved, the smaller degree of overlap will be obtained (unfortunately, large scale investigations in this direction are extremely hard to set up and carry forward, in the Italian scenario, for a number of reasons, like, administrative difficulties, time restrictions dictated by the requirements of the National Curriculum that result in a lack of motivation and interest, on behalf of the large majority of teachers, for what are often considered as *intrusive* research activities). Considering that learners are typically exposed both by course books and teachers to a small amount of common lexis, this makes it hardly possible the employability of assessment measures which set common lexical targets and imply the knowledge of a common set of vocabulary. The *Starters, Movers* and *Flyers* tests for young learners, for example - developed by UCLES – based on 100, 175 and 250 hours of instruction, respectively, show some strengths and weaknesses. Specifically, the administration of the *Starters* tests lasts 20 to 25 minutes; it is carried out by a trained examiner and learners are tested individually. The CYLE tests (*Starters* level) have originally been produced for children of 6 to 7 years of age, although they presuppose around 100 hours of previous instruction and a vocabulary just below 400 different words. On the other hand, children involved in the present research had had no previous exposure to the language and were estimated to know (possibly only in their written forms) a limited range of borrowed vocabulary, for example, *hamburger, hotdog, computer, ok.* The class teacher was inclined to believe that tests of this type were likely to be applicable and useful in the context of final year students with learners with an average exposure to the language of around 150 hours. Hence, the difficulty of identifying a common

range of lexis typically available in the young low-level class lends credence to the employability of test-formats based on the exact language exposure occurring in the classroom.

Before concluding this section, I would like to discuss some of the strengths and limitations of the testing methodology employed in this study with the aim to inform future research (also see section 8.5).

One of the issues to take into account in testing young learners lays in the difficulty they experience in keeping a high level of attention for an extended period of time as well as in motivating themselves towards task-completion. Also, in consideration of the data reported in chapter 5 which suggest that teacher speech accounts for a substantial proportion of the lexical exposure in the class and that children are likely to gain access to a much greater amount of *spoken* than *written* input, I decided to administer Yes/No tests in their oral format. On reflection, this decision had both strengths and weaknesses.

A positive outcome was the fact I could take notes of children's attitude, degree of assertiveness, level of concentration. I was, therefore, able to test and, at the same time, to observe the testees individually. Nevertheless, a weakness in the methodology employed resulted from the very observations of the subjects' responses to the stimuli. They recurrently acted (i.e. they whispered and repeated the word-stimulus to themselves) as if they were trying to identify the sound of the word-item uttered by the teacher, as if they were attempting to trace bits of information related to the word they could not gain access to from simply *listening* to the word. It could be argued that the observed behaviour may be caused by a plurality of factors:

1. Nation (2001) identified the ability to recognize a word when it is *heard* (*spoken* form) and when it is met in reading (*written form*) as initial steps in the process of receptive vocabulary knowledge. In current teaching methodologies (see chapter 3), and indeed in the teaching practices observed in the schools I visited while in the process of collecting data for the present research, *speaking* and *writing* skills are taught side by side and the speech produced by the teacher in class is often interrupted so that words or sentences or pictures can be written down or drawn on the board or in their notebooks

by the children. Thus it can be argued that vocabulary tests which implement an *oral construct* are likely to exclusively rely on the learners' ability to recognize a word when it is *heard*, rather than on both the written and spoken dimensions of lexical items thus, possibly, underestimating learners' actual receptive vocabulary knowledge. This can be particularly true in formal-instructional settings where learners typically become acquainted with new lexis by means of both oral and written input. Moreover, due to the fact that Italian native speakers are used to a phonologically transparent writing system they are likely to identify and label English letters and words with Italian sounds thus, for example, storing in their mental lexicon the written item *beautiful* as /beɑ:u:ti:fu:l/ rather than /bju:təfl/. Although Italian young learners would normally hear /bju:təfl/ as uttered by their teacher, in class, they are also typically provided with the written form of the word. At that point the child, particularly if *ab initio*, is likely to transfer L1 reading strategies to the L2 thus changing the input from /bju:təfl/ into /beɑ:u:ti:fu:l/. It could be argued therefore that a proportion of L2 vocabulary is assigned by learners a *multiple phonological identity* (i.e. native-like and non-native-like phonological identity) where the non-native-like pronunciation is likely at this level of proficiency to remain dominant. In a Yes/No test based on written stimuli the testee is likely to process through the following stages which lead to decision-making:

- Written stimulus (i.e. *beautiful*)→
- If native-like pronunciation is not available→
- L1/non-native-like pronunciation (i.e. /beɑ:u:ti:fu:l/) is searched→
- If link between L1/non-native-like pronunciation and written stimulus is available → *Yes* answer is produced
- If link between L1/non-native-like pronunciation and written stimulus is not available → *No* answer is produced

In a Yes/No test based on oral stimuli only the testee is likely to process through the following stages:

- Oral stimulus (i.e. /bju:təfl/)→

- If native-like pronunciation elicits word recognition→ *Yes* answer is produced
- If native-like pronunciation does not elicit word recognition→ *No* answer is produced

2. By implementing an oral yes/no test format in the present investigation it is possible that a number of *stimuli* which were only available to our learners through the link between L2 word ↔ non-native-like pronunciation have not been identified. On the one hand, this could result in an underestimation of learners' actual vocabulary knowledge. On the other hand, we should question ourselves on whether L2 lexical items which are stored in the learner's mental lexicon as L1-spoken forms (i.e. /beɑ:u:ti:fu:l/ for *beautiful* or /dʒi:rl/ for *girl*) are to be intended as items that have been acquired, or partly acquired, in the *foreign language* or rather as L2 written forms which have been changed into the learner's L1 spoken forms and possibly stored in the learner's L1-receptive/ productive mental lexicon (also see section 8.5).

3. Some words like, *blackboard, sharpener, jacket* were quickly recognized by learners while other groups of words, for example *instrumental* vocabulary (i.e. words that were not the focus of any teaching points but which were used by the teacher in the unfolding of the lesson-units) and lexical items related to the *weather*, were the hardest for the learners to remember. Nevertheless, despite some differences in scores between semantic categories a common attitude by the testees towards the task itself was noted. Learners were instructed to answer, *yes* if they believed they had heard the stimulus-word before or *no* if the word sounded new to them. Learners' attitude towards the task seemed consistently influenced by their ability to identify L1 translation equivalents for the tested vocabulary. Children often produced the L1 translation equivalent for the *stimulus*-word uttered by the teacher and successively formulated the related answer, yes (see section 8.5 on limitations of present research).

4. Finally, some of the *stimuli* (i.e. *name* or *door*) were not identified as words that had been heard before, despite the fact learners had no problems

recognizing them if embedded in meaningful contexts. For example children were often asked to close the door as they left the room and they did so with no hesitation, although they had answered *no* to the word *door* on its own. Checklist tests are typically based on de-contextualized vocabulary. They allow the researcher to investigate a consistent number of *stimuli*, although the latter are extrapolated from context and used in isolation. With adults or advanced learners this procedure guarantees no interference with the remaining vocabulary in the test, on the other hand, children of the same age and proficiency level as our learners may be too young and have too little language to be able to de-contextualize their vocabulary knowledge. Furthermore, the idea of context may somehow be related with the difficulty to define the concept of word itself. Carter (1998: 5) regarded the word as "the minimum meaningful unit". Therefore, it could be argued that *what's your name* may be intended as a word by our learners – as they are not able, yet, to divide the sentence into smaller meaningful units. On the other hand, whether the difficulties with de-contextualizing the language are to be explained as primarily the result of learners' age and level of proficiency or of a teaching approach mainly focused on communicative skills is still a matter for discussion.

I would like to conclude this section by reporting a recent conversation with a pre-schooler boy on words being hard or easy to acquire which occurred while taking part in a project that involved local primary schools. A brief commentary will follow. *Winnie the Witch* (Korky and Thomas, 1987) was a popular storybook which was often read to the children. They knew most of the lines by heart, but there was a word this particular child could never remember, *gleaming*. "The bath was a *gleaming white*." I asked him the reason why he was finding it hard. He thought for a while and then replied: "I don't know..., it's because I keep forgetting it".

It may sound like a *chicken and egg* controversy – is a lexical item hard to remember because it is difficult, or is it difficult because it is hard to remember? Also, is it always possible to find the right answer to such a question? Sometimes words are likely to be acquired because they are useful, phonologically likeable, or emotionally salient. Other times, the semantic field of an item may be already taken by its

synonym, or the word may be embedded in a complex syntactic or lexical environment. The data reported in this book have suggested that factors affecting learnability are likely to change and progress with age and level of proficiency of learners. An ingredient necessary for learning, particularly when dealing with young learners, is children's enthusiasm, curiosity and eagerness to make sense of the world. During the time I spent in the schools, recording data for the present research, I learnt to reinterpret the classroom not only as a place where children learn, but also as an environment where they live and share their experiences. Children take a holistic approach to life and therefore to learning. They want to see, to hear, to touch, to feel, they want to *live* the language before being able to acquire it. There is a need to form language teachers who can represent, in the eyes of young learners, the culture, the country and the people where the foreign language is spoken, but also – as highlighted by the research in this book – teachers who have an excellent command of the target language, thus to be able to maintain a good degree of autonomy from the textbook which typically introduces a limited and semantically predictable amount of lexis (the vocabulary introduced in text-books is more often than not organized by semantic-fields where topics like, family, school, hobbies, etc. are presented sequentially), although one with a typically high degree of inter-material variation (despite the fact text-books are typically structured by recurrent semantic-fields, the vocabulary chosen for each of the topic areas is likely to maintain little consistency between course books, Scholfield, 1991).

8.5 Limitations

It emerged from the present research that, while children at the outset of learning seem to rely more heavily on teacher speech than their more advanced peers, words which are both *heard* (phonological knowledge) and *seen* (orthographical knowledge) appear to be better acquired by learners than the vocabulary only available from classroom discourse. A piece of information which could not be accessed due to the methodology implemented for classroom observation (that is the use of audio rather than video-recording devices) deals with the proportion of vocabulary, *spoken* by the teacher in class, that gets written on the board and becomes, therefore, *written* input and thus available to learners in both its phonological and orthographical dimensions. Should the amount of *oral-written* input result into a substantial proportion of the total oral exposure available to learners in class, this may, in fact, undermine the

appropriateness of our initial decision to assess learners' phonological, rather than orthographical knowledge. Such decision was instructed, in part, by the data reported in chapter 5, which indicated that teachers seem to expose the learners to a much greater amount of vocabulary than course books. But also, it aimed at creating a one-to-one testing environment which allowed the researcher to monitor testees in their reactions to the *stimuli* as well as in their degree of assertiveness and which, therefore, took the form of a *silent* interview. Besides, by opting for an oral format of Yes/No tests it allowed us to avoid a potential problem in dealing with learners' orthographical knowledge – that is the difficulty of investigating the *backstage* to students' ability to acquire a lexical item by means of its written form. To say it in other words, how do we know what kind of information has been stored in the mental lexicon of an Italian child who proves to have learned the written form of words like, *I, beautiful, fine*? Have these items been *labelled* by means of their native phonological identity, or have they rather been stored as /i:/, /beɑ:u:ti:fu:l/, /fi:ne/ – thus allocating an Italian sound to a foreign language spelling? In the case of the latter, would it be fair to assign the same score to *Italianized* lexical items as to genuinely acquired vocabulary? It could be argued that by locating the item *beautiful* within the Italian phonological system (i.e. /beɑ:u:ti:fu:l/) while, at the same time, identifying it as a foreign word, the learner has employed some kind of *compressed* variation of code-mixing - that is, when the use of both L1 and L2 does not only occur in the construction of the same sentence, but in fact within a single word. Code-mixing - and language transfer in general - has been addressed as a *natural* developmental phenomenon in the acquisition of vocabulary (Wode, 1976 – reported in Ellis, 1994a: 29). Taken together, the considerations above may suggest that under the conditions of classrooms creating balanced oral/written lexical environments, the use of a methodology which aims at testing both phonological and orthographical knowledge of vocabulary is likely to offer a better picture of learners' lexical skills.

With reference to point 3 in section 8.4, above - that illustrates some common behaviours towards the assessment task which were observed among the test-takers investigated in this thesis – a number of important issues have been emphasized by the present research, namely the multi-faceted nature of vocabulary knowledge; the complex relationship between learners' ability to *capture* the spoken form of a

stimulus-sound and their ability to acknowledge it as either known or unknown; finally the possibility for a single test or, indeed, a single methodology to address the issue in full. Lorenzo-Dus (2007: 233) stresses the need to develop not just *combined* but rather *integrated* methodological approaches which are able to incorporate in their analytical process "the quantitative and qualitative toolboxes from the very beginning". This can be particularly true when assessing young learners whose motivation to co-operate, ability to focus on the task and general level of cognitive development are likely to undermine the effectiveness of assessment measures used in *isolation* while they encourage the investigation of young learners' vocabulary knowledge by means of the implementation of multiple assessment measures or integrated methodologies.

An attempt in this direction was made, in the present research, by designing a testing environment that combined the advantages of the yes/no test format (i.e. investigation of the actual vocabulary covered in the FL class; simple test-construct; high number of *stimuli* tested in a short period of time) with those of a more qualitative format in which observation strategies were implemented in the analysis of the *way* learners accomplished the task.

Unfortunately, the initial idea to implement in the analysis of learners' uptake rate a combination of quantitative (Yes/No tests) and qualitative (observation) methodologies had to come to terms with a number of factors, like the requirements of the National Curriculum, time and procedural restrictions in the availability of children to co-operate with research activities that are independent from and external to the actual school environment, which forced a change in the method implemented in the assessment of learners' receptive vocabulary knowledge and restricted *observation* of test-takers, from a means of assessment to a procedural strategy that indeed contributed to the creation a more controlled test environment (that is one where children's behaviour and attitudes in accomplishing the task like, degree of assertiveness, participation, expressions of uncertainty, fatigue were closely monitored) but that could not be intended as an autonomous and complementary set of data, to those obtained from the Yes/No tests, with reference to learners' uptake rate.

On reflection, with reference to point 3 in section 8.4 where a recurrent behaviour observed among test-takers has been emphasized (that is to supply the L1 translation equivalent together with the *yes* answer to the oral *stimulus* prompted by the teacher during the administration of the Yes/No tests) and in consideration of the administrative difficulties - which eventually arose during the planning of the present research - in dealing with observations of children's performance as a parallel assessment measure to the Yes/No test format, I believe that one of the limitations of the present research possibly lies in the methodology implemented in the analysis of learners' vocabulary uptake which addresses the complex issue of vocabulary recognition and knowledge in young learners from the restricted point of view of a single Yes/No vocabulary test, whose format typically provides little clear-cut indications on motivations to children's answers.

In retrospect and in consideration of children's observed attitude to associate the idea of *familiarity* with an L2 lexical item to their ability to produce/access its L1 translation equivalent, I believe that a translation test - comprising a proportion of word-items randomly selected among the *stimuli* listed in the Yes/No tests - could have been implemented in addition to as well as in support of the methodology already in place. After the administration of the Yes/No test each subject could be asked to translate for example one third (i.e. 20 out of 60) of the L2 *stimuli* into Italian (L1). This procedure would only have taken little time to complete while it would have possibly allowed the researcher a more comprehensive view of the learners' vocabulary knowledge. Alternatively, an analysis of test-takers' performance on Yes/No tests in relation to an external criterion such as a measure of general language proficiency, normally implemented by the class teacher as a medium of formative assessment, could have instructed and possibly reinforced the outcomes of the present research with particular reference to the analysis of variability in learners' uptake rates.

An issue that needs to be taken into account, when considering the data reported in the present research is the degree of correspondence between the lexical environments created by the two teachers who contributed to the studies dealt with in this book and the overall scenario of language teaching in primary education, in Italy. Teacher B and teacher A are both qualified linguists, with some relevant experience

in teaching to young learners. Moreover, the latter is NS of the target language and the former, although NNS, holds a degree in English. Within today's education environment where the typical foreign language teacher is a qualified educationalist, who has acquired the foreign language through attendance to intensive courses I believe, alas, that the teachers involved in the present research are rather atypical as far as lexical proficiency in the FL and overall linguistic competence are concerned. It is worth mentioning the fact that I spent the initial two months of this project contacting schools and attempting to *recruit* teachers who could be interested in taking part in the present investigation. After several weeks, I succeeded in getting only *three* positive responses. Just before the beginning of the academic year, one teacher dropped out, leaving us with two participants – a NS and a NNS of English. Local university-led projects also seemed to face similar organizational problems. This is partly due to the strict syllabus requirements, in Italian state schools, which leave very little time for integration of external projects and research-led activities. Also, it has proved extremely improbable that language teachers who followed the route of immersion courses are willing to become involved in what they tend to see as *inquisitive* research studies. It is important to point out that a possible implication of this *reluctance* to cooperate, on behalf of the *average* primary language teacher, is likely to result in overestimations of the vocabulary available to learners of the *typical* low-level class.

Finally, the small number of subjects involved in these studies – with reference to both teachers and learners – represents an obvious limitation to the applicability of the findings reported in the present research to the more general scenario, of language teaching and learning, in the *ab initio* class. However, in consideration of the important role that input has been acknowledged by all theories of L2 acquisition (Ellis, 1994a), and in view of a lack of studies which aim at investigating the input available to learners in the foreign language class, the research reported in this thesis has intended to offer an important, although initial, contribution to the analysis of classrooms as lexical environments.

Chapter 9

Conclusions and suggestions for further research

At the outset of this dissertation I commented that a principal motivation for undertaking research in this area was the absence of good data, often any data, on the language of the classroom. As Ellis has argued, "L2 can only take place when the learner has access to input in the L2" (Ellis, 1994a: 26), but where such input is unknown, the processes by which the L2 is learned are necessarily opaque. It is hoped that this dissertation has allowed for a more comprehensive picture of the different sources of input available to young learners in the low-level class to emerge, as well as for an initial insight into how input interacts with uptake. It seems possible, on the basis of this material, to make some tentative general observations about the nature of the oral input to which learners are exposed and how this interacts with other sources of input.

A parallel analysis of the vocabulary available to students, at the outset of learning, from both course books and teacher speech has highlighted the limited amount of lexis contained in teaching materials addressed to the low-level class. The teacher – during the course of one academic year - seems to typically expose children from 8 to 10 years of age to twice the number of different words than those available from the text. An analysis of the shared vocabulary between the two sources of input has indicated that most, if not all, of the lexis comprising the textbook *is* used by the teacher in class. On the one hand, this may suggest that language teaching in primary formal instruction is strictly planned in order to meet the demands of the syllabus; on the other, it could be argued that the vocabulary contained in traditional textbooks – like the ones analyzed in the present research and most commonly used in everyday language classes – is too predictable and too little stimulating for the new generations of young learners (Cameron, 2001: 90), and that it needs, therefore, to be re-thought and re-invented.

While teachers seem to produce a volume of lexis much in excess of the vocabulary introduced in course books, the number of low-frequency words does not appear to

increase proportionally. Textbooks constitute richer lexical environments, with 19% of infrequent vocabulary, compared to the 13% in teacher speech. As reported in the literature, despite a repetitive use of the same semantic contents (Cangià, 1998; Cameron, 2001) – *hobbies, home, school, animals* – teaching materials appear to employ a rather disparate selection of lexis as well as diverse amounts of vocabulary (Scholfield, 1991; Vassiliu, 2001). The discussion section presented in chapter 7 reported that an analysis of wordlists implemented in teacher training courses - which are expected to cover a good proportion of the vocabulary contained in teaching materials addressed to young learners – showed that only around 12% of the total vocabulary comprises NoL words. Should these estimates be confirmed by further research, they would raise a much wider issue. In consideration of Ellis's views that acquisition can only occur as a result of some kind of input if the proportion of infrequent lexis taught to prospective language teachers comprises around 12% of the total exposure available in teacher training courses, this may result in language teachers not being able to get a grasp of the lexical contents of the very course books they are expected to teach. Moreover, such lexical *inadequacy* on the part of primary teachers (if confirmed by future research in the area of vocabulary taught in teacher training immersion courses) is likely to reflect, in the medium and long term, in the learners' inability to acquire the lexical contents suggested in the syllabus, due to a lack of appropriate input. Recent strategic re-structuring of the primary sector (often guided by political and financial priorities rather than instructed by theoretical guidelines) seem to encourage the belief that teaching languages to young learners is, somehow, easier than teaching adults and that language teachers in the low-level class only need to master a proportion of the vocabulary and syntactic structures of the target language, in order to meet the requirements of the primary syllabus. This rather a-theoretical approach, if not rectified, is likely to slowly undermine the quality of language teaching in the primary sector.

In the light of the findings reported in this thesis – which stress the importance of teachers' lexical autonomy from course books – further studies appear to be necessary in order to obtain a more complete picture of the relationship between variations of teacher speech (with reference to range of vocabulary implemented, degree of sophistication of lexis, degree of overlap with vocabulary contained in course books) and the speaker's general level of proficiency in the language. The literature offers

indications that course books seem to rely on a highly diverse range of vocabulary (Scholfield, 1991; Vassiliu, 2001). This makes the planning of teacher training courses – aiming at covering the lexis of a great number of texts – a demanding task. Where there is a need for the production of more challenging teaching materials and classroom environments, I believe that the compilation of a comprehensive corpus of *English-for-teaching-purposes* vocabulary would be potentially very useful to a range of learners. This compilation might be similar to the *Lessico Elementare*, for the Italian language (Marconi, Ott, Pesenti, Ratti and Tavella, 1994), and comprise the lexis that young learners *are* taught, *ought to be* taught, and should become familiar with, during the course of pre-school and primary education. This might usefully instruct teacher trainers; authors of teaching materials; educators willing to experiment beyond the traditional foreign-language-class format. Besides, it is likely to create common lexical grounds for the compilation of tests which are able to produce more accurate and comparable results, with reference to low-level vocabulary knowledge.

The analysis of the relationship between the vocabulary learners are exposed to in class and the words they seem to acquire, has suggested that learners at different levels of proficiency seem to rely on different learning strategies. Specifically, children with no previous exposure to the language rely heavily on teacher speech while more advanced graders appeared to distinguish between parts of speech, thus favouring the acquisition of nouns over verbs. An in-depth investigation of the total lexical exposure, for the duration of one academic year, has indicated that frequency of occurrence in the classroom micro-environment has an impact on learnability of vocabulary. Words repeated more than 10 times were better learned than those appearing a lower number of times. Nevertheless, the factors that seem to more strongly correlate with learnability, despite pupils' level of proficiency, are the degree of imageability of words and word-saliency intended, here, as se*mantic saliency* that is the degree of fit between a specific lexical item and the thematic content of the related lesson unit.

The small sample of subjects involved in the present research highlights the need for findings along this line to be confirmed by future experimental studies before strong claims on the complex input-uptake relationship can be made. The natural extension

for the work reported in this thesis, and indeed an open area of investigation for further research, is the analysis of retention rates in the low-level class over a set period of time.

APPENDIX 6-A

Transcription of teacher speech in GRADE 3, CLASS A.

ok. Touch, sit down, jump, climb, raise your hand listen yes look stand up and ok touch ok who wants to start come here come here come here ok what is that run run run to the blackboard ok run to the blackboard all right another one yes listen to me listen to me listen to me ok now walk to the door walk to the door good good walk to the door no walk to the door ok point to point to the window ok ok another one close the book ok close the book close the book now close the book close the book close the book ok another one read it read it look look at the bat ok another one sing a song ok ok very good all right here this one another one draw a cat ok what do you have to do draw a cat ok that is a nice cat draw a cat ok thank you all right one more let us see this one who wants to do this one ok read it up touch the chair touch the chair touch the chair chair no no that is a desk the chair ok the chair all right ok here is one more thank you open the door open ok very good close the door ok stand up ok stand up ok stop stop this one you have got to stop this one the categories no just a minute ok ok calm down stop wait a minute wait wait wait is is that animal animal what have you got here what are these colours colours colours objects no objects objects no plant plant plant plant and we can do the number the number ok the number yes all right ok all right it's your turn now no first it is my turn first it is my turn all right listen ok you ask me is it no ask me is it is it an animal no it is not yes an insect no it is not a plant no it is not yes a colour yes it is he can continue continue is it blue no it try again violet no it is not try again is it white no it is not is it green no it is not yes it is black ok ok ok ok it is your turn quiet is it a colour try again a number yes no number number try again try again ok ok we have to ask is it is it try again try again a bird a bird no try again animals are only are only the fish and the bird are the animal ok otherwise it is an insect ok yes it is an insect a butterfly ok is it no try again try again is it an insect is it an insect yes continue is it a spider yes is it a butterfly ok ok we have to stop here stop stop first you have to colour colour the picture colour the picture all right ok colour the picture you colour colour you have to colour colour the picture yes colour the ruler colour the picture you have to you have to colour colour the pencil ok the pencil the pencil-case ok the pencil-sharpener the ruler the pen the rubber rubber ok so you colour the pencil the pen the pencil-sharpener the ruler the pencilcase the bag if you want yes ok not not not not the chair not the chair and the table not the chair ok colour colour come on colour yes yes all right all right ok now now now now that you have coloured this then you write the names of four objects pencilcase pencil-sharpener ruler ok ruler rubber pen yes yes objects objects under objects objects one two three four ok pen pencil pen pen pencil-sharpener pen pencil pencil-sharpener pencil pencil-sharpener pencil pencil pencil is this and pencil-sharpener is this ok one under the other ok what colour is your what colour is your pencil purple purple ok write purple purple just a minute purple purple purple ok ask ask him what colour is what colour is your green ok write green ok you two your ruler ok yellow all right write yellow ok ask him what colour what colour is your pen pencilcase ruler pen green ok yes next red ok red ok next ask Jacob what colour what

APPENDIX 6-A cont.

colour is what colour is your what colour is your pen it is blue write blue blue pen next what colour is your pencilcase yellow yellow ok next your what colour is your violet ok good allr ight ok what colour is your ask her what colour is your pencil-sharpener ruler rubber all right what colour is your pencilcase violet ok next you two blue and violet blue and violet ok blue and purple pencil-sharpener ruler rubber no nobody asks what colour ok what colour green ok ok I'll ask you what colour is your pencilcase red and your pencil-sharpener your pencil-sharpener what colour is your pencil-sharpener red red ok friend two friend two friend two friend two what colour is your you ask her or her or her or her ask her what colour is your brown ok pencil is brown here you have to finish this yellow yes what colour is your ruler be quiet please ok read ok would you start my pencil is blue ok another one doesn't matter yes rubber my rubber is grey ok.

APPENDIX 6-B

Transcription of teacher speech in GRADE 3 - CLASS B.

The snow is falling where are the words who is got the song can I borrow this a minute ok ready the snow about the snow one two three I took it one two three snow is falling gently falling falling gently on the ground snow is falling gently falling falling down without a sound snow is falling gently falling falling gently all the night when I wakeup in the morning all the scene it will be white ok it is got eight legs and it is brown it is a spider yes good it is got no legs it is green and orange no, no Peter you did not listen to the colours it has got no legs no legs it is brown and and green a snail it has got a big mouth and it is orange a fish ok good it has got six legs and it is red and light it is black and red it has got two legs it is orange it is black and red it has got two legs it is orange a bird ok it has got six legs it is brown a beetle a beetle ok it is it is it is purple and blue a butterfly ok good purple and blue it has it has got six legs and it is green a grasshopper ok we take these off like this and then we are going to review the numbers the numbers one to ten one to ten one to ten remember the numbers here we are going to look at the poster ok here is the poster ok here we have poster we have a magician here we have two children a boy and a girl a girl yes and here what is this what is this no what is this a cat a dog a fish what is this a cat or a dog or a fish a cat a cat ok this is a snake a snake you like snakes how many how many rabbits are there how many how many three three yes one two three how many balls how many balls four one two three four how many birds no there are two there are two birds in the cage how many snakes how many snakes ah, yes two snakes two snakes where one and where is the other one ah two yes ok two snakes yes you are right four rabbits one two three four ok four rabbits how many dogs one dog ok one dog ok how many how many pens pens no three three pens ok three pens what colour is the chair brown no the chair is brown ok there is one chair and it is brown what colour let us see what colour are the rabbits red red red and white ok I do not know the mice these these are oranges ok there are four oranges ok what else is on the poster ok now we are going we are going to review the numbers from one to ten from one to ten what number is this what number is this eight what number is this what number is this what number is this five and this two this number one six ok this number nine ok what what are we missing what are we missing what is missing ten good ten three yes you are right ok so you have all you have these numbers ok we will do that in a minute all right no now we are going to go backwards ok what to do if I turning on turn now we have ten nine eight seven six five four three two one come on let us try ten ten nine eight seven sixfive four three two one one one ok now we are going to do the numbers to twenty now we are going to do from eleven to twenty eleven twelve thirteen fourteen fifteen no sixteen seventeen seventeen eighteen nineteen twenty ok all right now we are going to sorry ok let us read this let us read this here we go eleven eleven say this twelve thirteen with your tongue between your teeth thirteen thirteen fourteen fourteen fifteen sixteen seventeen eighteen nineteen twenty twenty ok all right let us try to read it like this two four

APPENDIX 6-B cont.

twelve fourteen sixteen eighteen twenty twenty twenty all right now I am going to give you the cards I'm going to give you these cards what number what number have you got quiet you have not got it ok ready nine nine he has nine three three sorry I have got three I have got three yes all right I have got three three ten ten anybody got ten no I have got ten I have got ten all right I have got ten seven seven ok nineteen nineteen nineteen ok eleven eleven good good good eleven twelve twelve twelve twelve twenty twenty good twenty yes sixteen sixteen ok sixteen look look at the numbers five five five no five have you got five I've got five I've got five I've got five seventeen no seventeen seventeen ok seventeen good show it show it hold it up hold it up ok seventeen fifteen fifteen fifteen fifteen fourteen fourteen fourteen ok fourteen did I did I say them all two two two and thirteen thirteen yes thirteen thirteen one one ok what number have you got what number have you got eighteen ok eighteen what number have you got what number eight eight what number have you got wait a minute do you what to do it again we are going to do it again we are going to do it again ok are you ready ok same thing hold up your card ok hold up your card ok ready let us start here what number is that eighteen eighteen all right yes hold it up no seventeen seventeen one nine what number have you got nineteen that is nineteen that is nineteen nineteen this is nineteen ok nineteen two ok what number eight sixteen four fourteen what is this thirteen fifteen fifteen ok three seven seven seven twelve eleven twenty twenty and this is seventeen ok what number have you got one nine ok give me the cards thank you ok all right now I'm going to give you we are going to do it this way wait a minute all right now we are going to point we are going to point to the numbers ok point point to the numbers put this around the classroom around the classroom I'm going to put no no no I'm going to put the numbers from the numbers from children it's recording you are making a lot of noise ok now ok put this around look at these all right point to number point to number seventeen seventeen no seventeen ok ok seventeen seventeen seventeen point to number seventeen point to number thirteen thirteen no thirteen is there thirteen is there point to number nineteen nineteen nineteen point to number fourteen fourteen fourteen ok point to number eighteen eighteen eighteen point to number twenty twenty point to number fifteen sixteen point to number fourteen point to number fourteen point to number eleven eleven point to number thirteen no thirteen thirteen thirteen is this is thirteen is this ok point to number twelve twelve point to number fifteen fifteen point to number seventeen seventeen point to number eleven eleven point to number eighteen eighteen point to number twenty twenty number nineteen number nineteen number sixteen ok number sixteen stand up stand up go to number fourteen fourteen fourteen ok touch touch number fourteen thank you sit down stand up go to number seventeen seventeen ok touch number seventeen good all right stand up go to number nineteen stop touch number nineteen very good sit down stand up go to number sixteen touch number sixteen all right very good stand up go to number thirteen thirteen stop touch number thirteen good stand up go to number eleven eleven go to number eleven stop touch number eleven ok go number seventeen number seventeen stop touch number

APPENDIX 6-B cont.

seventeen ok good stand up go to number fourteen fourteen ok stop touch number fourteen good stand up go to number fifteen fifteen stop touch number fifteen very good stand up go to number twenty twenty stop touch number twenty touch it good all right sit down stand up go to go to number nineteen touch number nineteen ok very good all right now I'm going to give you a photocopy I'm going to give you a photocopy a photocopy yes a photocopy it looks like a snail doesn't it not a snail a snake a snake it looks like a snake ok sit ok ok ok here you have the numbers look look look here a minute can you look here a minute listen to me listen ok so here you have one here you have one and you have to put the the the numbers in the correct order ok you have to put the number in sequence ok one two three ok do that no that's number yes yes right away isn't this a pencil no what is in here listen what is in here is this yours no you haven't got a pencil ok well I give you my pencil just a minute just a minute just a minute just a minute here no just a minute just a minute sit down sit down ok one two three four five exercise number two exercise number two it says write the numbers in the correct order two minutes to do that ok just a minute ok ok have you finished that have you finished have you finished yes ok ok yes yes good ok now I have another another sheet here ok I have another sheet now this is going to we are going to count by twos.

APPENDIX 6-C

Transcription of teacher speech in GRADE 3 - CLASS C (closer to date of test).

Can you see a yellow bee can you see a yellow bee remember yes ok ready ok are you ready can you see a yellow bee all right ready one two three can you see a yellow bee yes I can it's under the tree can you see a ladybird yes I can it's on my shirt can you see a purple snail yes I can it's on the train can you see an orange ant yes I can it's in my hand can you one ready can you see a yellow bee one two three can you see a yellow bee yes I can it's under the tree can you see a ladybird it's on my shirt snail yes I can it's in my hand can you see an orange ant yes I can it's in my hand ok the boys boys can you see one two three can you see a yellow bee yes I can it's under the tree can you see a ladybird yes I can it's on my shirt can you see a purple snail yes I can it's on the train can you see an orange ant yes I can it's in my hand ok the girls now girls can you see a yellow bee yes I can it's under the tree can you see a ladybird yes I can it's on my shirt can you see a purple snail yes I can it's on the train can you see an orange ant yes I can it's in my hand ok a little bit better ok now look at the school song ok this one here ok what colour is the book here what colour is the book what colour is the ruler and the pen green the pencil is no the pencil is the school-bag is orange ok what colour is the school-bag here orange and pink pink and orange orange and pink it's the same thing ok what colour is the pen here green green and black what colour what colour is the rubber ok red ok red yellow and brown what colour is the exercise book no the exercise book white and yellow yes white and yellow ok ready all right we are going to sing the song now we are going to sing the song ok ready a pink and orange school-bag a green and black pen you were not ready a brown and red and yellow rubber back to school again ok ready the school-bag song a pink and orange school-bag a green and black pen a brown and red and yellow rubber back to school again a white and yellow exercise book a pink and orange pen a red and blue and violet ruler back to school again we have to do that again ready pink and orange school-bag let us sing the school-bag song all right ready a pink and orange school-bag a green and black pen a brown and red and yellow rubber back to school again a white and yellow exercise book a pink and orange pen a red and blue and violet ruler back to school again a pink and orange school-bag a green and black pen a brown and red and yellow rubber back to school again a white and yellow exercise book a pink and orange pen a red and blue and violet ruler back to school again ok did ok ready ok ready ready ok ready how many bees can you see would you like to read that please how many bees repeat how many how many can you how many five yes do you agree five bees how many bees can you see five all right next one how many seven flowers yes seven seven flowers all right next how many how many can you see ten yes ok next how many can you see can you see eight eight ladybirds yes eight ladybirds all right next how many six butterflies yes all right next yes go ahead how many how many birds can you see nine nine birds yes no three birds one two three three birds three birds three birds three three birds ok next how many no the last one how many snails how many snails repeat the whole thing how many snails can you

APPENDIX 6-C cont.

see five or six five six six five or six he wrote four he did four snails snails are snails one two three four one two three one two one two three four five five ok read this here colour the colour colour the the bees colour the bees yellow ok next colour colour colour the flowers orange ok next colour good colour ladybird ok next all right the birds light blue ok colour the snails brown horse you drew a horse a horse yes a horse ok what did you draw sorry a a snail a snail what did you draw what did you draw a flower what did you draw a snail ok what did you draw a bee a bee all right what did you draw a cat what did you draw just a minute a cat a rabbit a rabbit yes and just a minute just a minute a cat a rabbit it's like a caterpillar ok and then a duck a duck what did you draw a spider ok a beetle ok a grasshopper ok what did you draw a worm a worm a worm what did you draw a snail what did you draw what did you draw a butterfly a butterfly ok a snail a ladybird a beetle ok what did you draw owl ok owl a butterfly what did you draw a dog what did you draw a bee a bee what did you draw sorry ok caterpillar and a sheep and a sheep a sheep ok point to number ten number ten ok point to number fifteen fifteen no that's not fifteen no fifteen ok good that's number fifteen point to number thirteen thirteen thirteen point to number twenty point to number twenty number twenty point to number eighteen eighteen eighteen all right point to number seventeen seventeen seventeen seventeen all right point to number twelve twelve twelve ok yes point to number eleven number eleven all right point to number eight number eight eight yes number sixteen ok number fourteen number fourteen fourteen ok stand up stand up go to number fourteen number fourteen number fourteen ok stop touch number fourteen all right stand up go to number fifteen fifteen fifteen fifteen yes ok go to number eleven eleven eleven eleven stop that is number eleven all right go to number seventeen seventeen be careful seventeen ok all right yes touch number seventeen good go to go to number number stand up go to number twelve number twelve number twelve number twelve stand up stand up go to number twelve number twelve number twelve number twelve ok stop all right touch number twelve no touch touch number twelve ok stand up go to number number ten number ten ok touch number ten all right stop all right go to number number twenty number twenty touch number twenty all right very good go to number number three number three ok touch number three ok very good stand up go to number nineteen touch number nineteen ok sit down go to number fifteen fifteen fifteen ok touch number fifteen go to number nine number nine touch number nine ok got to number eighteen eighteen touch number eighteen go to number seventeen seventeen seventeen no seventeen seventeen seventeen seven seventeen ok touch number seventeen all right go to number twelve number twelve go to number twelve go to number twenty number twenty ok touch number twenty all right stand up go to number eleven eleven number eleven touch number eleven ok stand up go to number sixteen sixteen sixteen sixteen sixteen no sixteen six sixteen sixteen touch number sixteen all right ok page thirty this is one penny one penny one penny one penny one penny then we have two pennies two pennies then we have three no we have five if I can find it here five five five five five five five five yes here is five five pence five pence

APPENDIX 6-C cont.

five pence and I have ten pence too ten pence ten pence ten pence pence and then I have twenty twenty twenty twenty twenty twenty pence twenty pence fifty pence.

APPENDIX 6-D

Transcription of teacher speech in GRADE 4 - CLASS A.

Ok today is December the thirteenth this is the fourth grade the fourth grade ok I'm going to give you these cards no just a minute just a minute I give you these cards what card have you got yes ok ok ok come on ok we are going to read the words what words have you got sweater yes good shop yes come on wool yes field farmer sheep cold ghost ok factory park warm grandma yes children ok all right ready sweater yes ok you hold up the word all right one hot day who has hot nobody hot hot ok hold it up there is a white sheep in a green field white white no white green no we have not got it all right a farmer cuts the warm wool warm wool ok warm wool of the white sheep the warm wool goes to the big factory factory ok the warm wool goes to the small shop warm wool yes yes yes warm wool warm wool goes to the small shop grandma goes to the small shop yes and buys the warm wool ok good she makes a red a sweater she makes a red sweater for the happy children to wear on a cold day cold ok exchange exchange ok ready second time ready one ok ready ok ready one one hot day there is a white sheep no that is shop sheep a sheep come on who is the sheep sheep sheep in a green field a farmer cuts the warm wool farmer I can not see who has got the farmer farmer farmer I can not see it the farmer cuts the warm wool of the white sheep the warm wool goes to the big factory I didn't say shop yet the warm wool goes to the small shop grandma goes to the small shop and buys the warm wool she makes a red sweater for the happy children to wear on a cold day one hot day I said at the beginning ok change one more time ok are you ready ok come are you ready come on ready ok ready one hot day hot hot hot day there's a white sheep in a green field ok a farmer cuts the warm wool of the white sheep ok the warm wool goes to the big factory ok the warm wool goes to the small shop grandma goes to the small shop and buys the warm wool she makes a red sweater for the happy children she makes a red sweater for the happy children to wear on a cold day ok no no that is enough now we are going to do this ok we are going to do this can I have the cards please take a pencil now one no no just a minute just a minute just a minute one hot day ok write hot hot hot hot yes there is a white sheep white white white sheep white sheep white only one word one word hot white yes in a green field green no no not hot a farmer farmer farmer it is simple it is very simple farmer farmer a farmer farmer farmer cuts the warm wool wool wool wool wool you have to look here look here the warm wool of the white sheep wool wool wool wool a farmer cuts the warm wool of the white sheep it is an exercise the wool goes to the big factory factory factory yes yes ok the wool goes to the small shop shop grandma goes to the shop and buys the warm wool warm wool warm wool yes she makes a red sweater red sweater for the happy children to wear on a cold day cold day cold day ok would you like to write the words on the blackboard yes write the words yes write the words no no no just the words just the words one hot ok one hot day there is a a white sheep no sheep no no in a in a green green green green field field a a farmer farmer farmer is that right farmer ok cuts the warm warm farmer farmer yes go ahead warm woolof the white sheep sheep ok sheep how do you write sheep another here here here quiet the wool goes to the big factory the wool goes to the small shop shop to the small shop ok grandma goes to the shop and buys the wool warm wool you want to go outside you want to go outside wool wool warm wool sweater she makes a red sweater for the happy children sweater sweater for them to wear on a cold day quiet quiet one hot day one at the time the wool goes to the factory this is this is Father this is Father

APPENDIX 6-D cont.

Christmas Father Christmas yes Santa Claus Santa Claus ok what's he wearing what's he wearing who wants to answer what's he wearing what's he wearing what's he wearing what's he wearing yes jacket isn't it jacket red and white cap ok and is he wearing is he wearing gloves no is he wearing gloves yes these are these are mittens mittens they don't have they have just the thumb yes ok is he wearing is he wearing boots is he wearing boots yes ok what colour what colour what colour are the boots what colour purple all right what colour are the gloves blue light blue or dark blue light blue what is dark blue and what is light blue all right has he got a beard yes what colour is his beard white white white ok has he got a big nose yes he's got a big nose all right has he got has he got a sack this is called a sack yes he's got a sack all right now look on page page page page twenty-three ok page twenty-three yes here we have a picture of Santa Claus ok picture of Santa Claus open your book please open your book please page twenty-three page twenty-three ok so this is Santa Claus and he's got he's got some toys ok he's got some toys because he is magic ok in his sack he has a train all right a train yes a train a car a doll yes a computer game a computer game roller roller rollerskates rollerskates ok he's got rollerskates rollerskates and a book yes as well a mountain-bike all right doll a dog ok a ball a ball a bicycle a bicycle bicycle bicycle bicycle a ball ok ok ok ok let us look on page twenty-five twenty-five it says it says look and match look and match ok can you do that bicycle ball rollerskates computer game car ok take a pencil take a pencil do the exercise ok do the exercise page twenty-five twenty-five twenty-five take a pencil take a pencil pencil have you got a pencil take your pencil and do the exercise that was quick ok so what what's Father Christmas got in his sack he's got no yes what's he got he's got a computer game one at a time one at a time yes what's he got bicycle all right now look here a minute ok what colour is the bicycle what colour blue yes and the dog the dog what colour is the dog all right and the rollerskates ok and the train what colour is the train green and yellow all right good has has Father Christmas got black gloves red gloves has Father Christmas got brown boots no no they're grey has Father Christmas got a black beard no no he hasn't what colour is his beard white ok and what colour is his cap red and white ok very good on page twenty-five it says draw very quickly very quickly ok have you finished we've got another Father Christmas here you see this one is very fat very fat ok this is a present no ok have you got have you got have you got have you got have you got have you got a car in your sack as well.

APPENDIX 6-E

Transcription of teacher speech in GRADE 4 - CLASS B.

ok open your book to page page twenty-five twenty-five ok have you got have you got a a train in your sack twenty-five twenty-five ok sorry no you have to ask have you got a train in your sack etcetera train in your sack in your sack I haven't no I haven't ok ask her in your sack ball no I yes I have yes I have yes I have have you got no I haven't all right ok have you got have you got in your sack ok yes I have no I haven't yes I have ok all right have you got have you got ready yes I have ok ask him have you got no have you got a car in your sack have you got have you got yes I have ok ask him yes I have who's got a book who's got a book in his sack who's got a book who's got a book no no I'm asking who's got a book you have you got a book who has you've got a book a book yes a book have you got a book yes have you got a train have you got a train yes have you got a ball in your sack have you got have you got a train in your sack no I haven't have you got a computer game in your sack yes you have ok have you got a train in your sack ok have you got a cap in your sack no I haven't ok have you got a bicycle in your sack have you got a pair of rollerskates rollerskates in your ok have you got have you got a doll in your sack no I haven't ok have you got a pencilcase in your sack have you got a bicycle in your sack no I haven't all right ok rain the rain storm rain storm look on page twenty-two twenty-two page twenty-two twenty-two page twenty-two look here you have three pictures ok you have picture picture you have picture one picture two and picture three no just a minute just a minute ok look here at the map look here at the map this is a map look this is a map maybe I can put it over here a map of the world ok here we have a map here we have a map ok here we have a map ok here we have a map here we have a map here we here we have a map of the world ok Italy Italy is here Italy Italy this is Italy look this here the weather is cold this is Australia and the weather is hot ok in Scotland look Scotland Scotland the weather is cold is cold here here we have Christmas Italy is up here this is Santa Claus ok Santa Claus or Father Christmas Santa Claus and it's very hot this girl is called Haily and she's swimming she is swimming in the sea ok and Peter this is Peter Peter lives in Scotland in Scotland he is making a snowman can you see the snowman snowman snowman this is the snowman snowman he is making a snowman snowman and it's very cold it's very cold let us go to page page twenty-four survey swimming swimming making a snowman opening presents presents skiing skiing do you like swimming do you like making a snowman do you like opening presents do you like skiing write three names do you like swimming do you like do you like opening presents yes I do yes I do opening presents do you like making a snowman ok have you finished have you finished ok yes I do yes I do do you like opening presents yes I do yes do I like swimming yes I do very much making a snowman yes I do do I like skiing no I don't opening presents yes ok can you ask him have you finished ok do you like do you like yes I do ok skiing yes I do ok ask him ask him ok good on Christmas day yes skiing skiing no I don't opening presents yes I do I do yes I do skiing do you like skiing I do

APPENDIX 6-E cont.

very much very much very much ok come on swimming yes I do ok next skiing ok no I don't ok now we are going to read yes or no it's Christmas day in Australia ok three in circle ok yes or no we are going to read it we are going to read it would you read number one please number one in Australia yes ok number two it's hot no is hot no just a minute just a minute just a minute it's hot in is it hot yes ok next yes you do too all right number three because the first one was an example ok number three yes yes yes ok number three it's hot in Italy on Christmas day hot Christmas day no number four number four it's hot it's hot it's hot no ok next Haily lives in Italy six yes Haily with her friends Haily is skiing with her friends no Haily is this girl is this girl you've been very unpleasant Haily is this girl ok skiing she's skiing is she skiing she's skiing no she is not skiing she's not skiing she's Australian she's not skiing ok she's not skiing number number eight seven Haily is swimming with her friends Haily is swimming with her friends Haily is swimming with her friends Haily is swimming with her friends yes Peter Peter lives Peter lives number eight yes eight Peter lives in Australia Peter lives in Australia Peter no Peter lives in Scotland ok Peter lives in Scotland number nine in the sea no he's not swimming he's not swimming Peter Peter is not swimming Peter is not swimming no ok and then Peter Peter Peter making making a snowman yes Peter is making a snowman ok.

APPENDIX 6-F

Transcription of teacher speech in GRADE 4 - CLASS C (closer to date of test).

Can you find ok can you find colours what colours did you find light blue light blue no no body parts body parts parts of the body yellow hair hair eye finger finger black tooth tooth tooth tooth tooth teeth tooth is singular and teeth is plural is singular teeth is plural teeth ok the numbers numbers the numbers eight ok eleven ok fifteen fifteen ok fifteen eleven twelve thirteen eight ok seven ok the family and brother yes the animals fish dragon ok Halloween or animals what about the Halloween feast Halloween green pumpkin witch ghost pumpkin witch and ghost frog dragon ok the insects insects snail snail butterfly ladybird yes ladybird ladybird ok ladybird ladybird all right ok the objects purple purple yes school-bag copybook ok did you say scissors scissors yes scissors scissors ok scissors scissors all right book pencil-sharpener yes ok ruler pencilcase ok anything else all right ok raise your hand raise your hand what's your name what are you wearing what are you wearing what are you wearing come on what are you wearing I'm wearing I'm wearing ok your sweater is green and black and yellow All right your trousers are black all right black trousers and your shoes what colour are your shoes brown and black what are you wearing are you wearing a cotton T-shirt no are you wearing a cotton T-shirt no no no just a minute raise your hand no are you wearing a cotton T-shirt no I'm not ok you're not wearing a cotton T-shirt do you like T-shirts do you like T-shirts yes I do yes I do all right what are your favourite clothes what are your favourite clothes favourite clothes your favourite clothes your favourite what's your favourite colour what's your favourite number what are your favourite clothes what are your favourite clothes what are your favourite clothes your favourite clothes your favourite clothes yes my tracksuit my tracksuit my T-shirt what are your favourite clothes a white T-shirt what are your favourite clothes sorry white trousers your white trousers ok what are your favourite clothes what's Denny wearing what's Denny wearing in picture yes open your book yes what's Denny wearing in picture six what's Denny wearing in picture six page fourteen page fourteen what's what's Denny wearing in picture six a sweater and a trousers ok is Denny cold cold he's cold what's Molly wearing what's Molly wearing a coat ok she is wearing a coat a blouse a hat ok ok ok if you want to answer raise your hand what's Ted wearing in picture two what's Ted wearing in picture two and shoes ok all right look on page page page twenty-three twenty-three Santa Claus yes ok what has what has Santa Claus got in is sack has he got has he got a doll has he got a doll yes yes he has a train a dog a computer game a ball ok have you have you got a computer game yes I have yes I have have you got a bicycle yes I have ok have you got a train yes you have have you got have you got rollerskates have you got rollerskates yes ok yes I have has Father Christmas got rollerskates has Father Christmas got rollerskates yes he has have you got a pencilcase have you got a pencilcase no I haven't yes I have yes I have have you got have you got a book yes I have yes I have ok now I'm going to give you this ok true or false she true or false the farmer had the wool ok ready ready wool is warm wool is warm wool is warm wool is warm true wool is warm that's true number two who wants to do the sheep the sheep is green false the sheep is green false number three the farmer the farmer cuts cuts the wool number four who wants to do number four ok grandma goes to the big shop false small shop number five five makes grandma makes a blue sweater false what colour is the sweater red ok good the children the children sad are sad happy they are happy they are happy one two three four five six seven the two songs can

APPENDIX 6-F cont.

you colour a rainbow ok ready can you colour a rainbow can you colour the Summer sun can you colour the sky can you colour a rainbow can you colour a tree can you colour the Summer sun can you colour the sea colour in red colour in blue colour in yellow but colour in true colour in green colour in blue colour in orange but colour in true can you colour a rainbow can you colour it orange can you colour the Summer sun colour the night can you colour a rainbow can you colour a tree can you colour the Summer sun can you colour a dream colour in green colour in blue colour rainbow can you colour colour the Summer sun can you colour can you colour the rainbow can you colour a tree can you colour the Summer sky can you colour a tree do you like crisps ok ready do you like crisps no I don't yuck yuck crisps are yuck do you like cola no I don't yuck yuck cola is yuck do you like waffles no I don't yuck yuck waffles are yuck do you like hay yes I do.

APPENDIX 6-G

Yes/No Vocabulary Tests – grade 3 and grade 4.

Vocabulary Test – Grade 3 (chapter 6)

[Instructions to learners: "Have you heard this word before?"]

Name: _____ **Date:** _____

	LIST A			LIST B			LIST C	
1	[ ]	Door	21	[ ]	Card	41	[ ]	Pink
2	[ ]	Bat	22	[ ]	Poster	42	[ ]	Flower
3	[ ]	Name	23	[ ]	Snow	43	[ ]	Duck
4	[ ]	White	24	[ ]	Tongue	44	[ ]	Little
5	[ ]	Picture	25	[ ]	Snake	45	[ ]	Tree
6	[ ]	Animal	26	[ ]	Ball	46	[ ]	Warm
7	[ ]	Grey	27	[ ]	Children	47	[ ]	Ant
8	[ ]	Sharpener	28	[ ]	Leg	48	[ ]	Sheep
9	[ ]	Window	29	[ ]	Sheet	49	[ ]	Back
10	[ ]	Plant	30	[ ]	Mice	50	[ ]	Owl
11	[ ]	Friend	31	[ ]	Cage	51	[ ]	Bee
12	[ ]	blackboard	32	[ ]	Night	52	[ ]	School-bag
13	[ ]	Book	33	[ ]	Teeth	53	[ ]	Caterpillar
14	[ ]	Table	34	[ ]	Big	54	[ ]	Train
15	[ ]	Close	35	[ ]	Boy	55	[ ]	Repeat
16	[ ]	Bag	36	[ ]	Girl	56	[ ]	Ladybird
17	[ ]	Open	37	[ ]	Classroom	57	[ ]	Page
18	[ ]	Desk	38	[ ]	Magician	58	[ ]	School
19	[ ]	Nice	39	[ ]	Photocopy	59	[ ]	Shirt
20	[ ]	Insect	40	[ ]	Dog	60	[ ]	Penny

Comments:

APPENDIX 6-G cont.

Vocabulary Test – Grade 4 (chapter 6)

[Instructions to learners: "Have you heard this word before?"]

Name: _____ **Date:** _____

		LIST A			LIST B			LIST C
1	[ ]	Jacket	21	[ ]	Example	41	[ ]	Body
2	[ ]	Park	22	[ ]	Friend	42	[ ]	Brother
3	[ ]	Toys	23	[ ]	Pair	43	[ ]	Finger
4	[ ]	Beard	24	[ ]	Rain	44	[ ]	Hand
5	[ ]	Gloves	25	[ ]	Weather	45	[ ]	Family
6	[ ]	Mountain	26	[ ]	Snowman	46	[ ]	Fish
7	[ ]	Boots	27	[ ]	Storm	47	[ ]	Dragon
8	[ ]	Factory	28	[ ]	Scotland	48	[ ]	Blouse
9	[ ]	Time	29	[ ]	Map	49	[ ]	Cotton
10	[ ]	Grey	30	[ ]	Nine	50	[ ]	Frog
11	[ ]	Mittens	31	[ ]	Picture	51	[ ]	Eye
12	[ ]	Bike	32	[ ]	Ask	52	[ ]	Copy-book
13	[ ]	Fat	33	[ ]	First	53	[ ]	Animal
14	[ ]	Exercise	34	[ ]	Swim	54	[ ]	Coat
15	[ ]	Blackboard	35	[ ]	Skiing	55	[ ]	Dream
16	[ ]	Nose	36	[ ]	Put	56	[ ]	Crisps
17	[ ]	Thumb	37	[ ]	Next	57	[ ]	Hair
18	[ ]	Field	38	[ ]	Circle	58	[ ]	Eleven
19	[ ]	Magic	39	[ ]	Girl	59	[ ]	Butterfly
20	[ ]	Card	40	[ ]	Survey	60	[ ]	Clothes

Comments:

APPENDIX 6-H

Row scores for 3rd and 4th graders – Number of recognized words per child

Vocabulary Test – Grade 3 (chapter 6)

[Results – number of *Yes* answers per child. 20 stimulus-words per list; 60 stimulus-words, in total]

Ss	LIST A	LIST B	LIST C	Total No. of recognized words (60)	Average No. recognized words per class-unit	Average % recognized words per class-unit
ch01	10	3	3	16	5.33	26.65
ch02	12	6	8	26	8.67	43.35
ch03	12	4	6	22	7.33	36.65
ch04	11	7	11	29	9.67	48.35
ch05	14	4	7	25	8.33	41.65
ch06	13	8	11	32	10.67	53.35
ch07	10	4	6	20	6.67	33.35
ch08	13	4	9	26	8.67	43.35
ch09	13	8	10	31	10.33	51.65
ch10	13	1	7	21	7	35
ch11	13	8	8	29	9.67	48.35
ch12	10	3	7	20	6.67	33.35
ch13	8	1	6	15	5	25
ch14	11	2	7	20	6.67	33.35
ch15	11	5	7	23	7.67	38.35
ch16	13	3	5	21	7	35
ch17	10	2	8	20	6.67	33.35
ch18	12	5	12	29	9.67	48.35
Average amount/ proportion of recognized vocabulary				**23.61**	**7.87**	**39.35%**

APPENDIX 6-H cont.

Vocabulary Test – Grade 4 (chapter 6)

[Results – number of *Yes* answers per child. 20 stimulus-words per list; 60 stimulus-words, in total]

Ss	LIST A	LIST B	LIST C	Total No. of recognized words (60)	Average No. recognized words per class-unit	Average % recognized words per class-unit
ch01	12	8	18	38	12.67	63.33
ch02	12	13	19	44	14.67	73.33
ch03	13	7	17	37	12.33	61.65
ch04	15	12	18	45	15	75
ch05	14	11	16	41	13.67	68.35
ch06	11	7	16	34	11.33	56.65
ch07	8	1	12	21	7	35
ch08	10	8	16	34	11.33	56.65
ch09	17	14	19	50	16.67	83.35
ch10	16	16	20	52	17.33	86.65
ch11	12	14	19	45	15	75
ch12	16	8	15	39	13	65
ch13	15	8	17	40	13.33	66.65
Average amount/ proportion of recognized vocabulary				**40**	**13.33**	**66.65%**

APPENDIX 6-I

Row scores for third and fourth graders – Number of *yes* per *stimulus*-word.

Vocabulary Test – Grade 3 (chapter 6)

[Results – number of *Yes* answers per stimulus-word (18 subjects)]

		LIST A			LIST B			LIST C
1	[16]	Door	21	[01]	Card	41	[16]	Pink
2	[11]	Bat	22	[02]	Poster	42	[18]	Flower
3	[06]	Name	23	[02]	Snow	43	[05]	Duck
4	[17]	White	24	[00]	Tongue	44	[01]	Little
5	[03]	Picture	25	[06]	Snake	45	[18]	Tree
6	[11]	Animal	26	[02]	Ball	46	[02]	Worm
7	[10]	Grey	27	[06]	Children	47	[05]	Ant
8	[18]	Sharpener	28	[02]	Leg	48	[02]	Sheep
9	[18]	Window	29	[00]	Sheet	49	[04]	Back
10	[08]	Plant	30	[02]	Mice	50	[02]	Owl
11	[01]	Friend	31	[02]	Cage	51	[05]	Bee
12	[18]	blackboard	32	[09]	Night	52	[15]	School-bag
13	[15]	Book	33	[00]	Teeth	53	[02]	Caterpillar
14	[00]	Table	34	[03]	Big	54	[03]	Train
15	[03]	Close	35	[05]	Boy	55	[02]	Repeat
16	[04]	Bag	36	[04]	Girl	56	[18]	Ladybird
17	[08]	Open	37	[02]	Classroom	57	[01]	Page
18	[17]	Desk	38	[05]	Magician	58	[10]	School
19	[08]	Nice	39	[07]	Photocopy	59	[01]	Shirt
20	[17]	Insect	40	[17]	Dog	60	[09]	Penny

APPENDIX 6-I cont.

Vocabulary Test – Grade 4 (chapter 6)

[Results – number of *Yes* answers per stimulus-word (13 subjects)]

	LIST A			LIST B			LIST C	
1	[13]	Jacket	21	[00]	Example	41	[12]	Body
2	[08]	Park	22	[08]	Friend	42	[13]	Brother
3	[09]	Toys	23	[06]	Pair	43	[09]	Finger
4	[12]	Beard	24	[08]	Rain	44	[13]	Hand
5	[10]	Gloves	25	[03]	Weather	45	[13]	Family
6	[03]	Mountain	26	[06]	Snowman	46	[13]	Fish
7	[09]	Boots	27	[08]	Storm	47	[12]	Dragon
8	[13]	Factory	28	[07]	Scotland	48	[03]	Blouse
9	[07]	Time	29	[11]	Map	49	[09]	Cotton
10	[12]	Grey	30	[13]	Nine	50	[13]	Frog
11	[03]	Mittens	31	[12]	Picture	51	[10]	Eye
12	[09]	Bike	32	[01]	Ask	52	[13]	Copy-book
13	[07]	Fat	33	[06]	First	53	[12]	Animal
14	[02]	Exercise	34	[05]	Swim	54	[12]	Coat
15	[13]	Blackboard	35	[05]	Skiing	55	[06]	Dream
16	[13]	Nose	36	[04]	Put	56	[11]	Crisps
17	[01]	Thumb	37	[11]	Next	57	[13]	Hair
18	[13]	Field	38	[02]	Circle	58	[12]	Eleven
19	[10]	Magic	39	[10]	Girl	59	[13]	Butterfly
20	[05]	Card	40	[01]	Survey	60	[10]	Clothes

APPENDIX 6-J

CD ROM – Sample of class recordings. Corresponding to appendices 6 A to F.

APPENDIX 7-A

Yes/No Vocabulary Test.

Vocabulary Test – Grade 4 (chapter 7)

[Instructions to learners: "Have you heard this word before?"]

Name: _____ **Date:** _____

	LIST A			LIST B			LIST C
1	[ ]	Happening	21	[ ]	Friend	41	[ ]	Book
2	[ ]	Circle	22	[ ]	Coin	42	[ ]	Answer
3	[ ]	Basketball	23	[ ]	Legs	43	[ ]	Light
4	[ ]	Hear	24	[ ]	Eyes	44	[ ]	Sheep
5	[ ]	Number	25	[ ]	Name	45	[ ]	Mouse
6	[ ]	Correct	26	[ ]	Clothes	46	[ ]	Geese
7	[ ]	Homework	27	[ ]	Fingers	47	[ ]	Grey
8	[ ]	Fifty	28	[ ]	Head	48	[ ]	Donkey
9	[ ]	Clear	29	[ ]	Chant	49	[ ]	Arms
10	[ ]	Example	30	[ ]	Eighteen	50	[ ]	Chicken
11	[ ]	Football	31	[ ]	Eleven	51	[ ]	Garden
12	[ ]	Tennis	32	[ ]	Little	52	[ ]	Bird
13	[ ]	Dancing	33	[ ]	Shorts	53	[ ]	Wool
14	[ ]	Seventy	34	[ ]	Cheese	54	[ ]	Tree
15	[ ]	Chattering	35	[ ]	Grasshopper	55	[ ]	Children
16	[ ]	Forty	36	[ ]	Zebra	56	[ ]	Farmer
17	[ ]	Activity	37	[ ]	Family	57	[ ]	Cage
18	[ ]	Roller-skating	38	[ ]	Lion	58	[ ]	Factory
19	[ ]	Next	39	[ ]	Pencil-case	59	[ ]	Picture
20	[ ]	Soccer	40	[ ]	Food	60	[ ]	Scarecrow

Comments:

APPENDIX 7-B

Row scores for fourth graders – Number of recognized words, per child.

Vocabulary Test – Grade 4 (chapter 7)

[Results – number of *Yes* answers per child. 20 stimulus-words per list; 60 stimulus-words, in total]

Ss	LIST A	LIST B	LIST C	Total No. of recognized words (60)	Average No. recognized words per class-unit	Average % recognized words per class-unit
ch01	11	16	14	41	13.67	68.33
ch02	13	18	16	47	15.67	78.35
ch03	14	19	18	51	17	85
ch04	15	19	16	50	16.67	83.33
ch05	14	18	15	47	15.67	78.33
ch06	18	20	20	58	19.33	96.65
ch07	16	18	17	51	17	85
ch08	10	14	6	30	10	50
ch09	14	20	20	54	18	90
ch10	11	18	15	44	14.67	73.33
ch11	12	16	13	41	13.67	68.35
ch12	11	17	14	42	14	70
ch13	12	18	17	47	15.67	78.33
ch14	12	18	17	47	15.67	78.33
ch15	11	17	15	43	14.33	71.67
ch16	12	20	16	48	16	80
ch17	11	17	12	40	13.33	66.67
Average amount/ proportion of recognized vocabulary				**45.94**	**15.31**	**76.55%**

APPENDIX 7-C

Row scores for fourth graders – Number of *yes*, per *stimulus*-word.

Vocabulary Test – Grade 4 (chapter 7)

[Results – number of *Yes* answers per stimulus-word (17 subjects)]]

		LIST A			LIST B			LIST C
1	[02]	Happening	21	[16]	Friend	41	[17]	Book
2	[10]	Circle	22	[05]	Coin	42	[04]	Answer
3	[17]	Basketball	23	[17]	Legs	43	[13]	Light
4	[12]	Hear	24	[15]	Eyes	44	[13]	Sheep
5	[17]	Number	25	[17]	Name	45	[17]	Mouse
6	[07]	Correct	26	[17]	Clothes	46	[05]	Geese
7	[05]	Homework	27	[15]	Fingers	47	[17]	Grey
8	[17]	Fifty	28	[16]	Head	48	[13]	Donkey
9	[05]	Clear	29	[08]	Chant	49	[15]	Arms
10	[06]	Example	30	[17]	Eighteen	50	[17]	Chicken
11	[17]	Football	31	[17]	Eleven	51	[14]	Garden
12	[17]	Tennis	32	[13]	Little	52	[17]	Bird
13	[05]	Dancing	33	[16]	Shorts	53	[11]	Wool
14	[17]	Seventy	34	[17]	Cheese	54	[16]	Tree
15	[01]	Chattering	35	[16]	Grasshopper	55	[16]	Children
16	[17]	Forty	36	[17]	Zebra	56	[11]	Farmer
17	[05]	Activity	37	[16]	Family	57	[06]	Cage
18	[17]	Roller-skating	38	[16]	Lion	58	[15]	Factory
19	[09]	Next	39	[17]	Pencil-case	59	[11]	Picture
20	[14]	Soccer	40	[14]	Food	60	[13]	Scarecrow

APPENDIX 7-D

Sample of wordlist in *Storyland 4. Corso di inglese per la quarta elementare* (Read and Soberon, 1999), as for Unit 1.

UNIT 1

L2	*L1-translation equivalent*	*Page number (word first occurrence)*
Food, delicious food	Cibo, cibo delizioso	/
Do you like apples?	Ti piacciono le mele?	3
Yes, I do	Sì	3
They're	... sono...	3
Delicious	delizioso	3
Cheese	formaggio	3
No, I don't	No.	3
Horrible	schifoso	3
Banana	banana	4
Carrot	carota	4
Ham	prosciutto	4
Apple	mela	4
Tomato	pomodoro	4
Lettuce	lattuga	4
Pizza	pizza	4
Sandwich	tramezzino	4
Chicken	pollo	4
Hamburger	hamburger	4
I like	... mi piace...	4
I don't like	... non mi piace...	4
Ice cream	gelato	/
Stick	attaccare	54

APPENDIX 7-D cont.

Your	il tuo	5
Grow	crescere	6
Garden	giardino	6
Sunflower	girasole	7
Glass	bicchiere	9
Guess	indovinare	9
Result	risultato	9
Day	giorno	9
Halloween Superstitions	Superstizioni di Halloween	/
Bob-Apple	"l'acchiappamele"	10
Bowl	bacinella	10
Mischief night	Note delle biricchinate	10
Ring	suonare	10
doorbells	campanelli	10
Sleep	dormire	10
Pillow	cuscino	10
Dream	sognare	10
Sweetheart	innamorato	10
Pips	semi	10
Cheek	guancia	10
Fall	cadere	10
Last	ultimo	10
Sky	cielo	11
Moon	luna	11
Tonight	stanotte	11
Above	sopra	11
Boy	bambino	11

APPENDIX 7-D cont.

Girl	bambina	11
Rhythm	ritmo	11
Spooky	spettrale	11
wind	vento	11
Bright	lucente	11
Meet	incontrare	11
Toffee apples	Mele caramellate	12
Lolly stick	Bastoncino per lecca-lecca	12
Tablespoon	cucchiaio	12
Gram	grammo	12
Golden syrup	melassa	12
Wash	lavare	12
Ingredient	ingrediente	12
Heat	riscaldare	12
Melt	sciogliere	12
Boil	bollire	12
Cool	raffreddare	12
Dip	intingere	12
Leave	lasciare	12
Harden	indurire	12

APPENDIX 7-E

Sample of *The Maestra Marchigiana's Wordlist* (letter 'A') – used in teacher training courses.

A - B - C - D - E - F - G - H - J - K - L - M - N - O - P - Q - R - S - T - U - W - Y

La lista e stata appositamente preparata per le maestre elementari iscritte ai corsi delle 500 ore organizzati dal Provveditorato agli Studi di Ascoli Piceno e finalizzati alla formazione dei docenti di inglese nella scuola primaria. Essa è andata ad aggiungersi al corpus di materiale didattico originariamente preparato per gli iscritti ai corsi pilota delle 500 ore organizzati dall'Universita di Siena.

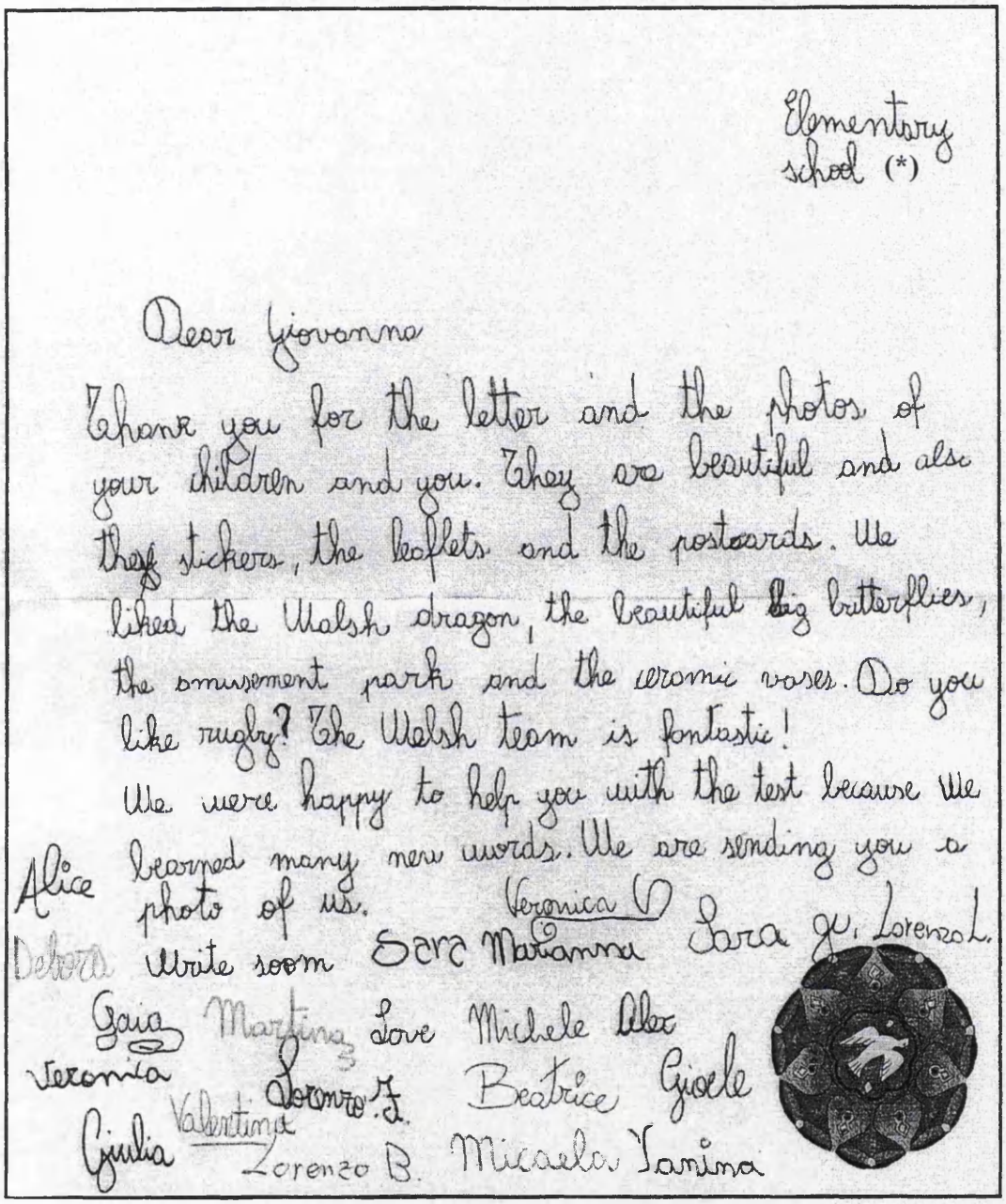
A

Inglese	Italiano
apple	mela
apple pie	torta di mele
apple tree	melo
arm	braccio, arma
to arm	armare
again	di nuovo, ancora, un'altra volta
what's your name again?	come hai detto che ti chiami?
alone	solo, solitario
to leave someone alone	lasciare stare qualcuno
leave me alone	lasciami stare
also	anche, pure
to add	aggiungere
to add up	sommare
addition	addizione
in addition to	oltre a, in aggiunta a
additional	in piu, aggiuntivo
anger	collera, rabbia
angry	collerico, arrabbiato
angrily	con rabbia, rabbiosamente
to be (very) angry (with)	essere (molto) arrabbiato (con)
I'm very angry with her	sono molto arrabbiato con lei
To get (very) angry (with)	arrabbiarsi (molto) (con)
She got very angry with me	si e arrabbiata molto con me
asleep	addormentato
to be asleep	essere addormentato
attention	attenzione
may I have your attention, please	attenzione, per cortesia
to pay attention to	fare attenzione a

Inglese	Italiano
attentive	attento
attentively	attentamente
answer	risposta
to answer	rispondere a
did you answer him?	gli hai risposto?
art	arte
artist	artista
arrow	freccia
arrowhead	punta di freccia
ant	formica
age	eta
to age	invecchiare
what's your age?	quanti anni hai?
to be of an age	avere la stessa eta
we are of an age	abbiamo la stessa eta
to come of age	diventare maggiorenne
I'll come of age in June	diventero maggiorenne in giugno
to be under age	essere minorenne
my sister is still under age	mia sorella e ancora minorenne

APPENDIX 7-F

Letter sent me by fourth graders.



Elementary school (*)

Dear Giovanna

Thank you for the letter and the photos of your children and you. They are beautiful and also those stickers, the leaflets and the postcards. We liked the Welsh dragon, the beautiful big butterflies, the amusement park and the ceramic vases. Do you like rugby? The Welsh team is fantastic!

We were happy to help you with the test because we learned many new words. We are sending you a photo of us.

Write soon

Alice Veronica V. Sara Marianna Sara G. Lorenzo L. Debora Gaia Martina Love Michele Alex Veronica Lorenzo F. Beatrice Giada Giulia Valentina Lorenzo B. Micaela Sabina

* Letter sent to me by the children who contributed to the experiments reported in chapters 6 and 7. They were willing to cooperate and enthusiastic over the idea of taking part in a research project.

Name and address of school have been deleted in accordance with Italian regulations on privacy.

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