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Departamento de Filología Inglesa

**CANTIDAD Y RITMO DE ADQUISICIÓN
LÉXICA EN UN CONTEXTO DE
INTRODUCCIÓN NO SISTEMÁTICA:
ESTUDIANTES DE INGLÉS COMO
LENGUA EXTRANJERA EN EDUCACIÓN
PRIMARIA**

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**Quantity and Rate of Vocabulary
Acquisition in the Context of Non-
systematic Input: Elementary Education
Students of English as a Foreign
Language**

*Cantidad y Ritmo de Adquisición Léxica en
un Contexto de Introducción No
Sistemática: Estudiantes de Inglés como
Lengua Extranjera en Educación
Primaria*

Doctoral thesis

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To my mother.

***For wherever you are, you can be
proud of your daughter.***

*It matters not how strait the gate,
How charged with punishments the scroll.
I am the master of my fate:
I am the captain of my soul.*
(Invictus, Herneſt Henley 1875)

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SUMMARY OF THE THESIS IN SPANISH	

LIST OF ABBREVIATIONS

AWL: Academic Word List

BNC: British National Corpus

CEFR: Common European Framework of Reference for Languages

DP: Deviation of proportions

EFL: English as a Foreign Language

ESL: English as a Second Language

FL: Foreign Language

GSL: General Service List

GSLA: General Service List of General and Academic English

GTM: Grammar Translation Method

L1-L2A: Absolute version of L1-L2 translation test

L1-L2P: Partial version of L1-L2 translation test

L2: Second language

LOB: Lancaster-Oslo-Bergen

Mch: Multiple choice

PVK: Productive vocabulary knowledge

RPVK: Receptive-Productive vocabulary knowledge

RVK: Receptive vocabulary knowledge

SLA: Second language acquisition

SLVA: Second language vocabulary acquisition

VLT: Vocabulary Levels Test

Chapter 1

Introduction

1.1. Rationale for the Study

Nowadays, few people would deny the importance of learning second languages. The improvement of the media coupled with the development of information technologies have given rise to an increase in international relationships without precedent. For this reason, students need to be prepared for living in a world which is becoming more and more international, multicultural and multilingual. Herein lies the importance of knowing languages other than one's mother tongue.

One of the main aims of the Spanish compulsory education system is to promote the acquisition of communicative competence in a Second/Foreign Language¹, which allows students to express and understand messages as well as handle everyday situations. In order to do so, vocabulary is considered one of the key elements, because “without grammar very little can be achieved, [but] without vocabulary nothing can be achieved” (Wilkins 1972: 111). In fact, vocabulary has proved itself to be an important predictor of communicative skills such as reading (Anderson and Freebody 1981; Laufer 1992; Golkar and Yamini 2007) and writing (Laufer 1994; Agustín Llach and Jiménez Catalán 2007). In this sense, we agree with Schmitt et al. (2001: 53) that “vocabulary is the building block of languages”.

Given the plethora of books, papers and literature on L2 vocabulary acquisition which have been published over the last three decades, we are at pains to maintain assertions such as the one made by Dr Meara (1980). Around thirty years ago, he stated that the field of Second Language Vocabulary Acquisition had been a neglected area up until the end of the 1970s, the Cinderella of Second Language Acquisition. Those days

¹ The terms Second Language and Foreign Language will be used interchangeably throughout this thesis. Both will be understood as different to the mother tongue, except for the cases where Foreign Language must be specified as a language which is different from the mother tongue, non-official and learned in formal contexts of instruction.

have been left behind. From that time onwards, vocabulary was no longer treated in a cavalier fashion, finding its way among the most important aspects of Second Language learning.

Nonetheless, the bulk of literature on L2 vocabulary acquisition which is currently available should not mean that all is said and established in this field. Many aspects of this area have not been given enough breadth and depth. Put another way, they are still in their developmental infancy.

One of the gaps that we may find in SLVA literature relates to the introduction and distribution of vocabulary during the learning process and its impact on the amount and rate of L2 vocabulary acquired. The real picture in the classroom at present follows its own rules, which seem to differ from the scientific postulates. Despite the claim for a systematic introduction of input on the part of researchers, didactic materials normally show an unsystematic presentation of vocabulary. Indeed, the recommendations made by the research community on the present issue have not seemed to reach the teaching community. There are countless didactic materials and guides with very few and general indications, if any, as to the reasons behind the amount of words introduced and the rate at which they should be introduced.

However, the fact that reality does not coincide with the desired situation should not be a reason to turn our back on it. Indeed, this mismatch between the theoretical and the empirical gives us a good reason to gauge the relationship between input introduction and the acquisition of this input on the part of the students.

The present PhD thesis intends to be an introduction to the analysis of the reality described above, where the quantity and rate of vocabulary acquisition in a Foreign Language might be somehow conditioned by the way this vocabulary is introduced and distributed. By addressing this issue we hope to deepen our understanding of the mechanisms of introduction and acquisition of vocabulary in a L2. It is hoped that learners, teachers, resource designers and the whole teaching-learning community in general can benefit from this study.

1.2. Structure of the Thesis

1.2.1. Part one

The first part of this thesis comprises chapters 2 and 3. These chapters present a theoretical review of the state of the question, which in this case corresponds to

Second/Foreign Language vocabulary acquisition. Chapter 2 focuses on two main issues: the unit of acquisition and the term ‘acquisition’ itself. The first part of the chapter addresses the different conceptions of the unit of acquisition par excellence, that is, the word. It looks at the word from the most traditional standpoints – which have dominated the scene – to the most recent alternatives – which try to find their place.

The form-meaning asymmetry of the word is another factor which figures prominently in this chapter. Attention is also given to the drawbacks that this may entail. Finally, possible solutions to the problem of asymmetry in the word are proposed. The second issue addressed in chapter 2 concerns the term ‘acquisition’. This involves the different interpretations of ‘knowing’ with respect to vocabulary learning. Each of these interpretations is analysed in depth. The second part of chapter 2 concludes with a detailed discussion of the Receptive-Productive dimension.

Chapter 3 comprises three main parts: prescriptions, descriptions and factors in Second Language vocabulary acquisition. It contrasts what it should be, that is, what is suggested by the research community, with the real picture that is found in this field of study. The desirable is represented by the postulates regarding the quantity and quality of FL vocabulary that should be introduced to the students. In this respect, curricula and didactic materials are considered important factors. The former represent what is agreed by authorities and experts, whereas the latter contain most of the actual vocabulary that learners will encounter. The section about the real picture focuses on several studies which show the degree of L2/FL vocabulary acquisition which learners have been able to reach.

1.2.2. Part two

The second part of the thesis focuses on the empirical study itself. This covers chapters 4 to the final conclusions, including the bibliographical references and the appendices. Chapter 4 presents the hypothesis, the research questions and the method which has been followed in order to carry out the study. The aim of the study is to find out whether the non-systematic presentation of vocabulary has an influence on its acquisition and, if so, in what sense. This chapter offers an exhaustive account of the research design, the materials and the procedure adopted in the study.

The results of the quasi-experiment can be found in chapter 5, which also includes their discussion. The key findings reveal that even though some vocabulary

learning was registered, the acquired amount did not live up to the expectations. The results also confirm that different types of vocabulary knowledge grow at different rates, with receptive knowledge increasing faster than productive knowledge.

Despite the non-systematic context of learning, statistical analyses show that the students' rate of vocabulary acquisition could be somehow modelled. However, this possible model was not based on frequency and distribution. The results suggest that these two factors did not predict vocabulary acquisition.

Finally, having considered the obtained results, some pedagogical recommendations and implications are suggested in chapter 6, followed by the general conclusions and limitations of the present thesis.

The appendices are included after the references section. They are organized into six blocks. The first block presents the identification files in both Spanish and English. These documents are a compilation of the teacher and students' personal and academic information. The second block includes the teacher and student questionnaires in both Spanish and English about their attitudes towards the English language and vocabulary learning. The third block comprises a bilingual Vocabulary Levels Test in both its Spanish and English versions. The fourth block contains the different instruments used for classroom control, among which include the written permission for the recording, the observation chart, the teacher worksheet and a sample of the researcher's diary. They all appear in their Spanish and English versions. The fifth block includes all the tests for measuring the acquisition of vocabulary, that is, the pre-test, the three global post-tests and the tests of the different sessions. They also appear in their Spanish and English versions. The sixth and final block contains the results of the correlation analyses carried out for inter-rater reliability.

Chapter 2

Word and Word Knowledge: Two Basic Constructs for L2 Vocabulary Research

2.1. General Introduction

L2 vocabulary research has traditionally left too much leeway for terminology. If we randomly took five studies on L2 vocabulary acquisition, we would probably find at least two or three different labels for the unit of counting and different ways the construct of *knowledge* is operationalized. This diversity might be partly due to the lack of systematization in the field (Read 2000), coupled with the naive belief that the sentence *She knows 20 words* can be straightforwardly understood in only one way.

This sentence – or any other with a similar pattern – can be found in many L2 vocabulary studies, but its meaning is not as simple as it seems at first sight. There is the presumption that all readers have the same conception of what is meant by *word* and by *know*. Despite the fact that both terms are widely used in L2 vocabulary studies and linguistics in general, they are also among the most controversial in the field.

The use of different labels leads to a serious problem of non-systematicity, which, at the same time, prevents us from reaching solid conclusions about L2 vocabulary acquisition. In this respect, Pérez Basanta (1995) states that “La razón [de esto] habría que buscarla en el hecho de que desde un punto de vista metodológico es mucho más factible hacer generalizaciones en cuanto a la gramática – donde las combinaciones son finitas- que en el léxico, en donde podríamos hablar de relaciones casi infinitas. [The reason [for this] is to be found in the fact that from a methodological standpoint, it is much more feasible to make generalizations about grammar – where

combinations are finite – than it is about vocabulary, where we could talk about almost endless relationships]” (Pérez Basanta 1995: 299). Accordingly, we should not be surprised by the fact that there was a time where learning and teaching a Foreign Language was merely a grammatico-functional issue.

This situation has been due in part to the great deal of fragmentation and inconclusive results in the field: “The teacher or researcher who reads articles and books with the hope of finding answers to questions concerning vocabulary acquisition and its development [...] is often left with more doubts than certainties” (Jiménez Catalán and Terrazas 2008: 173). The final and most unfortunate result of all these circumstances is the lack of an overall theory of how L2 vocabulary is acquired. In Schmitt’s words, “Our knowledge has mainly been built up from fragmentary studies, and at the moment we have only the broadest idea of how acquisition might occur [...] there are still whole areas which are completely unknown” (Schmitt 1995: 5).

Far from offering a definite solution to this problem, the present chapter aims to provide an extensive description of the two key terms mentioned above: *word* and *word knowledge*. The first part of the chapter deals with the *word* from three traditional perspectives and the problems they may pose for research. These problems are partly based on the asymmetry between form and meaning, which will also be commented on. Given the different drawbacks, some alternatives to the word have been proposed, although they are not without their pitfalls. Finally, the word as a functional unit arises as a temporary yet reliable solution to the problem.

The second part of the chapter addresses the other key term: the meaning of *knowing*, in this case, a word. The first issue to consider is that of the differences, if any, between word knowledge and lexical competence. From the standpoint of the former, we need to talk about the taxonomic versus the continuum perspective. The latter, in turn, concerns the breadth/depth distinction, together with the opinions of some important authors who adopted this viewpoint. Finally, we will focus on the Receptive/Productive dimension of vocabulary, paying particular attention to its nature and the relationship between receptive and productive knowledge.

2.2. The Word

2.2.1. Introduction

It is almost inherent to human nature to try to measure and categorize everything around us, but this activity seems to be easier in some areas than in others. Indeed, despite recent interest in the qualitative side of the lexical dimension, vocabulary has traditionally been, and still is, defined as the total set of words of a language (Pérez Basanta 1995; Jackson and Amvela 2001).

On the whole, quantitative studies on L2 vocabulary have usually adopted the word as a unit of counting. In fact, this term stands out as the construct par excellence, the spoilt child of Linguistics. Definitions of linguistic branches such as Syntax and Morphology mirror the elevated status enjoyed by the word. Syntax is defined as “the rules governing the ways words are combined to form sentences in a language” (Crystal 1980: 346). Morphology, on the other hand, is understood as “the branch of grammar which studies the structure or forms of words (Crystal 1980: 232). As we can see, the term *word* is key in both definitions. Not only is this term used in academic discourse, but the term *word* may be heard in ordinary conversation. This is something which is more usual than hearing for example *morpheme* or *lexeme*, terms which are expected to be almost non-existent in everyday conversation.

Nonetheless, despite its popularity, the word is one of the most controversial concepts in linguistic fieldwork. Discrepancies caused by the word have their root in its vague and abstract nature. In fact, disagreement finds its basis in the methodological shortcomings pinpointed by the definition of the word itself. This is why most authors just tiptoe through it. Having said that, this type of irregularity does not constitute an impediment for the wide use of the term.

2.2.2. Traditional perspectives

Lack of agreement about the definition of the word has led to an ensuing debate about this construct. Following Carter (1992) and Jackson and Amvela (2001), we can group word definitions into three different categories attending to orthographic, purely semantic, and formal criteria.

2.2.2.1. Orthographic definition

From an orthographic standpoint, the word is understood as a string of letters delimited by spaces. This definition, clearly based on the written tradition, is considered one of the most practical. In fact, it verges on common sense to identify the word with a sequence of letters and characters (hyphens or apostrophes) bound on either side by a space or a punctuation mark. This perspective can be used for counting the number of words in an essay, a telegram or even a shopping list.

However, several limitations are identified regarding the orthographic definition of *word*. The first one relies on the nature of the orthographic definition itself. As stated above, this type of definition has its root in the written dimension. Accordingly, the word conceived as a written element cannot be adopted in oral discourse. The oral dimension does not allow as clear a separation as that which can be found in the written language. There are, however, some exceptions to the rule, such as a teacher dictating a passage to young children who are learning to write, or an angry father who stresses every word as he forbids his child to go out. Special situations aside, not all words are highlighted in oral discourse. For instance, in the sentence *He was doing his exercises*, we can identify five orthographic words. Yet, were this sentence to be uttered, not all words would be stressed in the same way. The oral version of the sentence above would be something like /iwz'duinz'eksaiziz/. The forms *was* and *his* are almost orally imperceptible in and of themselves.

There is a second drawback regarding the orthographic definition of *word*. The same string of letters can adopt different pronunciations. For instance, *often* can be pronounced as /ofn/ or /ofn/. A major problem is when the same string of letters is pronounced differently and each pronunciation means a different thing. This is the case of *sow* which can be pronounced as /sau/ meaning female pig, or /sou/ meaning the action of putting seeds in or on the ground. Given this fact, stating that the string s-o-w constitutes one single word is not very accurate and should be treated with caution.

The third and fourth drawbacks have to do with the features of the English language itself. The third problem is based on the lack of stability of the English language. Due to the Anglo-Saxon oral tradition, nowadays we can find two different spellings of the same word. Taking into consideration the orthographic definition, should we accept the words *medieval* and *mediaeval* or *neighbour* and *neighbor* as two or the

same word? These variations are the result of the evolution of the English language, and some of the options may even become extinct in the future. If the word is to be considered a mere string of letters put together, then *neighbour* and *neighbor* are two different words, even though the difference is a question of British spelling versus American spelling.

The fourth and final limitation of the orthographic definition lies in the analytic nature of the English language. A plethora of concepts in English result from the combination of two words, such as *shop keeper* (tendero) or *extension lead* (alargador). In English – like in other languages which are predominantly analytical – there is a tendency to form new concepts by just placing one morpheme next to the other. The analytical basis of the English language especially dismisses the possibility of adopting an orthographic definition of *word*.

As can be observed from the drawbacks presented above, the orthographic conception of the word poses more problems than solutions can offer, especially when we are dealing with a language like English.

2.2.2.2. *Semantic definition*

According to semantic criteria, the word must be understood as an “indivisible unit of thought” (Jackson and Amvela 2001: 48). Jackson and Amvela offer three different ways in which this unit of thought can be defined:

- a) The word as represented in writing represents a thought unit or a psychological unit. Examples are names of objects: table, house; abstractions: courage, faith, intelligence; adjectives: tall, short; verbs: eat, sleep.
- b) The word forms one block but includes two units of thought: e.g. farmer, rethink, spoonful.
- c) The psychological unit exceeds the limit of the graphological unit and spreads over several words; the word is only an element of the real unity, which is then a more complex unit: e.g. all of a sudden, as usual.

Each of these definitions applied to a simple expression such as *a happy driver on the road* gives rise to a different result. Accordingly, in option (a), each of the graphical units in the sentence which constitutes a psychological unit – *happy*, *driver* and *road* – are considered units in and of themselves. This is the most common idea about the semantic conception of the word. Yet, regarding option (b), *driver* should be understood as two units of thought, that is, the action represented by the verb *drive* and the person

who carries out that action, who is represented by the suffix *-er*. Finally, if we adopt option (c), we could say that the whole statement constitutes one single idea: a person who is driving, is happy and is on the road. In this sense, this complex idea is considered indivisible, as any change or omission of elements would distort the unit of thought at hand. For instance, if *happy* were to be replaced by *tall*, *sad* or *intelligent*, the whole idea would change. From a pedagogical standpoint, it seems that option (a), which corresponds to the congruence between graphia and thought, is the most accepted and psychologically friendly.

Moreover, if the word is conceived as a unit of thought, we should bear in mind that not all items in that unit of thought contribute to its whole meaning to the same degree. For instance, in the example above, *happy* and *road* should be given more weight than ‘a’ and ‘the’. The first two appear to be more semantically determinant than the last two. *Happy* and *road* belong to the so-called *content* or *lexical words*, whereas ‘a’ and ‘the’ are classified as *grammatical words*. Singleton describes lexical words as “those which are considered to have substantial meaning even out of context” (1999: 11). By contrast, the author goes on to say that the semantic role of items such as *the* and *a* is “open to question” (ibid. 12).

However, we should not consider grammaticality and lexicality as two dichotomous terms, but rather as two extremes in a continuum; that is to say, not only are *the* and *a* considered grammatical, but so are terms such as *on* and *although*. Even though they are all placed within the grammatical category, the semantic load of *on* and *although* is higher than that of *the* and *a*. Therefore, the definition of the word as a unit of thought, and consequently a unit of meaning, presents serious problems. In other words, not all linguistic items share the same degree of lexicality, and some of them may not even be considered lexical at all.

2.2.2.3. Formal definition

The origins of the form-based definition of the word are to be found in Bloomfield, who views the word as “the minimal free form” (Bloomfield 1933: 178). We can discern two tenets from this idea. First, it seems that the word can stand on its own, having full meaning. Second, as it is considered the minimal form which can occur independently, it cannot be divided into smaller independent elements. Following Bloomfield (1933),

authors such as Cruse (1986) and Jackson and Amvela (2001) comment on the indivisible nature of the word. Cruse highlights the positional mobility of the word. This means that the word is the smallest linguistic part which can be moved around without destroying the grammaticality of the sentence. In this sense, Cruse holds that words are “the largest units which resist interruption by insertion of new material between their constituent parts” (Cruse 1986: 35). In turn, Jackson and Amvela (2001) place their idea of word within the hierarchy of linguistic units. The word is conceived as “an intermediate structure, smaller than a whole phrase and yet generally larger than a single sound element” (Jackson and Amvela 2001: 45). Lastly, both authors emphasize the internal stability of the word in contrast with its positional mobility and independence from its hierarchical position in the scale of linguistic elements.

The main advantage of the form-based definition lies in its “intuitive validity” (Carter 1992: 5). Yet, it is important to point out that, counter to what we may think, stability and mobility do not necessarily go hand in hand (Lyons 1968). In fact, there are some words which cannot be moved in a sentence such as determiners and conjunctions. This is why the formal definition of *word* cannot be attributed to all the elements in a language.

To conclude, it seems that none of the traditional perspectives of the word satisfy the research needs and challenges which this term involves. Table [1] shows the three types of traditional definitions of *word* together with the drawbacks that each of them presents.

Type of definition	Word definition	Drawbacks
Orthographic	String of letters delimited by spaces	It only covers the written dimension Polysemy Instability of English spelling
Semantic	Indivisible unit of thought	There are different degrees of lexicality Not all words are lexical, but mainly grammatical
Formal	Minimal free form	Stability does not always imply mobility There are words which have a fixed position in a sentence

Table [1] Traditional definitions of *word* and their drawbacks

2.2.3. *The problem of asymmetry*

Saussure (1959) defines the linguistic sign as the sum of a concept (signifié) and an acoustic image (signifiant or signifier). Yet, the linguistic sign does not present a unique, unequivocal, bidirectional relationship between the two components. The reason for possible irregularities regarding signifié and signifier is that of asymmetry. Sánchez (2007) states that there is the extended belief that “cada palabra física representa un significado bien delimitado, autónomo y fácilmente transportable. [Each physical word represents one well-delimited meaning, which is autonomous and easily transportable]” (Sánchez 2007: 181). Contrary to this belief, scholars agree that one form may have multiple meanings (Goulden et al. 1990; Anderson and Nagy 1991; Hatch and Brown 1995).

Hence, asymmetry gives rise to different linguistic phenomena, such as polysemy, homonymy and the so-called multi-words. They are important when it comes to understanding the irregular relationship between form and meaning in words. Polysemy and homonymy are two related but not identical phenomena. Both involve the relationship between one single form and different meanings. Grabe (1991) talks about these phenomena in the following terms: “each word form may represent a number of distinct meanings, some of which depend strongly on the reading context, and some of which are quite different from each other in meaning” (Grabe 1991: 392). When it depends on the reading context, Grabe refers to this phenomenon as polysemy, whereas homonymy occurs in cases where very different meanings share the same form.

Jackson and Amvela refer to polysemy as a phenomenon where the same word form has more than one meaning (Jackson and Amvela 2001). Put another way, polysemy occurs when “the many variants of meaning of a word [...] are truly related” (Hatch and Brown 1995: 49). One example might be the word *leg*. According to the Collins Concise Dictionary (2001), the form *leg* represents up to eleven different meanings: 1) either of the two lower limbs in humans, or any similar or analogous structure in animals that is used for locomotion or support; 2) the part of an animal, especially the thigh, used for food; 3) something similar to a leg in appearance or function, such as one of the four supporting members of a chair; 4) a branch, limb or part of a forked or jointed object; 5) the part of a garment that covers the leg; 6) a section or part of a journey or course; 7) a single stage, lap, length in a relay race; 8) either the opposite or adjacent side of a right-angled triangle; 9) one of a series of games, matches

or part of games; 10) either one of two races on which a cumulative bet has been placed; 11) In Cricket, the side of the field to the left of a right-handed batsman as he or she faces the bowler (Collins Concise Dictionary 2001: 844).

In principle, all the meanings seem somehow related, although there are some which are closer to the core meaning of *leg* than others. In a more or less direct fashion, we can observe that the meanings from (1) to (4) are related to the primitive idea of *leg* as a solid support. Meanings from (5) to (11) are slightly more removed from the initial idea of *leg*, but still considered as having the same origin, meaning that *leg* is therefore a polysemous word rather than a homonymous one. As can be seen in the case of *leg*, some meanings are not easily recognized as part of this form.

Indeed, polysemy is a complex phenomenon which presents two main problems: the number of meanings which are to be established for one form, and the transference of meanings. Distinguishing two meanings for the same word form can be a difficult task. In Jackson and Amvela's words, "it is not easy to say without hesitation whether two meanings are the same or different" (2001: 59). The case of *leg* could be illustrative in this sense. Meanings (1) and (2) are so similar that we are tempted to merge them into one. We can, however, justify this division on the basis that meaning (1) refers to a part of a living being, while meaning (2) refers to a part of a dead animal. Having said that, both allude to the same part of the animal, whether it be alive or dead. Accordingly, it could be upheld that (1) and (2) are not essentially different, although they appear as two different meanings in the dictionary entry.

The main element for identifying the meaning of a word form is the context. In this respect, Sánchez argues that "para que el oyente seleccione el significado adecuado, entre muchos, necesita disponer de marcadores externos a la palabra en sí, los cuales deben capacitarle para seleccionar una unidad significativa y no otra. [In order to select the adequate meaning, the listener needs to make use of external markers]" (Sánchez 2007: 180). If we find the word *leg* on its own, we will not be able to determine its meaning unless we place it within a phrase or sentence such as *the leg of the table* – which would correspond to meaning (3) – or *he broke his leg in a car accident*, corresponding to meaning (1).

Nonetheless, relationships between word meanings and their co-text are not straightforward, let alone unidimensional. Rather, they should be conceived as a set of

complex networks, or as Cantos and Sánchez (2001) put it, as lexical constellations. They take inspiration from the cosmic organization to explain lexical relationships:

“En el universo, cada galaxia o cada sol (= palabra o nodo) está constituido por un número variable de planetas que, a su vez, pueden tener a su alrededor un número variable de satélites. Este modelo tridimensional permite establecer relaciones entre diferentes dimensiones o niveles, admitiendo una complicada maraña de intersecciones en las que las dependencias pueden ser más cercanas o lejanas, directas o indirectas, mediatizadas o no por ‘satélites’ o intermediarios que actúan como lazos de unión entre el nodo matriz y los rasgos periféricos (Sánchez 2007: 182).

[In the universe, each galaxy is constituted by a varying number of planets. These planets can have, at the same time, a varying number of satellites. This model is tridimensional and allows different relationships between different levels, giving place to a complex net of intersections, where dependencies can be more or less direct].

Transference of meaning is the second problem to be addressed. The sample of transference par excellence is the metaphor. According to Carter, the metaphor “induces the hearer (or reader) to view a thing, state of affairs, or whatever, as being like something else, by applying to the former linguistic expressions which are more normally employed in references to the latter” (Carter 1992: 41). A detailed analysis of the phenomenon of metaphor is beyond the scope of this chapter. Metaphor will only be examined in relation to the subject we are discussing here, which is polysemy.

Transference of meaning commonly occurs with body parts. There is the example of *leg* which is transferred to the category of furniture (leg of a table), *hand* as in *the hands of a clock*, *tongue* as in *the tongue of a shoe*, and *foot* as in *the foot of a bed*. However, each language has its own metaphors. For instance, in French, a clock does not have hands but needles, and tables and chairs have feet instead of legs.

Related but different to polysemy is the phenomenon of homonymy. Jackson and Amvela state that polysemy is “a situation where we have two or more words with the same shape [but] are considered distinct lexemes, mainly because they have unrelated meanings and different etymologies” (Jackson and Amvela 2001: 61). *Bank* and *bard* are two typical cases of homonymy. The former can refer to a financial institution or to the edge of a river, whereas the latter can refer to an ancient Celtic poet or to a piece of bacon placed on meat during roasting. The two meanings for each of the words have nothing to do with each other. The fact that they share the same form is just a mere coincidence, fruit of the development of languages throughout history. *Bank* as a

financial institution is the result of the evolution of the Old Italian word *banca*, whereas the bank of a river has its origin in Old English. Tantamount to the case of *bank*, the *bard* poet is of Gaelic origin whereas *bard* as a type of food comes from the Old Italian *barda* (packsaddle).

Due to the different pronunciations that one single form may have, some cases of homonymy are given at the written dimension only. In this specific case we can find a homograph. Homographs represent different meanings and, as such, must not be confused with words which can be pronounced differently or words which have a different orthography but the same pronunciation such as *fête* / *fate* or *isle* / *aisle*.

Moreover, for two words to be homonymous, they do not necessarily have to belong to the same class. *Can* and *grate* can be nouns or verbs depending on the context. On his part, Gardner talks about the particularly complex case of *bear*, which stands for an animal or for the action of carrying. In fact, the phenomenon of *bear* is adopted by the author in order to show the degree of complexity that can be reached by homonymy:

“ [...] To make matters even worse, the past form of the verb ‘bear’ is ‘bore’, which bears no orthographic resemblance to the other forms in the semantic family. Additionally, the form ‘bore’ itself has much more common meanings that are totally unrelated to bear [...] (to bore a hole, the man is a bore, I don’t want to bore you with this, etc).” (Gardner 2007: 251).

Nonetheless, homonymy does not seem to pose serious problems of disambiguation thanks to the co-text. For the most part, homonymous terms are disambiguated by the words that surround them. In fact, disambiguation occurs naturally when homonyms fall within different grammatical classes. For instance, it is very difficult to confuse *stick* as a noun with *stick* as a verb in a sentence. The different syntactical behaviour of each term reveals their grammatical category, and, consequently, their meaning. We can infer two ideas from a sentence like *After the knee operation he had to use a stick as he could not walk properly*. First, regardless of the meaning of ‘stick’, we can assert that this word falls under the nominal category. Second, the co-text tells us that the meaning of ‘stick’ is related to *walk properly*. Similarly, the sentence *I will stick the instruction paper on the wall so that everyone in the class can see it* shows *stick* preceded by the auxiliary verb ‘will’, thus indicating its verbal condition.

Polysemy and homonymy are two extended phenomena in the English language. In fact, monosemic words are rarely found, unless they correspond to scientific or technical terms specifically restricted to Medicine (otitis, scalpel), Chemistry (enzyme, bromide) or Engineering (microchip). Those words which are more commonly used are normally those which have more meanings (Ravin and Leacock 2000). What remains unclear is whether a high degree of polysemy is a cause or a consequence of the high frequency of use of those words. This aspect can be explored thanks to recent advances in corpora studies.

However, despite their bearing and popularity, polysemy and homonymy are rarely contemplated in this kind of work. Corpora studies usually present lists of decontextualized words which are currently analysed electronically. In this sense, polysemy and homonymy might obscure the analysis; for example, *arm* is observed to appear 40,000 times in a two-million word corpus. We can assert whether this specific form has a higher or lower presence in that corpus. Yet, the meaning referred to by that form is not explicated. There is no mention of the number of times *arm* refers to a human limb or to the part of a sofa.

Biemiller and Slonim (2001) warn of the multiple meanings of high frequency words and the repercussion this may have on corpus analysis. However, according to Gardner, corpus analysis programs are still in their “developmental infancy” (Gardner 2007: 244). Until we can resort to more sophisticated disambiguation programs, results yielded by studies which rely on frequency forms should be approached with caution. He goes on to say that: “it would be virtually impossible to meet the criteria of same grammatical class and same meaning in grouping words unless the researcher had access to a grammatically and semantically tagged corpus or a sophisticated collocational analysis program” (Gardner 2007: 244). Results in corpus-based studies will become much more reliable when a way to disambiguate language and deal with polysemy and homonymy is found.

Thus, so far, we have seen that one form can stand for different meanings, whether related (polysemy) or not (homonymy). Asymmetry can also result in the opposite situation, where one single meaning is represented by two or more forms appearing together. This type of combination is known as multi-words. Multi-words are defined as “a sequence of two or more words (a word being simply an orthographic unit). This sequence of words semantically and/or syntactically forms a meaningful and

inseparable unit” (Moon 1997: 43). Moon leaves out comparative or passive forms such as *more/most expensive* or *was done* as he understands that they are formed grammatically.

Some authors have stretched Moon’s definition to the maximum. Sinclair (2004) is one researcher who has taken this construct to the extreme. He talks about the ‘maximal approach’ by which a unit of meaning should be extended “until the ambiguity disappears” (Sinclair 2004: 280). Under this definition, a sentence or even a whole paragraph could fit under the multi-word label. Yet, we find ourselves unable to accept a whole paragraph, even a sentence, as a multi-word or just as one single meaning.

Indeed, Moon’s definition seems quite ambiguous. In an attempt to overcome the drawbacks in Moon’s proposal, Goldberg states that “phrasal patterns are considered constructions if something about their form or meaning is not strictly predictable from the properties of their component parts or from other constructions” (Goldberg 1995: 4). Accordingly, two or more word forms constitute a multi-word unit only if they give rise to a concept that is different from the sum of their parts. In this sense, the fact that two or more words appear next to each other in a text does not necessarily mean that they constitute a multi-word.

The multi-word category is relatively wide and comprises several items which differ in institutionalisation, fixedness and transparency. Before delving further into the discussion of the different types of multi-words, it is necessary to clarify what each of these criteria mean. Institutionalisation concerns to what extent a group of two or more orthographic words is considered a unit by a language community. Fixedness stands for the degree of frozenness in a word sequence, for example, the higher the degree of fixedness, the lower the possibility of inflection or change of order. Lastly, transparency refers to the possibility of interpreting the meaning of a unit beyond the meaning of its components. This phenomenon is also called semantic or grammatical non-compositionality, and it can be seen in different degrees in multi-words. The degree of transparency is inversely proportional to the possibilities of being a multi-word.

Five different types of multi-words can be identified according to their degree of institutionalisation, fixedness and transparency: idioms, fixed phrases, prefabs, compounds and multi-verbs (see table [2]). The term *idiom* is sometimes used as a superordinate for any type of multi-word. However, in the narrow sense, an idiom is understood as a multi-word unit whose meaning is not the result of the meanings of its

parts, that is, it has a non-compositional nature. In turn, fixed phrases can be described as an odds and ends category, where almost anything fits. This includes greetings (good morning, excuse me), proverbs (enough is enough), and similes (dry as a bone). Most of them are noted for their degree of fixedness, and not so much for their compositionality or institutionalisation. As for prefabs, they are defined by Moon as “preconstructed phrases, phraseological chunks, stereotyped collocations, or semi-fixed strings which are tied to discursal situations and which form structuring devices” (Moon 1997: 47). Contrary to phrases, prefabs enjoy a considerably high degree of institutionalisation, although their frozenness is not particularly noticeable. Among the most well-known prefabs are introductory formulae such as *this is* or *that reminds me*. Although prefabs are not as fixed as idioms, this type of construction has become lexicalized due to its frequent use in discourse (Pawley and Syder 1983).

CATEGORY	INSTITUTIONALISATION	FIXEDNESS	TRANSPARENCY
Idiom	High	Medium-High	Low
Fixed Phrase	Medium-High	High	Medium-High
Prefab	High	Medium	High
Compound	Medium-High	Low	Low-Medium-High
Multi-verb			
• Prepositional Verbs	Medium-High	Medium-High	High
• Phrasal Verbs	High	Medium-High	Medium-Low
• Phrasal-Prepositional Verbs	High	Medium-High	Medium-Low

Table [2] Types of multi-words and their degrees of institutionalisation, fixedness and transparency

Regarding compounds, they are considered “the least interesting” by some authors (Moon 1997: 44). Maybe the reason is that “the process of compound formation does not lend itself readily to general rules” (Jackson et al. 2001: 84). In fact, they are orthographically inconsistent. They can adopt different formats: one word with two roots, two hyphenated forms, or just two separate words. In some cases, two formats coexist such as *paper clip* and *paperclip*. It could even be the case that three possible formats exist, an example being *heartbreak*, *heart-break* and *heart break*. It is possible that, in the future, the hyphenated and separate forms will become obsolete, leaving only

the first form. For instance, *lipstick* and *wildlife* together are possibly the result of the evolution of the forms *lip* and *stick*, and *wild* and *life*, respectively. Nonetheless, there are some compounds which resist lexicalization such as *kiwi bird*, which only appears as two separate forms.

Compounds are distinguished from ‘normal’ or other types of multi-word units in terms of phonology, syntax and semantics. Contrary to ordinary words, compounds have two primary stresses, as they have two roots. From a grammatico-syntactic perspective, compounds present special features in terms of word order, interruptibility, modification and inflectibility.

They are sometimes ungrammatical, such as in the cases of *knee-jerk* and *sea-sick*. These two examples show how the normal word order in English is altered by placing the object before the verb in the first case, and the noun before the adjective in the second case. Moreover, even though some compounds are made up of two free word forms, they cannot be interrupted by any new form. This is due to their high degree of frozenness. Frozenness somehow delimits the flexibility of compounds. They can be modified according to their grammatical class, but only the last part of the compound can be inflected. In this sense, the plural of *paper basket* is not **papers baskets*, but *paper baskets*.

Semantically speaking, compounds tend to acquire specialized meanings: “only in rare cases is the meaning of a compound derived from that of its constituents in the literal sense” (Jackson and Amvela 2001: 81). In most cases, it is only one of the constituents which loses its semantic transparency. For instance, in the case of *dustbin*, it is the first part of the compound, that is *dust*, which loses its transparency. A dustbin is not restricted to the collection of dust in the same way a blackboard is not necessarily black or made of wood.

As discerned from the reflections above, compounds are irregular in their form and present different degrees of non-compositionality. These two facts sometimes make it difficult to decide whether two forms should be considered a compound or not. This is to be taken into account in the quantification of L2 vocabulary. If quantification is based on purely formal terms, then maybe *paper basket* should be counted as two forms, whereas, in semantic terms, these two forms might be accepted as just one.

We now arrive at the fifth type of multi-words: the multi-verbs. They can be divided into prepositional verbs, phrasal verbs and phrasal-prepositional verbs. The first two consist of a lexical verb and just one particle, whereas the third one requires three elements, viz, the lexical verb plus two particles. However, we should not identify multi-verbs with free combinations. For instance, in the prepositional verbs, the object can become the subject of the passive sentence, whereas this does not occur in free combinations of verb plus preposition. *We will call on the headmaster* can be transformed into the passive structure, as *call on* is a prepositional verb. By contrast, the free combination *call after* prevents the sentence *We will call after the meeting* from turning into a passive one.

In the same vein, phrasal verbs should also be distinguished from free combinations, due to the idiomatic nature of the former (Greenbaum and Quirk 1990). The isolated meanings of the constituents of phrasal verbs such as *give in* (surrender) or *look up* (visit) differ from the meaning of the phrasal verbs themselves. On the contrary, the meaning of free combinations can be predicted. What is more, not only do phrasal verbs differ from free combinations in terms of semantic predictability, but also in fixedness. In free combinations such as *walk past*, *walk* can be replaced by *run*, *trot*, *swim* or *fly*. This is something which cannot be done with a phrasal verb, where the two components are indispensable. In turn, the phrasal-prepositional category is the easiest to identify due to the number of elements: a lexical verb plus an adverb and a preposition. Examples of phrasal-prepositional verbs are *look forward to*, *put up with* and *take out on*. Similar to prepositional and phrasal verbs, these types of constructions vary in their degree of idiomaticity, that is, it is easier to infer the meaning of *stay away from* (avoid) than *stand up for* (support).

To conclude, the discussion on polysemy, homonymy and multi-words evinces the complexity of the relationship between meaning and form. They may be regarded as three of the most representative cases of linguistic asymmetry found in language. These kind of irregularities – as a result of asymmetry and reflected by these types of phenomena – can pose serious problems for lexical quantification.

2.2.4. Alternatives to the word

It has been observed that the word is one of the most ambiguous and vague constructs in language. For this reason, some proposals have been made in order to overcome the

different obstacles established by the definition of word. Several alternatives to the notion of word have been suggested. These alternatives can be gathered around three different categories. The first category is based merely on form; the second one relies on morphology, whereas the third rests on semantic underpinnings.

2.2.4.1. Formal category

The token and the type are the two forms which fit into the formal category. The token is also called a ‘running word’. This is defined as every word form in a spoken or written text regardless of the number of times it occurs (Nation 2001). In this sense, each token corresponds to one of the items that a word processor counts as a word. Accordingly, the sentence *It is not easy to say it easily* has eight tokens, as *it* is counted twice. Forms are counted as many times as they appear in the text. The token is then normally used to measure the length of a text.

However, at the semantic level, some researchers use the type. This is defined as the representation of “a class of linguistic item” (Richards and Schmidt 2002: 567). Continuing on from the sentence above, there are seven types and not eight, as *it* is counted only once. The type was used by Carroll (1971) who took the concept to the extreme, distinguishing even between upper and lower-case letters. According to this author, *car* and *Car* are two different types and should be counted that way, and not as only one form. A less radical use of the type is found in Seashore and Eckerson (1940), who resorted to this alternative when calculating vocabulary knowledge in the 1920s and 1930s, adopting the standard definition of the term.

These two proposals can be useful in strictly quantitative studies, where it is only the number of forms that counts. Hence, they could be a good alternative for corpora studies. Milton states that, at first sight, the type seems to be “a very workable figure [...] easily understood” (Milton 2009: 9). Yet, they are far from apprehending the complex nature of the lexicon. First, they focus exclusively on form, and we should not forget that linguistic items are primarily meaning containers. In this sense, an alternative to the word which is based merely on formal criteria does not seem very appropriate. Second, as they are based on form, neither the token nor the type contemplate the existence of multi-words. *Look after*, *put up with* and *good morning* are counted as two, three and again two items, ignoring their semantic features.

Last but not least, the psychological validity of tokens and types is at the very least doubtful. As stated above, tokens strictly focus on text quantity, regardless of semantics. In turn, the formal nature of the type means that we count *table* and *tables* or *cook* and *cooked* as different items in a text; that is to say, *table* and *tables* or *cook* and *cooked* are not technically the same word. The question is whether they should be considered different items from the standpoint of vocabulary research. The adoption of the type as a unit of counting in L2 vocabulary research does not contemplate the regularity of the rules by which words are inflected. Put another way, once the rules of the plural and the regular past tense are mastered, the type can be applied to other nouns and verbs. Therefore, someone who knows the word *table* would possibly know *tables*, and the same can be said of *cook* and *cooked*. This does not mean, though, that learning vocabulary is an easy task: “a learner needs to learn thousands of new words in a Foreign Language to become competent” (Milton 2009: 10), and this is something which requires considerable effort.

2.2.4.2. Morphological category

The morphological category contains two different units: the lemma and the word family. One of the main differences between members of the formal category and members of the morphological category is the abstractness of the latter. Both the lemma and the word family are abstract units. Texts do not include lemmas or word families but rather members of these units. In order to distinguish the abstract units from the concrete members, the former are written in capital letters.

Vermeer (2004) points out that the lemma is the most reliable unit of counting. Nation defines the lemma as consisting of “a headword and some of its inflected and reduced forms” (Nation 2001: 7). However, the author does not clarify which of the inflected forms are to be considered part of the lemma and which are not. Francis and Kučera (1982) point out that the members of a lemma belong to the same grammatical class, although they may differ in spelling. For instance, the lemma PLAY includes *play*, *plays*, *playing*, *played*, but not *player*. This last form would belong to another lemma, as it is not a verbal form but a noun. *Player* would instead be part of the lemma PLAYER, which includes *player*, *players* and most likely *player’s* and *players’*.

According to the aforementioned authors, the verb forms *went* and *gone* should be placed within the lemma GO. A similar case concerns the forms *am*, *are* and *is* with

the lemma BE. However, there is a doubt as to whether a learner can associate *went* with GO or *am* with BE, unless he or she has studied these irregular forms before.

Alternatively, it is more probable that a learner would associate *player* with PLAY. Gardner (2007: 244) warns that “the opaque spelling and phonological connections between the lemma headword and the family members will surely cause more and different learning problems than their more transparent counterparts”. Indeed, psychological validity plays an important role here. In the case of *GO* and *went*, psychological validity is non-existent, whereas there is a high degree of validity in the case of *player* and PLAY, even though the former does not belong to the latter.

We now turn to the second unit in the morphological category: the word family (hereafter referred to as WF). This is considered one of the strongest alternatives to the traditional notion of words for vocabulary research. The WF is defined as a headword plus its inflected and closely related derived forms. The fact that derived elements are included shows that the scope of the WF is wider than that of the lemma. Because of its popularity among linguists, it has been adopted by numerous L1 and L2 vocabulary studies (Ito and Bauman 1995; Laufer 1998; Laufer and Nation 1995; Nation 1990; Goulden et al. 1990; Diack 1975). Goulden et al. (1990) and Diack (1975) made use of the WF in their tests. In both cases they wanted to measure the vocabulary size of native speakers of English who are expected to be familiar with the ways of deriving and inflecting words. The WF has also been used by Coxhead (2000) in the design of wordlists for advanced EFL students. She assumed that university students had enough knowledge of English to deal with the WF instead of lemmas.

As can be inferred from above, the use of the WF – and, to a certain degree, its justification as a unit of counting – basically relies on suppositions. In this sense, adopting the WF as the unit of measurement in vocabulary studies implies that learning the headword HOPE automatically includes learning *hopeless* or *hopefully*. It is fair to say that a learner with a certain level of proficiency in his or her foreign language, and with certain metacognitive skills, will be able to associate *hopeless* and *hopefully* with HOPE. However, this should not mean that knowing ‘hope’ necessarily implies knowing *hopeless* or *hopefully*. It is true, though, that if the learner knows the meaning of the suffix -less and the meaning of the headword HOPE, then he or she may be able to figure out the meaning of *hopeless*. Nevertheless, there is no guarantee that knowing the meaning of *hope* includes knowing the meaning of some of its derivatives. Table [3]

presents the different forms which are included under the labels of *lemma* and *word family*.

Schmitt (1998) provides evidence of the difficulties in adopting word families as a unit of counting in vocabulary studies. He carried out an interesting study on the interaction between different aspects of word knowledge. One of the tests consisted of providing words derived from those that had been learned previously. Someone who had acquired *friend* was expected to give derivatives such as *friendship* or *friendly*. However, most participants were unable to give any derivatives at all, which proves that knowing one or several members of a word family does not necessarily imply knowledge of the rest of the members.

A possible solution to this issue is adapting the concept of word family to the learner's level (Gardner 2007). This adaptation consists of fine-tuning the concept of word family including a higher or lower number of affixes depending on the student's level. In this sense, we shall avoid generalizations regarding the learners' vocabulary knowledge. This refinement will provide us with what we can call *sensible word families*. We will develop this idea further in section 2.2.5. *The word as a functional unit*.

Base form	Included in the <i>lemma</i> category	Included in the <i>word family</i> category
PLAY	Play, plays, playing, played	Player
HOPE	Hope, hopes, hoping, hoped	Hopefully, hopeless
WIDE	Wider, widest	Widen

Table [3] Forms included in a lemma and a word family

2.2.4.3. *Semantic category*

The semantic category includes two proposals, viz, the lexeme and the lexical unit. Lexemes are usually identified with headwords in a dictionary. As they are placed within the semantic category, lexemes are defined as attending to meaning (Crystal 1995; Biber et al. 1999; Jackson and Amvela 2001). *Break down* and *put up with* will probably appear as dictionary entries, but this may not be the case with *paper basket* or *in front of*. This is due to their different degrees of non-compositionality (see section 2.3.2 of the present chapter). For this reason, Crystal refines the definition of lexeme as a “unit of

lexical meaning, which exists regardless of any inflectional endings it may have or the number of words it may contain” (Crystal 2003).

Crystal’s definition solves the problem of lexemes in relation to multi-word items. Indeed, the semantic basis of the lexeme overcomes two main obstacles: the formal constraints found in other alternatives such as types, and the risk of overgeneralization found in word families.

However, the lexeme also has its limitations. First of all, not all words present the same degree of lexicality. Jackson and Amvela (2001) distinguish between lexical lexemes and grammatical lexemes. Lexical lexemes are identified with nouns, verbs, adjectives and adverbs, although the openness of the latter is arguable (Quirk et al. 1985). They are also known as open classes, as they are potentially able to add new members. By contrast, grammatical lexemes belong to the so-called closed class category. Prepositions, pronouns, determiners and conjunctions are basically functional words with a grammatical rather than a lexical function. Their main function consists of establishing grammatico-syntactic relations between lexical lexemes. The closed category is restricted and rarely adds new members.

Nonetheless, there are several degrees of lexicality within grammatical lexemes. For instance, prepositions such as *behind* and *under* are more lexical than the determiners *a* and *the*. The first two have more lexical meaning than the last two, even though the four of them fall within the grammatical category. This is to show that lexicality is not an all-or-nothing characteristic, but that it has to be represented on a scale. A possible option is to refine the definition of lexeme by pointing out the different degrees of lexicality that lexemes may enjoy. In this way, we would not have lexical and grammatical lexemes, but rather lexemes with various degrees of lexicality.

The second limitation in the adoption of the lexeme as an alternative to the word is that it does not contemplate the polysemic nature of most words. As was discussed in the previous section on asymmetry, the form-meaning relationship is not of unique and bidirectional correspondence. One single form can allude to different meanings and just one single meaning can require more than one form. The definition of the lexeme does not distinguish between the different meanings in a polysemous word, or between homonymous words. Although an alternative based on semantic criteria is appealing, the basic problem is still the same as in other proposals, that is, asymmetry is not

contemplated. A direct, cogent correspondence between form and meaning is straightforwardly assumed.

Having discussed the lexeme we now arrive at the second alternative in the semantic category: the lexical unit. The lexical unit is defined by Cruse (1986) as the smallest part which satisfies the following two criteria:

- 1) It must be at least one semantic constituent
- 2) It must be at least one word

A semantic constituent is a complex item which contains form and meaning and has a grammatical function. It combines with the meaning of other constituents in a sentence, contributing to its overall meaning. An affix, a word or even a whole phrase can be considered semantic constituents. For instance, *un-* or *-ly* are semantic constituents, though they are not lexical units, as they are not words. *House* or *on the road* can be labelled lexical units as they are semantic constituents and are at least one word. The problem is that very few researchers would accept *on the road* as a unit of counting. Regarding Cruse's second criterion, a lexical unit must be at least one word. Cruse defines the word according to its positional mobility and resistance to interruption. Put another way, the word is understood as the smallest unit that can be moved in a sentence without destroying its grammaticality, and the largest unit that resists interruption.

Hence, if the lexical unit is adopted by vocabulary studies, its definition should be fine-tuned, that is, a lexical unit should be understood as a minimal semantic constituent which is made up of at least one word. In this sense, some definition problems could be overcome. Accordingly, *Rachel* or *knows* would be considered lexical units, but not *un-* or *-ly* or *on the road*.

Despite its drawbacks, Cruse's definition of a lexical unit has a positive point. It refers to the combination of one or more forms with a single meaning, so that one form may constitute as many lexical units as meanings involved. One example could be the form *tick*, which has up to four lexical units regarding its four meanings: 1) a recurrent metallic tapping or clicking sound, such as that made by a clock; 2) any large group of small parasitic arachnids living on the skin of warm-blooded animals and feeding on the blood of their hosts; 3) the strong cover on a pillow or mattress; and 4) account or credit (informal). Even though some meanings may be fairly similar, each identified semantic sense will give birth to a new lexical unit. They will always be considered different lexical units, regardless of the close relationship between them. Bogaards (2001)

recommends the lexical unit as the unit of measurement for L2 vocabulary studies. He carried out two experiments which support his proposal. Both experiments consisted of engaging participants in a reading and translating task. These two tasks were expected to help participants acquire some incidental vocabulary. Bogaards wanted to demonstrate that “new senses for forms that have already been acquired cannot be taken for granted” (Bogaards 2001: 337). This supports the idea that it makes sense to assume that the unit of counting in vocabulary studies needs to be reduced to the meaning that the learner is exposed to. In light of Bogaards’ results, Knowles and Mohd Don state that we may need to begin “to consider individual word meanings” as the basis for our analyses (2004: 71).

However, two weaknesses are found in lexical units. First, we have already talked about how difficult it is to delimit different senses in a word. As a consequence, we may struggle to distinguish between different lexical units which share the same form. Second, although lexical units try to be as close to the real picture of language as possible, paradoxically enough, they become less appropriate for the strong current of corpora studies which is increasingly more dominant in the scope of L2 vocabulary research. Very complex programs with semantically and grammatically tagged corpora are being designed (Landes et al. 1998; Ravin and Leacock 2000), but they are still in their initial stage. Nevertheless, even if they were to be highly developed, there is still a long way to go until these programs behave like human brains, if this ever does happen.

To sum up, the present section has introduced several alternatives to the ambiguous and vague notion of the word. These alternatives have been organized according to the criteria on which they are based, whether it be formal, morphological or semantic. We have seen that all of them have their advantages, but what has become more evident is that there are some disadvantages which have to be taken into consideration before adopting them as the unit of counting for vocabulary studies. Table [4] summarizes the alternatives which are proposed in place of the word.

BASIS	CATEGORY	DEFINITION
Form	Token	Every word form in a spoken or written text regardless the number of times it occurs
	Type	The representation of a class of linguistic item
	Lemma	A headword plus its inflected and reduced forms
Morpheme	Word Family	A headword plus its inflected and derived forms
	Lexeme	Unit of lexical meaning, regardless of inflectional endings
Meaning	Lexical Unit	The smallest part in language that constitutes at least one semantic unit and is at least one word

Table [4] Alternatives to the word as the unit of lexical counting

2.2.5. Sensitive and sensible schemes in the conception of the word: Word as a functional unit

Thus, so far, we have found that it is quite difficult to find the perfect once-and-for-all unit of measurement for L2 vocabulary research. None of the proposals discussed above as an alternative to the word seem to be the solution. Although an ensuing debate about the ideal unit of counting for L2 vocabulary is still very much alive, it seems to be more and more clear that there is not a panacea in this respect. Daller et al. hold that “the unit of counting should match the use to which the data is put” (Daller et al. 2007: 39). Certain alternatives seem to adapt better to a specific research purpose than others may do, but, to date, a definitive solution to the problem is still quite far off.

Over the last decade, we have experienced a slow but steady evolution from a researcher-centred approach to a learner-centred approach. In the eighties, Anderson and Freebody claimed that “what counts as a word will depend upon the researcher’s principal purposes” (Anderson and Freebody 1981: 98). Around 30 years later, Gardner asserted that “whatever morphological taxonomies [...] words must have some correlation to the way learners actually associate words in their minds” (Gardner 2007: 246). A clear development towards a claim for the learner’s psychological validity of the unit of counting can be observed.

Hence, there is the need to find an alternative which meets two requirements. First, the concept of *word* has to be valid for the learner, and second, at the same time it has to be accepted by the research community. In an attempt to satisfy both the learners’ and the researchers’ needs, the so-called *sensible schemes* have been proposed. The *sensible schemes* establish several levels of knowledge which students are expected to have reached at certain points of their learning process. Two important *sensible schemes*

are suggested by Bauer and Nation (1993) and by Gardner (2007). The scheme proposed by Bauer and Nation contains seven levels which are explicated in table [5].

Level	Explanation	Examples
1	Each form is a different form. The belief that learners have no idea of morphological relationships may be too radical.	'Car' and 'cars' or 'play' and 'played' are considered the same word by the students
2	Inflectional suffixes. This second level may be tantamount to the lemma. Learners are expected to have basic knowledge of suffixes.	Past tense suffix -ed Present continuous suffix -ing
3	Learners should be able to distinguish between the most frequent and regular derivational affixes.	-able, -er, -ish, -less, -ly, -ness, -th, -y, non-, un-
4	Learners already know frequent, orthographically regular affixes. Researchers focus on frequency and orthography over productivity and phonology. The main reason is their interest in written L2 over oral L2.	-ation, -ful, -ism, in-
5	At this level the learner should know regular but infrequent affixes. These kind of affixes are defined as "affixes that are fairly regular, but they do not individually add greatly to the number of words that can be understood by learners" (Gardner 2007: 246).	-age, -al, -an, -hood, -let, anti-, arch-, bi-
6	The learner is expected to know frequent but irregular affixes. Despite being frequent, the use of members in this category sometimes requires changes in the word base such as deletions or additions.	-able, -ee, ion-, pre-, re-
7	Classical roots and affixes. Nation and Bauer strongly recommend the explicit teaching of this category. Contrary to general belief, they have quite a high productivity and frequency.	ab-, ad-, dis-, ex-

Table [5] Bauer and Nation's sensible scheme (1993)

This scheme should be recognized for its importance and pioneering character, although we must point out three drawbacks. First, it is necessary to define what is meant by "the most frequent and regular derivational affixes". Even though examples are provided, we may still find ourselves in a situation where we have to decide whether an affix is in fact frequent or not for it to be included in the relevant category.

Second, suffixes and prefixes are seen to share the same degree of difficulty. However, this assumption does not correspond to the linguistic reality. Many prefixes are transparent and easily paraphrasable. This is the case of non- and un-, meaning not. By contrast, suffixes are normally more difficult to decipher. Suffixes like -ment, -ness, and -ish are more difficult to define and possibly more difficult to learn.

There is a third objection to Bauer and Nation's scheme: the lack of attention to word stems. The authors focus on affixes, relegating stems to a secondary stage. However, some studies (Wysocki and Jenkins 1987; Tyler and Nagy 1989; Hancin-Bhatt and Nagy 1994) have shown that learning derivatives is related to the knowledge of the stems. In fact, only after students recognized the stem of a word were they able to know the contribution of the suffix to the word form. Therefore, we can say that Bauer and Nation's proposal has been narrowed down to the linguistic features of the affixes without consideration for the student's ability to learn them.

A more contemporary scheme is the one proposed by Gardner (2007), which appears in table [6]. In an attempt to combine learner and linguistic needs, the author offers three different criteria to take into consideration when selecting the unit of counting for L2 vocabulary studies.

Word as	Learner's profile			
	Age	Proficiency	Literacy skills	Morphological training
Base forms + Regular inflections	Young Children	Low	Low	No
Base forms + Regular inflections + Irregular inflections + Derivational prefixes	Older Children and Adolescents	Intermediate	Intermediate	Some
Base forms + Regular inflections + Irregular inflections + Derivational prefixes + Derivational suffixes (regular and irregular)	Adults	High	High	Extensive

Table [6] Gardner's sensible scheme (2007)

Gardner endeavours to satisfy both research and pedagogy. As can be discerned from the chart above, Gardner establishes a direct relationship between age, proficiency and the morphological level. In this regard, it is expected that the higher the age, the higher the learner's proficiency and the morphological knowledge. When Gardner talks about the morphological level, he refers to the knowledge of affixes and multi-word items. In the first morphological level, the learner is expected to recognize only plurals and closed compound nouns such as *milkman*. The second level of morphological training encompasses both inflections and derivations as well as closed compounds and hyphenated items such as *sugar-free*. The third and more extensive level includes all the

previous categories plus phrasal verbs (switch off), idioms (on the rocks), fixed phrases (pleased to meet you) and prefabs (the thing is).

However, the three stages are closed; that is to say, they do not allow the characteristics from the previous table to move from one stage to another. For instance, it may be the case that an adolescent is more proficient than an adult, or that an older child is able to identify derivational prefixes but not irregular inflections. Despite the limitations, Gardner's proposal is an important step towards taking into consideration the learner's needs, which have traditionally been relegated to the sidelines.

In conclusion, a functional approach like the one adopted by these schemes seems to be a possible solution to the *word* issue. Perhaps the most appropriate way to address the controversial definition of *word* is to take into consideration both the learners themselves and the aim of the study. Put another way, not only should the focus be on the purely linguistic aspect, but also on the learner. Therefore, we should be aware of the need for schemes adapted to the students' learning processes without losing the research perspective.

2.3. Knowing a Word

2.3.1. Introduction

There are several ways to understand vocabulary knowledge. Different terms imply different paradigms. In fact, it is not the same to conceive vocabulary knowledge from the point of view of the word as it is as a competence. Indeed, the choice made is unavoidably going to condition the rest of the study.

The definition of *knowledge* is very likely to affect the size of any vocabulary estimation. The obtained results will always have to be interpreted from the chosen standpoint. For this reason, conclusions drawn from a study have to be relativized, according to the perspective adopted.

2.3.2. Word Knowledge, Lexical Competence, or both?

In the field of L2 vocabulary acquisition we can find several terms which refer to the level of vocabulary learning. Labels such as *lexical knowledge* (Richards 1985), *vocabulary knowledge* (Meara 1996), and *semantic competence* (Blum-Kulka 1996) have been quite popular among L2 vocabulary scholars. Nonetheless, *word knowledge* –

hereafter WK – and *lexical competence* – hereafter LC – have been among the most recurrent ones. For this reason, the present section will focus on these two terms.

The problem with the sheer variety of terms regarding vocabulary knowledge is not the variety itself, nor is it the different elements that form their definitions. The real problem is the general tendency to use one or another label indistinctively, as if they were totally akin. Indeed, many authors cannot help combining the use of two or three labels in the same document. This is the case of Henriksen (1999), who interchanges *word knowledge* and *lexical competence* in her discussion about the confounding terminology which dominates L2 vocabulary acquisition fieldwork.

There are important divergences as regards WK and LC. First, there is the historical tradition of each of these terms. Up until the seventies, the study of vocabulary fell within other areas such as Grammar. It was not considered important enough to be studied in and of itself. Consequently, a specific term to refer to the study of vocabulary was not necessary at that point and WK performed well enough in this role.

Only after the mid-seventies did vocabulary start to stand out as an independent discipline, a research area in and of itself. It was at that moment when the term LC began to appear. It was first used by Canale and Swain in their discussion about Communicative Competence (1980). Yet, in these first years LC was considered a mere component of grammatical competence, still being afforded little autonomy. Nevertheless, the fact that a new term was specifically created for vocabulary knowledge meant an important step in the recognition of vocabulary as a benchmark in L2 acquisition, forecasting the change that vocabulary learning would undergo in the following years. In fact, nowadays, the Common European Framework of Reference (CEFR) presents LC as an independent competence with its own value and meaning; as an underpinning for the teaching and learning of languages (more about the CEFR in chapter 3, section 3.2.2.1 [a]).

The second divergence between WK and LC lies in the terms *knowledge* and *competence*. The former is more in line with Chomsky's view of vocabulary as a set of data to be learned in the same way as we would learn the world's capital cities or the Spanish mountain ranges. This tenet bears connection to the idea of vocabulary as merely declarative. By contrast, *competence* alludes to skills or the ability to do something. This is known as procedural (can-do) knowledge.

Sanjuan (1991) adopts the term LC in her discussion about L2 vocabulary knowledge. This author understands vocabulary knowledge as being primarily a psycholinguistic process conditioned by internal and external factors. Accordingly, the process is open, dynamic and idiosyncratic. What distinguishes LC from other competences such as Phonology or Grammar – Sanjuan claims – is that it is constantly growing and changing. Besides being changeable and dynamic, the idiosyncratic feature of LC reveals the central role of the speaker in its development. For instance, teenagers are more receptive to vocabulary when it comes to topics they can identify with such as music or computers, more so than other topics which do not interest them.

Robinson (1989), on his part, prefers the use of WK. He puts the declarative perspective on a par with procedural knowledge. Despite this fact, Robinson highlights the importance of process over product. He criticizes the narrow linguistic view of WK stating that WK can also be dynamic and procedural.

On the basis of the comments above, it seems that the use of WK and LC indistinctively is far from justified. According to the ideas discussed above, we should distinguish between two types of vocabulary knowledge: WK, which is based on word level, and LC, which relies on discourse. Notwithstanding, the two dimensions are closely bound to each other, as discourse somehow hinges on individual words, and individual words are normally displayed in discourse. The fact that, to some extent, one is considered part of the other does not mean that WK and LC are the same thing. As they are different, one would expect the methods of analysing them to be different too. Therefore, a fine-grained distinction between terms such as *lexical competence* and *word knowledge* should be taken into consideration (Read 1997, 2000). Schmitt (2000) clearly states that he deals with vocabulary knowledge from the word-knowledge standpoint, underlining the divergences between this term and lexical knowledge. Both WK and LC are equally legitimate. The decision of whether to adopt one or the other depends on the research aims and the context.

2.3.3. Vocabulary Knowledge as Word Knowledge

The numerous proposals about word knowledge make it difficult to classify. The main reason for this is that they cannot be grafted onto any linguistic theory in particular, as they touch upon several perspectives. Nonetheless, there seem to be two trends which

have dominated the scope of word knowledge: the taxonomy perspective and the continuum perspective.

2.3.3.1. *The taxonomic perspective*

The two main exponents of the taxonomic perspective are Richards and Nation. Richards was one of the first authors to stress the importance of vocabulary in L2 acquisition. He talked about the need to pay attention to word knowledge in his well-known work entitled *The Role of Vocabulary Teaching* (1976). His ideas on what it means to know a word were, and still are, a reference for L2 vocabulary studies. His *Role of Vocabulary Teaching* was one of the first studies which triggered the discussion about the definition and meaning of word knowledge.

According to Richards, WK is based on seven different aspects:

- a) Knowing the degree of probability of encountering the word in speech or print
- b) Knowing the limitations imposed on the use of the word according to function and situation
- c) Knowing the syntactic behaviour associated with the word
- d) Knowing the underlying form of a word and the derivations that can be made of it
- e) Knowing the associations between the word and other words in the language
- f) Knowing the semantic value of the word
- g) Knowing many of the different meanings associated with the word.

Most of these aspects make reference to the features of the word itself, viz, orthography and morphology (d), grammatical class (c), and semantic information (f) and (g). Yet, there are some clues about the role of the word in discourse. These are found in point (a), where frequency of occurrence is clearly alluded to, register in (b) and association in (e). Moreover, all seven statements start with the same word: *knowing*. The use of the verb *know* for introducing statements about word knowledge reinforces the declarative background of Richard's taxonomy.

Almost twenty years later, Nation presents another model of word knowledge. This model features nine aspects which revolve around three main dimensions: form, meaning and use (see table [7]). Knowing the word form means knowing what the word looks like (orthography) as well as how it sounds (phonology). Nation builds on these

expected sub-divisions by adding a third aspect to the category of form, viz, the identification of word parts. By word parts Nation means affixes (prefixes and suffixes). For instance, knowledge of word parts includes understanding that the two letters ‘un’ can be a prefix meaning *the opposite*, such as in the case of *do – undo*.

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

Table [7] Nation’s taxonomy on Word Knowledge (2001)

The second dimension, word meaning, is divided into three parts. The first part concerns being able to establish a link between form and meaning. The other two parts tie in with the different connotations that a word may have in a language. We know that languages do not have equivalent translations. The same concepts and referents from one language to another may carry different associations in those languages. One example is the word *prawn* in English and in Thai. In English the word *prawn* is neutral, whereas in Thai this word is used as a well-known nickname within the family.

We now come to the third dimension: use. This dimension is also divided into three parts: grammatical functions, collocations and constraints on use. As its name suggests, grammatical functions concerns the part of speech a word is. Having this kind

of information means that you can confidently say that *beautiful* is an adjective, and, as such, should go before the noun it complements. Collocations and constraints on use are somehow linked to frequency of occurrence. In this sense, it is a fact that some words appear more frequently with others, that is, they collocate. People do their homework, but make their bed. Both *do* and *make* imply action, but *make* does not collocate with *homework*, while it does with *bed*. Regarding constraints on use, there are words which are expected to occur in some contexts and not in others. In this sense, the term *chick* referring to a young girl will normally appear in an informal conversation between friends, while the term *miss* is expected to be found in much more formal contexts.

If we compare Richards' and Nation's models, we can appreciate that ideas about word knowledge do not seem to have changed much. Yet, Nation introduces an important new development. The nine sub-aspects in Nation's taxonomy are framed within the Receptive-Productive scope. Receptive knowledge involves, among other things, word recognition, whereas Productive knowledge involves word utterances. This framework associates Nation's aspects not only with the merely declarative, but with procedural tenets. In this sense, the scope in which these aspects appear changes from *I know* to *I am able*.

Richards and Nation are not the only ones following the taxonomic trend. Schmitt (1998) also adopts this perspective for his vocabulary research. He focuses on the interrelationship between four different types of word knowledge: spelling, association, grammar and meaning. These four aspects are in tune with some of the ideas outlined in Nation's model. In fact, spelling ties in with the *Form* question *How is the word written and spelled?* Meaning and association are clearly related to Nation's questions *What meaning does this word form signal?* and *What other words does this word make us think of?* respectively. Lastly, when Schmitt talks about grammar, he refers to word class, which would correspond to Nation's grammatical functions. The author discovered that the four types of knowledge were not completely independent. A certain correlation between some of them was observed, although the existence of a developmental hierarchy was not revealed.

Along the same lines, Pigada and Schmitt (2006) also showed the partial independence of different kinds of word knowledge. Two new developments can be highlighted with respect to Schmitt's study above. First, the number of words in Pigada and Schmitt was abruptly increased from 11 up to 133. Second, the frequency variable

was also considered when discussing results. The results in Pigada and Schmitt (2006) confirmed the results in Schmitt (1998) that different types of word knowledge develop at different rates. Frequency stood out as one of the most influential factors in acquisition, though at different degrees depending on the type of word knowledge (more about the frequency factor in section 3.4). For instance, spelling turned out to be one of the most affected types of knowledge, whereas meaning did not. In light of these results, the authors concluded that “various aspects of word knowledge should be treated differently” (Pigada and Schmitt 2006: 20). Therefore, the statement *s/he knows that word* should be fine-tuned by making an explicit allusion to the type of word knowledge referred to.

As can be observed from the discussion above, word knowledge understood as taxonomy is easy to visualize. It is seen as a set of discrete units that accumulate, reducing vocabulary knowledge to a mere quantitative issue. However, taxonomic models present a serious problem of practicality. Hence, testing the vocabulary level of one learner may involve seven tests for each single word, which would multiply in the case of Nation’s proposal. If this was to be applied to a whole group of learners, the task would turn into a “mammoth task” (Meara 1996: 46) for the testers and an almost insurmountable one for the testees.

2.3.3.2. *The continuum perspective*

The idea of WK as a continuum has been adopted by several authors. This approach was nicely described by Nagy (1988) as an imaginary line which ranges from “I think I’ve seen that word before [to] that’s what I did my dissertation on” (Nagy 1988: 4). Nagy’s view is in tune with Faerch et al. (1984), Palmberg (1987) and Melka (1997). Behind their conceptions of word knowledge there is the belief that “as one acquires more knowledge of a given word, one will move along the continuum of knowledge” (Waring 2002: 1).

Despite the common idea behind their perspectives, the authors have different views about the way these degrees of knowledge should be understood. According to Faerch et al., “we should think of vocabulary knowledge as a continuum between the ability to make sense of a word and the ability to activate the word automatically for productive purposes” (Faerch et al. 1984: 100). That is to say, the first degree of word knowledge would correspond to the mere recognition of the word as part of the foreign

language, whereas it would reach its highest degree when the learner is able to use it in free production.

Regarding Palmberg's ideas (1987), knowledge would start at what he calls *potential vocabulary*, viz, terms which can be recognized by the learner as they are very similar to forms in the foreign language. Here, there is a key factor which goes beyond word knowledge in its narrowest sense; there is a place for cognate strategy. What it takes into account in the first stage is not L2 word knowledge, strictly speaking, but the use of the learner's L1 knowledge. Palmberg's continuum ends with the active use of that word in discourse.

Other scholars such as Trembly (1966) and Durso and Shore (1991) distinguish between three degrees of familiarity. They classify vocabulary into unknown, known and frontier words. The category of *frontier words* refers to "words that participants judge as familiar but fail to acceptably define" (Zareva 2007: 148). This distinction is quite simple and does not seem to encompass the complexity of the construct that is being treated.

Despite several authors adopting the idea of WK as a continuum, there are two caveats in order. First, the existence of thresholds is admitted. In this sense, we agree with Meara that what "we have is a continuum which is actually a discontinuum" (Meara 1997: 118). As its very nature implies, a continuum does not present thresholds, at least perceptible ones.

A continuum is defined as a one-dimensional space with simple measurable properties that vary systematically in a linear fashion (Meara 1997). Yet, the development of word knowledge is far from being a foreseeable, upward-moving process. In fact, "we have words able to hop onto the continuum, move around it and disappear from it" (Meara 1997: 188). Unsystematicity can be seen in different studies where attrition is detected, and vocabulary which had been previously learned would be totally or partially forgotten in the future. According to these studies, one cannot expect vocabulary knowledge to develop steadily and regularly.

The second caveat refers to the concept of familiarity itself. This term is quite vague, and, as a consequence, difficult to discard and accept at the same time. It is considered almost common sense that the higher the degree of familiarity with a word, the higher the degree of word knowledge. Yet, there is the difficulty of defining what a high degree of familiarity actually means. In her discussion about word knowledge,

Melka (1997) states that having phonological, morphological, syntactical and lexical information about an item should be viewed as having a high degree of familiarity. This conception leads us back to the taxonomic perspective of Richards and Nation. We have here again the somewhat latent idea of WK as a cumulative process divided into different aspects. In an attempt to solve this problem, Melka proposes that we address the distance between recognition and production instead of the stages. The term distance seems more appropriate than familiarity, as it is more germane to the idea of continuum. It defines the idea of WK as a line of progress.

All in all, WK as both taxonomy and continuum presents several drawbacks. Lack of practicality in taxonomy and lack of clarity regarding some terms in the continuum perspective such as *familiarity* are among the most important weaknesses which do not seem easy to solve, at least in the short term.

2.3.4. Vocabulary Knowledge as Lexical Competence

Since Communicative Competence was established as the ultimate goal of language learning, everything related to this field has revolved around the construct of competence. We no longer talk about types of knowledge, but rather competences. Competences are at the core of Second Language curricula, and they often appear in many documents about teaching and learning languages. The learner has to be competent in several linguistic and extralinguistic aspects; in other words, he or she must be able to do certain things with language. In this context we no longer talk about word knowledge, but rather lexical competence.

2.3.4.1. Breadth and Depth

I have decided to include Breadth and Depth in this section because they normally appear in discussions about Lexical Competence. This two-dimensional approach to vocabulary knowledge has been conventionally used by different authors (Read 1993; Wesche and Paribakht 1996; Wolter 2001). *Breadth* is defined as vocabulary size (Laufer et al. 2004) or as the quantity or number of words learners know at a particular level of language proficiency (Nation 2001). It has traditionally been measured with word recognition tests. This format is considered appropriate to assess high amounts of words in a reasonable period of time (Nation 2001). For instance, in Zareva (2003), participants had to answer whether they recognized certain word forms and whether they

knew their meaning. Results showed that breadth was more revealing than depth, although the author warns that “the data the analysis was based do not allow for any definitive conclusions” (Zareva 2003: 560). Yes/no test formats or the well-known Vocabulary Levels Test (Nation 1990, Nation 2001; Schmitt et al. 2001) can provide a fairly reliable estimation of the vocabulary breadth in language learners.

As for the subject of depth, this is a dimension which is hard to define accurately. *Depth* has been used to refer to the quality of lexical knowledge, or how well the learner knows a word (Read 1993; Meara 1996). Yet, the understanding of this construct is far from being cogent. Read (2004) groups the different concepts of depth into three categories:

1. Network of knowledge. Depth concerns how words associate and interact with each other, which may be restricted in use according to register and context (Read 2000).
2. Precision of meaning, that is, the difference between having a limited, vague idea of what a word means and having much more elaborated and specific knowledge of its meaning.
3. Comprehensive word knowledge, that is, not only knowledge of semantic features but also the orthographic, phonological, morphological, syntactic, collocational and pragmatic characteristics of the word.

Regarding the first category, there have been several attempts to measure depth mostly by means of association tests (Read 1993; Paribakht and Wesche 1996; Greidanus and Nienhuis 2001). Behind the rationale of this type of test is the concept of depth as a network of links between words. The second category reminds us of the continuum-like approach with the different degrees of familiarity mentioned by Palmberg (1987) and Melka (1997) (more about vocabulary knowledge as a continuum in section 2.3.3.2.). Lastly, category three could be identified with Richards’ (1976) and Nation’s (1990, 2001) taxonomical models (more about vocabulary knowledge as a taxonomy in section 2.3.3.1.).

What is even more confusing is that the term depth is sometimes contrasted with *width* of knowledge. From this perspective, depth refers to the different degrees of

relationship between form and meaning in a word, whereas width concerns the relationships between a word and the rest of the entries in the lexicon. However, this is not a widely recognised distinction. The term *depth* is normally used to refer to any kind of link between the different word dimensions or the different words in the lexicon. Depth can include the shades of meaning a word may carry, its connotations and collocations, the phrases and patterns of use where a word is likely to be found, and also the association between words in the learner's mind. The problem is the lack of specification in defining the different links represented by depth (Meara 2002).

There is the idea that the L2 lexicon does not have as many links – or, at least, these links are not organized in the same way – as L1 vocabulary. Several authors have supported this idea. For instance, Meara (1982, 2009) suggests that word associations found in the L2 lexicon of a learner are qualitatively different from those in a L1 speaker. Indeed, it is thought that the different types of syntactic, semantic and morphological information which form a lexical representation in a learner's L1 are more strongly and highly integrated than those in the L2 (Jiang 2000).

Hence, most vocabulary researchers are aware of the complexity surrounding the concept of depth. Some researchers such as Daller et al. (2007) have suggested that we talk about lexical quality, which would include not only depth as it is understood here, but also breadth and fluency. The latter refers to the ease with which words can be recognized and used. This three-pronged approach is yet to be operationalized, as to date there is no accepted methodology for approaching depth, let alone fluency.

The main problem for measuring depth lies in the difficulties found in its definition. There is absence of a “clear, comprehensive and unambiguous” (Milton 2009: 123) definition to approach this construct. This is not surprising as it is difficult to join collocation, association, polysemy and other word features attributed to depth. Authors such as Vermeer (2001: 218) have even argued that there “is no conceptual distinction between breadth and depth of word knowledge”. However, Wolter (2006: 746) states that it is necessary to consider the complex syntagmatic and collocational links between words. Meara and Wolter (2004: 95) comment that “we might find learners with similar vocabulary sizes, but very different degrees of organization in their lexicons”. This is in line with the study carried out by Greidanus and Nienhuis (2001). They revised Read's association test (1993) and found that there was, in fact, something different beyond breadth which developed simultaneously, though possibly at a different rate.

A different thing is whether these two dimensions are adequate enough when it comes to determining Vocabulary Knowledge. In Meara's words, "this two-dimensional approach to vocabulary knowledge is not really rich enough to explain the diversity that we find in language learners" (Meara 2002: 404). In turn, Milton states that the distinction between breadth and depth is "deceptively simple [and they] turn out to be ambiguous words [which] can cause confusion" (2009: 13). It is true that definitions in this approach – especially as regards depth – are far from airtight, but the idea persists that there is something separate from vocabulary breadth which tells us something about "the degree of accuracy, appropriateness or native-likeness that learners can perform with" (Milton 2009: 123). This distinction has been the breeding ground for different vocabulary knowledge proposals, some of which will be commented on in the following two sections.

2.3.4.2. *Meara (1996)*

Authors such as Meara support the idea of a reduced dimensional model of vocabulary knowledge. He claims that "despite the manifest complexities of the lexicon, [vocabulary knowledge] might be described in terms of a very small number of easily measurable dimensions" (1996: 37). He distinguishes between size and organization. It is important to point out that these two dimensions do not refer to individual words, which is what occurs with the previously mentioned taxonomy and continuum perspectives. He goes beyond the idea of vocabulary as the sum of the speaker's knowledge of items.

Meara states that vocabulary should be conceived in terms of Lexical Competence or the ability to use words, which testifies to a qualitative change in the concept of vocabulary in comparison to the taxonomical and continuum-like approaches. Nonetheless, he does not forget the quantitative side of vocabulary, as size is one of the two dimensions in his model. Size refers to the number of words a learner knows. Meara states that this dimension is the most important one when dealing with small lexicons, which he considers to be below 5,000 or 6,000 words.

However, the size dimension presents two drawbacks. First, there is lack of agreement in the definition of the unit of counting. This is translated as a high degree of heterogeneity and contradiction found in the results of vocabulary size studies. Second, there is a problem of practicality in measuring size as it is defined here. Put another way,

a learner who has studied a second/foreign language for several years is expected to handle between 2,000 and 3,000 words. Random dictionary selections and tests based on frequency levels seem to be a possible solution (Nation 1983, 1990, 2001; Schmitt et al. 2001; Nation and Gu 2007). One of these tests is the VLT created by Nation (1990) (see more about the VLT in the methodology section).

Nonetheless, there are two issues to take into consideration with respect to these testing methods. First, even at the lower levels, the learners' vocabularies normally reach 200 to 400 words. Only ten percent of this 'small' amount of vocabulary would already result in a test with 20 or 40 items. Second, most selection methods in dictionaries are somewhat biased. As for frequency, this is not the only factor to take into consideration, especially in contexts of foreign language learning. This type of formal instruction is normally based on coursebooks, which primarily rely on functionality (Alcaraz-Mármol 2009). In this sense, many high-frequency words are not studied by learners even after several years of instruction. By contrast, many low frequency words are learned in the early stages, as their functionality becomes paramount for basic communication.

Meara suggests checklists as a solution for the vast amount of words to be assessed. In this type of test, learners have to say whether they know a series of words or not. This simple format makes it possible to test a very large number of items in a very short period of time. Some studies (Mochida and Harrington 2006; Meara 1992; Meara and Buxton 1987) have shown that yes/no tests correlate well with other formats such as multiple choice or translation.

However, we do not know to what extent these tests are reliable, especially with children or low-level learners. In other words, when test-takers have a low level of the foreign language they may confuse similar forms. For instance, the words *house* and *horse* are very similar in their spelling. Even though they have nothing to do with each other in terms of meaning, some low level students may say they know the word *horse* when they actually mean *house*. They may not have yet acquired the ability to distinguish between two very similar forms, such as in this case.

Organization is the second dimension in Meara's model. This dimension takes over from size as the learner's lexicon grows. Organization refers to the associations among words which form the network in which the L2 lexicon is distributed. The degree of organization in the lexicon is determined by the number of connections among members of the lexicon. Meara states that it is the "connections [which] precisely

distinguish true vocabulary from a mere list of words” (Meara 1996: 48). Moreover, he adds that those with better organized lexicons are better performers than those with bigger but largely unstructured lexicons.

Nonetheless, Nation warns that language use is not only associationally driven, but, more basically, meaning driven (Nation 2001). Therefore, and far from discounting the value of organization, it seems that vocabulary size is primarily paramount in L2 vocabulary acquisition over other aspects such as connections, and it is quantity rather than quality that we should first expect from learners. As Meara himself recognizes, “all other things being equal, learners with big vocabularies are more proficient in a wide range of language skills” (Meara 1996: 37).

2.3.4.3. *Henriksen (1999)*

Henriksen also conceives vocabulary knowledge as a competence built around a three-pronged perspective: partial-precise, depth and receptive-productive knowledge. Regarding the partial-precise dimension, lexical knowledge is understood as a continuum whereby knowledge is operationalized at different levels of understanding or comprehension. This continuum comprehends knowledge from initial word recognition to rough vagueness through to fine-grained distinctions of meaning.

As for depth, she distinguishes between two types of word connections in a network: syntagmatic and paradigmatic. The former establishes a sequential or collocational link between two words. In this sense, two words connected syntagmatically are expected to belong to different word classes. A syntagmatic relationship is established between *dog* and *bark*. These two words belong to different word classes and yet they appear clearly associated. By contrast, paradigmatic relationships appear between words from the same grammatical category. As such, they can perform the same syntactic function within a given sentence, bearing a hierarchical connection to each other (Wolter 2006).

Paradigmatic connections can be classified into four main types: coordinates (cat and bird); superordinates (cat and animal); subordinates (cat and Persian) and synonyms (cat and feline). The hierarchical relationship between each pair differs in each case. Coordinates share the same status in the hierarchy. In the case of superordinates, one of the words is more specific than the other, one being hyperonym (animal) and the other one hyponym (cat). The opposite situation occurs in subordinates, where it is the first

term (cat) which includes the second one (Persian). Finally, the fourth type of link is the one between synonyms, where a close semantic relationship is found between them.

The author does not mention a third possible link between words, which are the so-called clangs. Clangs rely on mere phonological links between words regardless of their semantic or syntactic basis, such as *sister* and *mister* or *resister* (Singleton 1999). This type of association is more common in L2 beginners, especially at a young age. Meara (1978) evinces this fact in his study with learners of French as a Second Language. The participants, who virtually had no L2 level, offered a surprisingly large amount of clangs which considerably surpassed the number of syntagmatic and paradigmatic relationships. In a similar study, the same author (1982) discovered that non-native speakers produce high proportions of syntagmatic and clang responses to prompt words. Native speakers, on their part, primarily produce paradigmatic responses. In addition, it seems that higher proficiency learners tend to produce a higher amount of paradigmatic relationships than lower proficiency students (Piper and Leicester 1980; Söderman 1993).

Association tasks are used to analyse these links (Greidanus and Nienhuis 2001; Meara and Fitzpatrick (2000). Learners are asked to mention the first word(s) that come into their mind when seeing or hearing a prompt form. The answers provided are considered indicative of the sort of relationship the stimulus word has with other members of the learner's mental lexicon.

The third and final dimension mentioned by Henriksen is receptive-productive vocabulary knowledge. This dimension will be addressed in detail in a later section. For now, it is suffice to say that Henriksen associates receptive-productive knowledge with control or accessibility to word knowledge, that is, how well the learner can access and use a word.

To summarize, although we have distinguished between Word Knowledge and Lexical Competence, the boundary between them is permeable. Figure [1] shows the different vocabulary conceptions which are dealt with in the present chapter. In a sense, Lexical Competence seems to feed off Word Knowledge and vice versa. In addition, more accurate measures to assess lexical competence are necessary. Meanwhile, it seems that Word Knowledge is more widely accepted from a L2 vocabulary research standpoint, if only because of tradition.

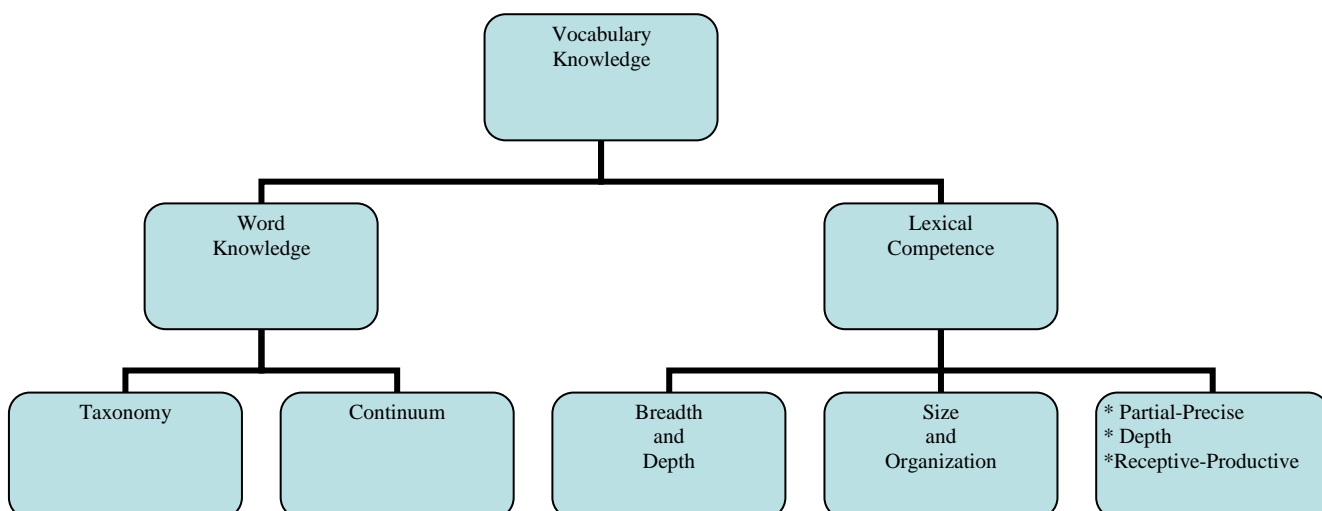


Fig [1] Vocabulary Knowledge: conceptions

2.3.5. Vocabulary Knowledge and the Receptive-Productive dimension

The Receptive-Productive dimension is present in vocabulary knowledge both as WK and LC. In one way or another, the two perspectives are based in part on Receptive-Productive vocabulary knowledge, hereafter referred to as RPVK. For this reason, dimension will be addressed in a separate section.

2.3.5.1. The nature of Receptive-Productive vocabulary knowledge

The terms *Receptive* and *Productive* are not specific to vocabulary research. They have been widely used in other fields such as Psychology or when referring to non-linguistic abilities. As with other constructs within the field of L2 vocabulary acquisition, different labels have been used to refer to RPVK. Among them we can find Recall-Recognition (Jones 2004; Zareva 2005; Barrow et al. 1999; Barcroft 2003, 2004; Hulstijn, Hollander and Greidanus 1996) and Active-Passive (Laufer 1998; Laufer and Paribakht 1998; Corson 1995; Meara 1990, 2005), despite the legions of studies on them. Maybe this is due to the bewildering variety of contexts where Receptive and Productive concepts can be found that have rarely been defined:

“One major hurdle that the researcher interested in Receptive and Productive vocabulary must overcome and tiptoe through is the definition, description and categorisation of these notions we have come to blithely accept as ‘given’. Rarely do we see researchers or theorists

working within pedagogy or language acquisition get down the nitty-gritty of what is actually meant by Receptive vocabulary and by Productive vocabulary or even the relationship between the two” (Waring 1997: 1).

Getting down the *nitty-gritty* of RPVK is beyond the aim of the present discussion. What is afforded here is a bird’s eye view of this dimension. Read (2000) holds that RPVK has been conceived from many different viewpoints and has not always been defined in the same way. In this study, we will adopt the three-pronged approach proposed by Mondria and Wiersma (2004). These authors describe the RPVK dimension in terms of learning, knowledge and testing. These three threads present RPVK as process, product and evidence of the product.

RPVK as a process involves the act of learning the meaning of a L2 word (receptive), coupled with learning to express a concept by means of a L2 word (productive). In this sense, RPVK can be understood as skills or associations. Regarding the former, Nation holds that

“Receptive knowledge involves perceiving the form of a word while listening or reading and retrieving its meaning. Productive knowledge involves wanting to express a meaning through speaking or writing and retrieving and producing the appropriate spoken and written word form” (Nation 2001: 24-25).

As for the latter, it is important to highlight that receptive and productive knowledge represent different associations. Meara (1990) states that whilst productive knowledge of a word is activated through a link with other words, receptive knowledge needs the form of an item to be activated. Under Meara’s view, RPVK is built upon an association process, where the learner’s mental lexicon develops on the basis of different word connections.

The identification of RPVK as a product ties in with Corson’s idea of vocabulary knowledge as use. He maintains that receptive or productive vocabulary knowledge is not always necessarily linked to proficiency but to use. It is the product that determines whether knowledge is receptive or productive. Put another way, even if the degree of knowledge of a word is really high, if this word is never used by the learner it will never become part of his or her productive vocabulary knowledge. An illustrative example of this are the English speakers and the Graeco-Latin vocabulary. This kind of vocabulary is called *learned vocabulary*, and it normally belongs to low-frequency levels. This

learned vocabulary is found in academic areas such as Medicine, Literature, Linguistics and the Arts, among others. Speakers may know several learned words but may never use them, perhaps because the opportunity has never presented itself. In this case, Corson talks about receptive vocabulary instead of productive vocabulary even though words are very well known by the learner.

The last idea in Mondria and Wiersma's proposal refers to RPVK evidence. Authors use different tasks in order to evince the type of vocabulary knowledge discerned by learners. Laufer (1998) and Laufer and Paribakht (1998) opt for a functional perspective when adapting the definition of RPVK to the tasks at hand. In both cases, the labels Receptive-Productive are replaced by Passive-Active. In line with the other definitions, passive here is about understanding the most frequent meaning of a word. Moreover, they go beyond the active label by further dividing it into Controlled and Free. The former consists of providing the cued recall of the word, whereas the latter involves the spontaneous use of a word in a context generated by the user in response to a writing assignment. According to the authors, this fine-tuned distinction is more real-life than the dichotomy which is normally used. As far as communicative aims are concerned, understanding what others say may be covered by passive knowledge. Controlled active is appropriate when the speaker is prompted to use a specific L2 term. Lastly, free active knowledge is identified when the speaker uses a term without previous stimulation.

Some authors such as Nation (2001) argue against the use of the Passive-Active terminology. Admittedly, these labels may sometimes lead to confusion. In fact, Passive seems to imply that the recipient of the input only receives information. By contrast, it has been observed that learners are also active when they are exposed to information, as they try to produce meaning when reading or listening. Another important shortcoming regarding these terms is their application to different tests. For instance, is L2-L1 translation an example of a passive or active test? Schmitt (1998) argues that this test provides evidence of active knowledge.

Waring (1997), on the other hand, states that L1 translation is related to the recognition of the word, in that this type of activity measures passive knowledge. In turn, Laufer et al. (2004) suggest modifying both the number and the label of the constructs. They propose four types of vocabulary knowledge based on two dichotomous distinctions: recall-recognition and passive-active. The combination of these terms

results in four categories: a) Active recall, which consists of supplying the L2 target word; b) Passive recall, which involves understanding the meaning of the L2 word presented in context; c) Active recognition, which stands for selecting the target word from four options; and d) Passive recognition, which concerns selecting the meaning of the target word from four options. The aim of Laufer et al.'s study was to find out whether there were differences among the outcomes of the four types of vocabulary knowledge. Active and passive recognition seemed to be indistinguishable, in that only three levels were really identified and operationalized: active recall, passive recall, and recognition only. These results dovetail nicely with previous results in Laufer (1998) and Laufer and Paribakht (1998), where three types of RPVK were also detected.

Regardless of terminology and subdivision, the results of the studies above coincide with the idea that the learning difficulty of productive knowledge is higher than that of receptive knowledge. Ellis and Beaton (1993) offer two possible explanations. The first one, of a quantitative nature, links learning difficulty to the amount of knowledge to be processed. Productive knowledge requires familiarization with completely new information – which the learner will have to be able to recall. Conversely, receptive knowledge only requires partial information of that concept.

The second explanation has a qualitative basis. It relies on the types of associations of a new L2 item in the mental lexicon. Especially at low levels a new L2 word hardly has any relationship with other L2 words, as L2 words are not highly integrated, given that their links are not very strong. By contrast, L1 connections are strong and provide native speakers with “a rich lexical knowledge network that can be drawn upon, during lexical inferencing, to integrate information across and within sentences and to generate accurate syntactic and semantic inferences about words” (Nassaji 2006: 398). Thus, initial links in the L2 learner's lexicon are established between the L2 word and its L1 equivalent (Jiang 2000). The L2 word will then be expected to integrate into the L2 lexicon. However, the L2 word frequently becomes fossilized at that stage. As a consequence, access to the L2 word (productive knowledge) becomes more difficult than access to the receptive knowledge of that L2 word.

A third possible explanation for the higher difficulty of productive over receptive knowledge possibly lies in the tests which measure each of them. Waring and Takaki (2003: 133) state that “the type of test that is selected will have a great bearing on the apparent results”. Receptive and Productive test requirements are closely related to the

definition provided on these two types of vocabulary knowledge. Generally speaking, productive tests present more difficult requirements. In fact, “while a decreased receptive knowledge may still be sufficient for success on a receptive test, a decreased productive knowledge may be insufficient for success on a productive test” (Mondria and Wiersma 2004: 97).

Furthermore, tests show that productive knowledge declines faster than receptive knowledge (Waring 1997; Mondria and Wiersma 2004). This may be due to the higher accuracy required by productive tests. Nonetheless, it seems to be not only a question of testing but also of information processing. Vocabulary retention may be higher or lower depending on the task involved in the learning process (Hulstijn and Laufer 2001). This idea is known as the Involvement Load Hypothesis (ILH). It states that the more the learner is involved in the task, the greater the degree of vocabulary retention. Different tasks are characterized by their high or low degree of involvement for the learner. In this regard, a reading task followed by questions implies a higher degree of involvement than a mere reading task; but, at the same time, the former requires less involvement than a writing task where words are used in free style. According to the ILH, it is the writing task which will lead to better vocabulary retention.

Studies like the ones discussed above make us wonder whether the Receptive-Productive dichotomy exists as such. On the one hand, there does not seem to be a consensus on the definition of these constructs, as they can be understood from different perspectives. On the other hand, further distinctions can be made within the RPVK dimension – which makes the situation more complex. These observations lead to warrant further investigation on the issue.

2.3.5.2. Interaction between Receptive and Productive vocabulary knowledge

Questions about the relationship between Receptive and Productive vocabulary knowledge, hereafter referred to as RVK and PVK, have been dominated by two main issues: the distance between the two types of knowledge, and the question of whether RVK and PVK belong to the same or different sections within the cognitive system.

Regarding distance, after many years of RPVK research it remains unclear which kind of gap exists – if it does indeed exist – between RVK and PVK. The results of studies carried out on this issue can be classified into three categories. The first one reveals a large gap between RVK and PVK. The second group of results points towards

a balance between RVK and PVK, stating that the gap is very small, or almost imperceptible. There is the assumption in these two groups that regardless of the gap size, RVK is greater than PVK. However, we can find some specific situations which question the almost fixed idea that RVK is always going to be higher than PVK. The third category of studies highlights the instability of the RPVK distance, which may increase or decrease under certain circumstances.

Going back to the first group, studies showing a large gap between RVK and PVK have a relatively long tradition. The most relevant works for this discussion range from the beginning of the 20th century to the present day. As stated above, all of them share the idea that the amount of RVK is considerably superior to PVK. Yet, these studies differ in aim and scope. The first two studies about this issue appeared towards the end of the first quarter of the 20th century. These were carried out by Stoddard (1929) and Morgan and Oberdeck (1930). Stoddard is well known for his pioneering attention to L2 vocabulary acquisition, standing out as a model for early vocabulary works. His subjects were American youngsters without any previous knowledge of the L2 they would be tested on afterwards. The vocabulary validity of this study was questioned, the reason being that only memory ability and not vocabulary ability was tested. Morgan and Oberdeck were responsible for the first study that centred directly on the gap between RPVK. Its relevance comes down to the relatively high number of participants involved and the amount of words tested. A total of 177 native English speakers attending university were tested on 500 German words. Both studies showed that RVK doubled, and in some cases RVK almost tripled.

We now move on to the nineties, which was a productive decade for vocabulary studies. Many of them contributed towards our understanding of the RPVK dimension. We need to highlight the contributions made by Laufer (1998) and Laufer and Paribakht (1998). Both studies are in line with the previous ones showing that RVK is far larger than PVK. Laufer (1998) observed how Israeli high school students of English doubled their RVK over a one year period, whereas their PVK lagged behind, increasing by only 50%. Similarly, results in Laufer and Paribakht (1998) also reflected a significantly larger RVK.

Questions about this issue were still being debated going into the 21st century. The studies of Schneider et.al (2002), in particular, are worthy of special mention. They focused on learners with very little experience in their foreign language. Unsurprisingly,

it was also observed that receptive results were significantly higher than productive ones. Schneider et al. presented a new development with respect to previous studies. In addition to the immediate tests, they delivered one delayed retention test for each type of knowledge. Not only did the delayed tests show that the RPVK gap was maintained, but it also showed how part of the PVK had diminished, increasing the gap even more.

The group of studies which show a small gap between RVK and PVK are far less numerous, though their results are of considerable significance. Annen (1933), Seashore and Eckerson (1940) and Takala (1984) share the idea that most receptively known vocabulary is also productively known. These three studies reveal a degree of coincidence in RVK and PVK between 92-95%. In all three cases the participants were children, which makes them fairly comparable. Yet, there is a fundamental point which distinguishes Takala from the other two studies. The difference is that Annen and Seashore and Eckerson focus on L1 whereas Takala deals with L2. A possible explanation for Takala's results is found in Ringbom (1984). He holds that "if the learning has been thorough enough, the knowledge structures cannot only be activated by incoming data, but also be self-activated for production" (1984: 63). In other words, the participants in Takala's study made an explicit effort to learn vocabulary both receptively and productively.

However, Waring (1997) warns about some weaknesses in Takala's research. First, Waring notices "uneven distribution between the number of Active and Passive items" (Waring 1997: 18). In more specific terms, on average, 37 words were tested productively versus only 4 words receptively. This significant divergence increases error probabilities in RVK. A second pitfall in Takala's research involves a lack of information about the words tested. It is not clear from the study whether these words came from the students' coursebook or whether English vocabulary acquired outside the classroom was included as well.

Thus, so far, we have presented the gap as something static and somewhat independent from the learning situation. Yet, the gap may increase or decrease under certain circumstances, hinging on the learner's features (Clark 1993). Many studies that focus on the differences between RVK and PVK have involved children (Annen 1933; Stalnaker and Kurath 1935; Smith and Prescott 1942; Seashore and Eckerson 1940; Takala 1984). In these cases, the overlap between RVK and PVK was almost complete.

Some recent studies show that the RPVK gap changes as the learner's proficiency develops, that is, the higher the learner's proficiency, the greater the distance between receptive and productive vocabulary knowledge. Laufer and Paribakht (1998) showed that their participants' vocabulary size had an effect on their receptive and productive vocabulary knowledge. Those with a greater vocabulary size presented a higher RPVK gap than those whose vocabulary size was lower.

These authors also found that the learning context – whether EFL or ESL – together with the length of stay in the foreign country may widen the gap for RVK. In fact, the distance between receptive and productive vocabulary was greater in EFL students with 74%, whilst it did not reach 58% in ESL students. Indeed, length seemed to have a widening effect: the longer the stay in the foreign country, the shorter the distance between the two types of knowledge.

As for all the studies mentioned above, there seems to be the implicit belief that Receptive vocabulary knowledge is always higher than Productive vocabulary knowledge. Thus, it is common sense, almost intuitive, to think this way. If we were to analyse our own experiences as L2 learners, we would find that not everything we can understand can also be produced. This notion has been confirmed by a large number of studies (Schuyten 1906; Aitchinson 1987; Griffin and Harley 1996). Yet, we can find situations where a learner may produce something in the L2 without having heard it before. For instance, the word *supposition* may not have ever been heard by a learner whose L1 is Spanish.

Nonetheless, in the need to use it, the learner may intuitively produce a form which, according to the rules of English, coincides with the L2 word. Another case is that in which the accent or even the pace of discourse prevent the learners from discerning the message, even though they are able to produce it.

As far as the cognitive system is concerned, Meara (1996) states that the relationship between a word and the rest of the words in the mental lexicon is partly determined by the kind of knowledge the learner has of that word, whether receptive or productive. Behind this idea there is the assumption that RVK may be qualitatively different from the PVK. Results in Mondria and Wiersma (2004) can also be interpreted as having confirmed this tenet. Theirs was an attempt to corroborate the *Combination Hypothesis*, which states that learning a L2 word both receptively and productively has a greater effect on RVK than only learning a word receptively. Unexpectedly, the results

were not in line with this idea. No significant differences were found among those participants who only learned vocabulary receptively and those who acquired vocabulary by combining receptive and productive learning. What is more, some of the participants who only learned the receptive way performed better than everyone else. In light of these results, we can think of RVK and PVK as partaking in different parts of the cognitive system.

Contrary to Mondria and Wiersma (2004), other authors uphold that RVK and PVK are in the same part of the cognitive system (Belyayev 1963; Lovell and Dixon 1967). Nonetheless, there seems to be some disagreement as to the kind of relationship between the two types of knowledge. Belyayev (1963) and Lovell and Dixon (1967) identify different cognitive phases within a continuum, among which we can find imitation, reproduction, comprehension, assimilation and production. The first phase, imitation, is defined by Lovell and Dixon as a “perceptual-motor skill that does not work through the meaning system to any great degree” (1967: 35). The second stage, reproduction, implies an active reconstitution of what has been read or heard (Belyayev 1963). Although reconstruction is given, knowledge is not assimilated, which means that learning is not yet possible. The RPVK appears implicitly as an ordered process where acquisition begins with imitation until eventually arriving at production (see figure [2]).

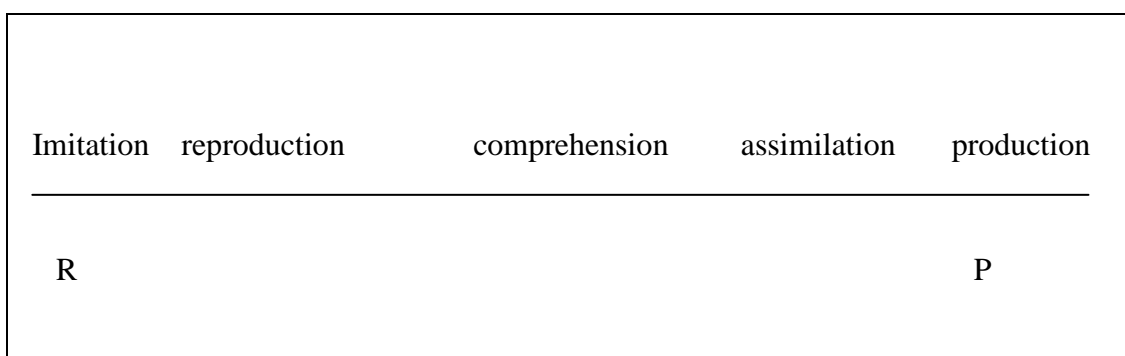


Figure [2] RPVK as a continuum

However, we should not think that receptive vocabulary knowledge develops completely before productive knowledge has even begun to develop. It seems more appropriate to consider RPVK as two partially overlapping areas within the general cognitive system of the learner (see figure [3]). Hence, studies have shown that the two types of knowledge may end up complementing each other. That is to say, receptive

learning leads to some productive knowledge and vice versa (Griffin and Harley 1996; Waring 1997). This fact runs counter to the idea previously suggested that this dimension constitutes an ordered continuum. What we may find instead are two interacting areas which usually develop at the same time but at different rates, located in the same system and used by the learner according to his or her needs and circumstances (Melka 1997).

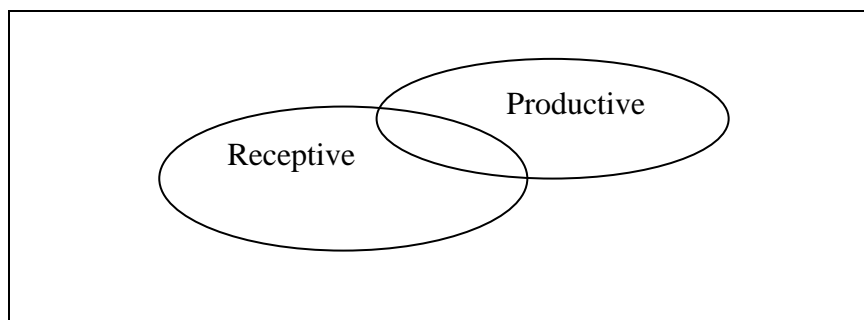


Figure [3] Receptive-Productive Vocabulary Knowledge as overlapping areas

Despite the plethora of studies about vocabulary knowledge, there is something which is seldom mentioned: the instability of knowledge. As it has been stated above, the acquisition of receptive and productive knowledge does not follow a straight line and is not one-dimensional. Accordingly, we could compare the formation of lexical knowledge with atomic behaviour. For example, the atomic nucleus would correspond to the core knowledge (the well-known information already established in the mental lexicon). On its part, knowledge that is unstable or not fully integrated is similar to the electrons moving backwards and forwards from the nucleus, as the unstable lexical knowledge is still potentially easy to forget in the short and mid-term.

2.4. Conclusion

The present chapter has dealt with two constructs which are paramount for L2 vocabulary research: word and word knowledge. Only by determining what is meant by these two terms will we be able to reach solid conclusions in the field of L2 vocabulary. The first part of the chapter has shown the difficulties, gaps, ambiguities and irregularities in the definition of *word*. A functional approach to the word as the most adequate perspective to adopt nowadays has been proposed. The second part of the chapter has focused on word knowledge.

The two main trends dominating this issue have presented significant drawbacks. These two approaches are implicitly based on the Receptive and Productive skills. It is this line of study which has been developed the most, thus having a considerable impact on most L2 vocabulary research. After the present discussion, the statement *s/he knows that word* should be fine-tuned by clarifying the unit of quantification and the type of word knowledge he or she actually knows.

Chapter 3

L2 Vocabulary Size and Rate of Acquisition: Prescription, Description and Factors

3.1. Introduction

The fact that L2 vocabulary research is multi-faceted makes it difficult to bring together the many branches explored in order to achieve a cogent whole. However, the positive side of not having a single path to follow is that attention can be specifically focused on the aspects which are considered relevant for our purpose. In this sense, the chapter is divided into three main parts. The first part, which is entitled *Prescription*, concerns what EFL students should learn as regards L2 vocabulary, namely how many and which words are to be introduced. The coursebook and the curriculum play an important role, as they are normally the “containers” of the input L2 students are exposed to and the reference guides for resource designers and teachers.

The second part of the chapter focuses on studies about L2 vocabulary knowledge and acquisition. This section deals with both vocabulary size and rate of acquisition in students of different nationalities, levels of proficiency, and under several learning conditions. The third and final part discusses the possible factors which can potentially affect L2 vocabulary acquisition.

3.2. Prescription

3.2.1. *Quantity and quality in vocabulary selection: The criteria of frequency, distribution and functionality*

The selection of appropriate vocabulary and its arrangement is one of the main issues in L2 vocabulary teaching. This field should take into consideration two principles. The

first one points towards having realistic expectations about what learners can and cannot learn. The second one focuses on the learners' profile and their lexical needs.

Regarding expectations, it is estimated that the English language contains around 54,000 word families (Webster 1963). Zechmeister et al. (1995) carried out a study where it was observed that educated native speakers of English knew around 17,000 word families. This is approximately one third of the whole set. What is more, the authors warned that they might have overestimated the speakers' vocabulary size given that they worked with word families.

Two years later, Nation and Waring (1997) offered a more optimistic result. Their estimations about the vocabulary size of native speakers of English came to around 20,000 word families. Although this is higher than that presented by Zechmeister et al. (1995), it does not reach 50% of the total number of units in the English language.

These figures are far more realistic than previous estimations such as that of Miller and Gildea (1987) where it is claimed that native speakers of English had a good command of, on average, 80,000 lemmas, or Diller (1978) who calculated that native speakers knew an overwhelming amount of 216,000 English lemmas. The fact that the unit of counting is the lemma and not the word family could explain these high amounts, but there is still serious uncertainty as to whether these results are actually realistic.

Nonetheless, even the lowest estimations for native speakers might be too much to expect of the average learner. There are two main reasons why trying to match a native speaker in terms of vocabulary size, in principle, is not a realistic aim for a L2 learner. First, Nation and Waring (1997) believe that the capacity of lexical acquisition for an average L2 learner is around 5,000 word families. Second, a L2 learner does not normally need 17,000 or 20,000 word families to communicate. In order to establish communication, a learner requires far less vocabulary.

As for the learner's profile, it is an extremely complicated task trying to find a common core vocabulary for the whole learner community. The English language has managed to become the world language, the lingua franca of international communication between speakers of different languages. What is more, English is an international language in business and music, among other fields. This has been an influencing factor in the diversification of the English learners' profiles to the point that we can say with a considerable degree of confidence that there are as many learner types as reasons for why people learn a L2.

Yet, it would be quite unpractical to identify learners' profiles individually. For this reason, we suggest classifying them into two broad categories: 'standard' learners and 'specialized' learners. Both groups are far from homogeneous, although their members share some general features which indicate which category they should belong to. On the one hand, the category of 'standard' learners can be defined as a group studying the L2 in order to communicate on a basic level with native speakers of that language. Sometimes, but not always, 'standard' learners study the language in a formal context as part of their academic curriculum.

The 'standard' learner category includes, for instance, people who learn English because they want to travel abroad or the typical high school student who just wants to pass his/her English exam at the end of the year. A list of survival expressions, numbers and WH questions would probably be enough for the former. As for the latter, studying the linguistic contents that will appear in the exam would be suffice. The occasional traveller and the high school student are just two examples of the 'standard' category. Nonetheless, there may be 'standard' learners who need more than a list of survival words. They want to be able to hold a basic conversation with a native speaker. In this case, numbers and WH particles alone are not nearly enough.

Within the specialized group of students we can find ESP (English for Specific Purposes) learners such as doctors, lawyers, engineers, journalists and economists. In addition to a set of basic words, they need specific vocabulary pertaining to their particular area of specialization. ESP learners normally approach specialized vocabulary receptively. Put another way, the aim of doctors, engineers and lawyers is to be able to understand, that is, to obtain information from written or oral sources. Rather than integral communication, their goal is in line with those who used to read the classics according to the Grammar Translation Method.

English Studies students, on their part, can also be considered specialists. They are potential experts in the Second Language, and, most likely, future teachers. Accordingly, not only must they be able to talk in English, but they must also be able to talk *about* English. In this sense, they are expected to express themselves in English as well as show some metalinguistic knowledge.

The need for quantitative and qualitative vocabulary selection reflects the idea that "in terms of usefulness, all words are not created equal" (Nation and Gu 2007: 20). Here, communicative usefulness is understood by the authors as the degree of

practicality for communicative interrelation. In Nation and Gu's words, "vocabulary that gives the greatest reward is that which occurs very often and which relates to areas of language use that are relevant for the learners" (Nation and Gu 2007: 20). This is why usefulness – and, consequently, vocabulary selection – have been determined in terms of three criteria: frequency, distribution and functionality. It should be pointed out that these three areas might not be the only ones, but they are considered the most important aspects for vocabulary selection.

3.2.1.1. Frequency and distribution

Frequency is behind one of the most important pioneering attempts of vocabulary selection in the 20th century, known as the *Carnegie Report*, hereafter referred to as CR (Palmer et al. 1936). This project is part of the *Vocabulary Control Movement*, a research trend based on the systematic selection of vocabulary. The rationale of the CR is the unfeasible task which the learner is faced with: to acquire all or most words in a second language. This attempt to delimit the arduous task of vocabulary learning stood out because acquiring the whole set of vocabulary in a language was considered simply unrealistic (Schmitt 2000), even for a native speaker. The authors of the *Carnegie Report* propose general frequency – or the number of times a word occurs in discourse – as the main criterion for vocabulary selection. Furthermore, the founders of this project also mention six additional secondary criteria. These are listed and explicated in table [8].

Criteria	Explanation
Structural value	All structural words – otherwise known as functional words – have to be included in core vocabulary. They comprise pronouns, articles and prepositions.
Universality	Words should be avoided that cause some kind of regional offence
Subject range	Items should have the greatest range, that is, they should be able to fit in a wide variety of texts. In this sense, non-specialist items are preferred.
Definition words	These words fall within the so-called ‘Procedural Vocabulary’ category. These types of words are typically used in paraphrases and explanations (Robinson 1988). For this reason McCarthy (1990) attributes them high indexical potential. McCarthy gives the examples of the words ‘type’ and ‘instrument’, which have a much higher indexical potential than ‘hydrometer’. These words are considerably useful in cases where the learner has no access to the exact word, which is why they should be given priority over others.
Word building capacity	Words which are the basis for new word forms are recommended as core vocabulary items.
Style	Colloquial or slang vocabulary is excluded from the list. As neutral a style as possible is pursued.

Table [8] Criteria for vocabulary selection according to the Carnegie Report (1936)

Frequency is clearly the dominating factor in the *Carnegie Report*. Even the six criteria presented above are, to some degree, related to frequency. For instance, structural (or functional) words are among the most frequent in English, and therefore must be learned. Along the same line, universal rather than specific use as well as neutral-style words are essential to vocabulary learning. These words are normally more frequent in general discourse than specialized or slang terms, as their unmarked nature allows them to appear in a wide range of texts.

Like any other selection criteria, those in the CR aim at optimizing the amount of vocabulary learned by students. The idea is that those words which are most frequent in a language provide the learner with the greatest communicative reward. In fact, Nation observes that “when we look at texts our learners may have to read and conversations that are like ones that they may be involved in, we find that a relatively small amount of well-chosen vocabulary can allow learners to do a lot” (Nation 2001: 9). It is expected that a relatively limited but frequent vocabulary allows learners to express themselves fairly well.

The total that is accepted nowadays as the minimum threshold for basic communication amounts to around 2,000 word families. These families are not chosen at random. They have to be among the most frequent in general English discourse. Yet Schmitt warns that “this will not enable a conversation on every topic, and certainly not an in-depth conversation on most topics” (Schmitt 2000: 142). Admittedly, we have to be realistic and recognize that this amount limits the speaker in some respects.

However, despite limitations, Schmitt goes on to say that the 2,000 most frequent word families “should still allow satisfying interactions with native speakers on topics focusing on everyday events and activities” (ibid.). Indeed, it has been observed that knowing the 1,000 most frequent words in general English familiarizes the learner with 78% of the words in general, non-specialized texts (Nation 2001). What is more, the addition of the second 1,000 most frequent words increases understanding up to 84% (ibid.).

However, understanding 78% or 84% of the words in the text is not tantamount to understanding 78% or 84% of that text (Nation and Gu 2007). That is to say, if a text of 100 words has twenty pronouns, forty articles and ten prepositions, it is not necessarily true that 70% of that text is understood by the reader. In fact, if the reader ignores the meaning of the remaining 30 words, there is little chance they will get the gist of that text. If the main idea of the text is to be understood, Francis and Kučera (1982) state that at least 84% of that text – which is different from 84% of the words in the text – is necessary. However, more recent studies disagree with this calculation. They point towards 95% (Laufer 1995) or even no less than 98% (Nation 2001; Schmitt 1997) as the minimum requirement for the reader in order to deal with the possible key words which are unknown, and which are necessary for a general understanding of the text.

In some studies, the threshold of the learners’ minimum vocabulary size varies from 2,000 word families to 3,000 or even 3,500 word forms (Nation and Waring 1997). Liu Na and Nation (1985) claimed that at least this figure is required for reading authentic texts. This change does not necessarily imply a considerable increase in the amount of vocabulary, but rather a change in the unit of counting adopted by scholars. As detailed in the previous chapter, a word family includes several word forms, so 2,000 word families may be equivalent to some 3,500 word forms.

The minimum threshold of 2,000 to 3,000 word families still leads to important meaning gaps when addressing L2 texts. In order to overcome these gaps it is estimated that at least 5,000 word forms are required (Sutarsyah et al. 1994). What is more, specialized groups of learners need an even larger amount. Those wanting to becoming teachers need at least 9,000 (Nation and Gu 2007) or even 10,000 word families (Hazenbergh and Hulstijn 1996; Pérez Basanta 1999; McCarthy 2007).

Given the results yielded by frequency studies, it seems more than worthwhile to devote time and effort to the 2,000 most frequent words, so that basic communication can be warranted (Nation and Hwang 1995; Nation 2001). In Nation's words (2001), "the high-frequency words of the language are clearly so important that considerable time should be spent on them [...] Anything that teachers and learners can do to make sure they are learned is worth doing" (Nation 2001: 16).

However, frequency should not be seen as a panacea for vocabulary selection. Despite its unquestionable relevance, relying on just frequency lists as the basis for vocabulary content in materials presents several problems. One of the most noteworthy weaknesses is the modest pedagogical usefulness of frequency lists (Richards 1974). Indeed, a considerable proportion of the most frequent words are functional words, namely determiners, pronouns and prepositions, which according to McCarthy (1990) are usually the most informationally empty words. The abstractness of these types of words makes it more difficult to teach and learn, especially among younger students.

Another pedagogically weak feature is the way in which words are arranged in frequency lists. They are presented in alphabetical order. The possible semantic or psychological association that may be established among some of them is completely accidental. From a pedagogical standpoint, McCarthy (2001) views vocabulary learning as "sets of words which are semantically or psychologically associated, regardless of their difference in frequency of occurrence" (McCarthy 2001: 157). He gives the example of the semantic field of clothes. According to the General Service List (West 1953) *hat* and *skirt* are among the 2,000 most frequent words, but others such as *jeans* and *trousers* are not. Nonetheless, the latter may even be more popular among learners than the former. The four words differ in their frequency levels, but they are normally learned together. Their psychological links are stronger than their frequency divergences. A similar case concerns food. *Egg*, *fish*, *sausage* and *salad* are normally

learned within the same set. However, not all of them are among the most frequent words in English, hence they would not normally appear in the same frequency list.

Frequency presents another important problem, which is the heterogeneous nature of corpora according to which frequency lists are drawn up. These lists constitute the basis for vocabulary selection if frequency is to be considered the main criterion. Corpora designers use different sources from different origins. What is more, it is important to be cautious with our conclusions when working with corpora and frequency lists. That is to say, language is continuously changing. Not only do new terms frequently appear, but also those which already exist can change their position in the lists. Their frequency level may increase or decrease due to sociological factors. For instance, the General Service List does not contemplate words such as *computer* or *Internet*, which are nowadays among the most frequent terms in general discourse.

Given the present discussion, it seems that vocabulary selection for L2 teaching should not be exclusively based on frequency, as “the single word-frequency list alone is not sufficient and must be supplemented by psychological considerations” (McCarthy 2001: 157). In fact, if repetition is important, so too is the distribution of that repetition. Studies by Bloom and Shuell (1981) and Dempster (1987) show that spaced presentation is much more effective than massed presentation. Rehearsal can be done through intense or spaced exposure, but at the same time increasing the intervals of exposure. Bahrick and Phelps (1987) conducted a longitudinal study where 35 individuals learned and rehearsed 50 English-Spanish word pairs under ten different retaining techniques. One of these conditions consisted of presenting the words six times in the same day. Another condition consisted of administering seven retaining sessions with 30-day intervals.

Results showed that the probability of retention was significantly higher in the second condition than in the first one. In a second study by Bahrick et al. (1993), participants had to learn six sets of 50 English-French or English-German word pairs. Rehearsal was done at different intervals of 14, 28 or 56 days. Retention was tested for 1, 2, 3 or 5 years after training had been completed. Best retention was registered when words had been rehearsed within 56-day intervals. In light of these results, we can suggest that optimal retention will appear if new vocabulary is initially rehearsed with frequent intervals and with intervals gradually becoming longer until they are approximately one month apart.

In addition to the relationship between time, rehearsal and acquisition, we have to distinguish between *maintenance rehearsal* and *elaborative rehearsal*. The former favours retention in the short-term memory whereas the latter promotes long-term memory (Milton 2009). Put another way, maintenance rehearsal is related to priming an existing representation. Elaborative rehearsal, by contrast, consists of triggering connections between new information and information already known, and seems like a better option for long-term retention. In this sense, association tests are seen nowadays as a promising tool for measuring this kind of retention. The Lex30 (Meara and Fitzpatrick 2000) is an association test which involves presenting a list of stimulus words to the testees, who have to produce responses to these stimuli. Vocabulary size is considered greater, as responses are more rare. The problem with association is that there is the feeling that it is potentially very rich, but it is difficult to know how to exploit this richness. Zareva (2005: 560) states that “associative measures hold a potential as valid measures of L2 learners’ lexical knowledge that need to be re-examined in an assessment context”.

As is the case with frequency of occurrence, there is no distribution schedule which can accurately warrant L2 vocabulary acquisition, although the aforementioned studies point towards favouring association and revision periods which should be progressively longer as well as more systematic.

3.2.1.2. *Functionality*

As stated above, the learners’ communicative needs should be taken into consideration when selecting vocabulary. It has been discussed that frequency does not always seem to fulfil those needs, and that a second main criterion is to be adopted for appropriate lexical choice. At the same time that the *Carnegie Report* was being developed, another project was evolving, namely the *Basic English* project, created by the linguistic psychologist Charles Kay Ogden. As in the case of the *Carnegie Report*, it too belonged to the *Vocabulary Control Movement*. It was another attempt to establish a systematic and established selection of vocabulary for L2 teaching. The rationale behind the project is the same as that of the *Carnegie Report*: a need to select the most adequate L2 vocabulary, given the unfeasible task of the L2 learner to acquire all the vocabulary in a language. The *Basic English* project aimed to limit “English vocabulary to the minimum necessary for the clear statement of ideas” (Schmitt 2000: 15).

We agree with Carter that at the core of Odgen's and Richards' proposals there is the idea of "a communicative adequacy whereby, even if periphrastically, an adult's fundamental linguistic needs can be communicated" (Carter 1987: 23). The *Basic English* project presents a list with 850 items. The list is organized according to the four main word classes (nouns, verbs, adjectives and adverbs) and it also contains functional words such as pronouns and determiners. These 850 items are believed to be enough to express any meaning with the help of paraphrasing. Due to the limited number of words in the list, verbs such as *ask* and *want* were not included, but they could be replaced by others in the list.

Despite the advantages of lexical economy and psychological considerations, the *Basic English* project seems to present some problems. The first one is polysemy. It is not very clear whether learners are expected to know the multiple meanings of each word in the list or just the core meaning. It is estimated that if the students were to acquire both primary and secondary meanings of all words, the number of meanings to learn would amount to 12,425 (Nation 1990). The second and third problems are discussed by Schmitt (2000). The author warns about the unnatural situation of communication which may result from using the list. It is stated that words such as *ask* or *want* can be replaced by others such as 'put a question to' or 'have a desire'. Yet this does not sound natural at all; rather, it reminds us of machine translation. In fact, Howatt (1983) classifies *Basic English* as artificial language. Schmitt also states that many words which are part of social formulae do not appear in the list, but they should be learned by the students given their communicative value.

Drawbacks aside, this project highlights the idea that "when selecting lexical items [...] criteria other than frequency come into play. [...] Word frequency alone is not enough as there are many words which all learners [...] are almost sure to need even though they do not occur very high up on frequency lists" (Schmitt 1997: 270).

Along this line, Allen (1983) mentions four main questions concerning aspects which should be considered when selecting L2 vocabulary for students (see table [9]).

L2 Vocabulary selection: issues to consider

- 1 Which words must students know in order to talk about people, things and events in the place where they study and live?
- 2 Which words must the student know in order to respond to routine directions and commands?
- 3 Which words are required for certain classroom experiences?
- 4 Which words are needed in connection with the students' particular academic interests?

Table [9] Criteria for selecting L2 vocabulary (Allen 1983)

According to Allen, lexical syllabi should be designed on the basis of the four questions outlined above. The author maintains that these questions seem to cover the most important aspects concerning the learners' needs considerably well. The first question regards those words which, once learned, allow learners to put the new language to use. The second and third questions cover the learners' needs when dealing with the English lesson and expressions such as *open your books* or *repeat after me*. Finally, the fourth question focuses on those learners with special needs, that is, those who need to use English for specific purposes.

White (1988) is another author interested in identifying the vocabulary that best adapts to the learners' communicative requirements. He highlights three criteria: availability, opportunism and centres of interest. The first one is linked to those words which, regardless of their degree of frequency, are equally recurrent to native speakers as other more frequent words. One illustrative example is that of *pepper*. This word appears far fewer times than *salt* in frequency lists. However, White claims that *pepper* is just as available as *salt*, as both *salt* and *pepper* constitute a linguistic tandem. Opportunism and centres of interest are more directly related to communicative priority. Accordingly, words which are relevant to the learners' immediate situation, and those which are of communicative interest to them, should be primarily presented.

In addition, White comments on other criteria which do not point directly to functionality but can also contribute to the selection process, namely learnability, range and coverage. Learnability refers to words which are easier to learn, and therefore, should come first. Regarding range, there are words which appear in a variety of texts and are not restricted to specific text types. As for coverage, those words which show a high degree of neutrality should be given priority over others which are more specific.

For instance, *look* should be learned before *peep* or *glare* which both refer to ways of looking at something.

In conclusion, between 2,000 and 3,000 L2 words are considered enough for basic communication, but these words should not be chosen at random. There seem to be two main criteria for their selection: frequency and functionality. The problem however is that they do not necessarily match, that is, words which are frequent are not always equally functional and vice versa.

3.2.2. The curriculum and the coursebook from the L2 vocabulary perspective

3.2.2.1. Vocabulary and curriculum design: The Common European Framework of Reference for Languages and the Spanish Curriculum of Elementary Education

Discussions about vocabulary and curricula can cover a wide spectrum of aspects. For the purpose of this PhD thesis, we will focus on two main areas: the Common European Framework of Reference for Languages (CEFR) and the Spanish Curriculum of Foreign Languages in Primary Education. We will explore how vocabulary is presented and understood in these two documents.

The Common European Framework of Reference for Languages (hereafter referred to as CEFR) was created by a committee of European experts on education. The main aim of the CEFR is to provide a framework of comparison in the study and testing of languages. Milton and Alexiou (2009) define the document as something which “brings order to the plethora of courses, exams and awards which learners can take” (2009: 195). It is important to note that the CEFR is not language specific. In theory, it should allow direct comparison between learners, courses and coursebooks in different languages. As it is built upon skill-based criteria rather than knowledge-based criteria, it is flexible and highly inclusive. It is expected that any coursebook or learner should be able to find a place in the system:

“The approach adopted here, generally speaking, is an action-oriented one in so far as it views users and learners of a language primarily as ‘social agents’ i.e. members of society who have tasks (not exclusively language-related) to accomplish in a given set of circumstances, in a specific environment and within a particular field of action. While acts of speech occur within language activities, these activities form part of a wider social context, which alone is able to give them their full meaning. We speak of ‘tasks’ in so far as the actions are performed by one or more individuals strategically using their own specific competences to achieve a given result” (CEFR 2001: 9).

Hence, the CEFR is organized in terms of competences – both general and communicative – which allow us to perform a series of tasks via linguistic and non-linguistic means. At the same time, the general and communicative competences contain a series of sub-competences. Within the general competences category we can find general knowledge, general skills, existential competence and ability to learn. The communicative competence category comprises three components: linguistic, sociolinguistic and pragmatic. We will focus on the linguistic component, which includes lexical, semantic, phonological, grammatical, orthographic and orthoepic knowledge.

Vocabulary is mainly found in two categories: lexical competence and semantic competence. The former is defined as the “knowledge of, and ability to use, the vocabulary of a language” (CEFR, p.111). According to the CEFR, the lexical competence category consists of lexical and grammatical elements, among which we can find fixed expressions and single word forms. Given the approach adopted in the present thesis, we will focus on the single word forms. They include members of the open word classes and also closed lexical sets such as days of the week. Vocabulary is also present in what is called semantic competence, which deals with “the learner’s awareness and control of the organization of meaning” (CEFR, p. 115). As we can see, these two competences seem to cover the two vocabulary dimensions mentioned by Meara: size and organization (see more about what it means to know a word in section 2.3).

However, the competence-based approach to language teaching and learning is a double-edged sword. As stated above, its approach allows room for flexibility, but this flexibility also involves a certain degree of abstraction and imprecision. The CEFR is divided into three main levels: A, B and C. Each level presents two sub-stages of knowledge (A1, A2, B1, B2, C1, C2) for each competence and sub-competence. Tables [10] and [11] show how the CEFR views vocabulary progress.

As can be observed, the CEFR presents lexical knowledge as a series of *can-do* sentences which describe what learners are able to do in each learning stage. Postulates in table [10] (vocabulary range) talk about the quantity of vocabulary that is required in order to carry out certain actions. Table [11] approaches vocabulary from a more qualitative perspective. It focuses on different errors and degrees of accuracy which occur at different levels in vocabulary use. For instance, a level B1 learner has sufficient vocabulary to talk about most topics related to his/her everyday life; however, he/she

will still make major errors when talking about specialized topics beyond everyday life. A low degree of accuracy is expected.

VOCABULARY RANGE	
C2	<i>Has a good command of a very broad lexical repertoire including idiomatic expressions and colloquialisms; shows awareness of connotative levels of meaning.</i>
C1	<i>Has a good command of a broad lexical repertoire allowing gaps to be readily overcome with circumlocutions; little obvious searching for expressions or avoidance strategies. Good command of idiomatic expressions and colloquialisms.</i>
B2	<i>Has a good range of vocabulary for matters connected to his/her field and most general topics. Can vary formulation to avoid frequent repetition, but lexical gaps can still cause hesitation and circumlocution.</i>
B1	<i>Has a sufficient vocabulary to express him/herself with some circumlocutions on most topics pertinent to his/her everyday life such as family, hobbies and interests, work, travel, and current events.</i>
A2	<i>Has sufficient vocabulary to conduct routine, everyday transactions involving familiar situations and topics. Has a sufficient vocabulary for the expression of basic communicative needs. Has a sufficient vocabulary for coping with simple survival needs.</i>
A1	<i>Has a basic vocabulary repertoire of isolated words and phrases related to particular concrete situations.</i>

Table [10] Vocabulary range according to the CEFR levels

VOCABULARY CONTROL	
C2	<i>Consistently correct and appropriate use of vocabulary.</i>
C1	<i>Occasional minor slips, but no significant vocabulary errors.</i>
B2	<i>Lexical accuracy is generally high, though some confusion and incorrect word choice does occur without hindering communication.</i>
B1	<i>Shows good control of elementary vocabulary but major errors still occur when expressing more complex thoughts or handling unfamiliar topics and situations.</i>
A2	<i>Can control a narrow repertoire dealing with concrete everyday needs.</i>
A1	<i>No descriptor available.</i>

Table [11] Vocabulary Control according to the CEFR levels

Moreover, the CEFR proposes different topics which should compose or make up the linguistic competence in a language:

1. personal identification
2. house and home, environment
3. daily life
4. free time, entertainment
5. travel
6. relations with other people
7. health and body care
8. education
9. shopping
10. food and drink
11. services
12. places
13. language
14. weather

However, the notions for each of these topics are not specified. In fact, the CEFR states that it is the users of the document themselves who should decide about the specific notions (word forms) which are to be dealt with at the different levels and within the different topics:

“Users of the Framework may wish to consider and where appropriate state:

- which lexical elements (fixed expressions and single word forms) the learner will need/be equipped/be required to recognise and/or use;
- how they are selected and ordered”

(CEFR 2001: 112).

In an earlier version of the CEFR, the document included vocabulary lists. These lists were based on the Threshold Level materials (Van Ek and Trim 1990) and some of the Waystage materials (van Ek 1990). However, they are no longer included in more recent versions of the document.

Given this situation, it is not unusual to find a haphazard distribution of vocabulary in foreign language materials. After analysing several Elementary education EFL textbooks, Mancebo (2005) concluded that the materials followed the guidelines established by the CEFR except when it comes to vocabulary. Nonetheless, the root of the problem may not be the coursebook itself, but the lack of specific information presented by the CEFR on vocabulary.

On the other hand, it is not our intention here to discount the value of can-do statements. Yet the can-do statements are not specific enough and should go beyond general statements. Put another way, nowadays it is unquestionable that both fixed phrases and single forms are necessary in order to learn a foreign language. This is stated by the CEFR. But what the document does leave out is which phrases and which words are to be learned.

Thus, although vocabulary is viewed as one of the underpinnings of the CEFR for foreign language learning, there are important weaknesses which should be addressed to make the document more concrete, applicable and practical. The vocabulary aspects which would require attention are the following:

- Specific quantity of notions. In order to make the CEFR more tangible, Milton and Alexiou (2009) support the idea that the CEFR system can work, but an introduction of a vocabulary size measure is necessary in order to make the document “more robust” (Milton and Alexiou 2009: 211).
- Specific quality of notions. The CEFR mentions the semantic fields that the student should command, but there is no list containing the members of those fields, that is, the specific notions to learn.
- Distribution of notions according to the three levels established by the CEFR. Providing a specification of notions is not enough. Each level in particular should outline the quantity and quality of notions.

Nevertheless, it is fair to say that the CEFR might not be the best place to provide the specific notions. As its own name indicates, it is a framework of reference with general instructions to approach language teaching and learning – not a curriculum. However, the fact that the CEFR adopts a skill-based approach does not necessarily mean that the document has to refrain from considering the specific notions to be addressed at each level.

What is more, if the CEFR is not the place to specify the notions, then where is? If consensus is to be reached in the field of language teaching, some measures should be taken in order to avoid haphazardness. One of these measures could be a record of the specific notions to be acquired by students. If the CEFR is not the one to provide it, then it would be beneficial for some other document to take on board these notions.

We now turn our attention to the Spanish curriculum of Elementary education. The term *curriculum* in the teaching and learning context should be understood as the set of aims, basic skills, pedagogical approach and assessment criteria of a specific stage (Stern 1983). It is important to clarify that a specific curriculum for foreign languages does not exist in Spain. What we find is a section devoted to this issue at each stage of compulsory education. For this reason it makes more sense to talk about the part of the Elementary education curriculum concerning foreign languages instead of the curriculum for foreign languages.

Some institutions do present their own list of vocabulary. This is the case of the Hong Kong Education Department in China and the Education Department of Andalucía in Spain. These are not official lists but they are widely used as sources of reference for coursebook designers or as guidelines for teachers in those communities. However, they are an exception to the norm, with the norm being very different.

The Spanish curriculum does not present a prescriptive programme of contents. Similar to the CEFR, it is flexible and open, in tune with the general pedagogical principles established by experts and authorities alike. The EFL contents in the Spanish curriculum are classified as conceptual, procedural and attitudinal. The conceptual contents are defined as the linguistic aspects to learn. As for the procedural contents, they refer to can-do statements, that is, what students should learn to do. Finally, attitudinal contents concern the extralinguistic aspects among which we can find, for instance, respect towards other cultures. According to the definition of the three aspects, it seems that vocabulary is mostly to be found among the conceptual contents. These contents are distributed into four different blocks. The first and second blocks are mainly composed of procedural contents; the third block contains mostly conceptual aspects, whereas the fourth block deals with attitudinal aspects (see table [12]).

Bloque 1. Escuchar, hablar y conversar

- Escucha y comprensión de mensajes orales de progresiva complejidad, como instrucciones o explicaciones, interacciones orales dirigidas o grabaciones en soporte audiovisual e informático para extraer información global y alguna específica.
- Interacción oral en situaciones reales o simuladas dando respuestas verbales y no verbales que exijan elección entre un repertorio limitado de posibilidades, en contextos progresivamente menos dirigidos.
- Producción de textos orales conocidos previamente mediante la participación activa en representaciones, canciones, recitados, dramatizaciones, interacciones dirigidas... o bien preparados mediante un trabajo previo con ayudas y modelos, mostrando interés por expresarse oralmente en actividades individuales y de grupo.
- Desarrollo de estrategias básicas para apoyar la comprensión y expresión oral: uso del contexto visual y no verbal y de los conocimientos previos sobre el tema o la situación transferidos desde las lenguas que conoce a la lengua extranjera.
- Valoración de la lengua extranjera como instrumento para comunicarse.

Bloque 2. Leer y escribir

- Lectura y comprensión de diferentes textos, en soporte papel y digital, adaptados a la competencia lingüística del alumnado, para utilizar información global y específica, en el desarrollo de una tarea o para disfrutar de la lectura.
- Uso guiado de estrategias de lectura (utilización de los elementos del contexto visual y de los conocimientos previos sobre el tema o la situación transferidos desde las lenguas que conoce), identificando la información más importante, deduciendo el significado de palabras y expresiones no conocidas.
- Lectura y escritura de textos propios de situaciones cotidianas próximas a la experiencia como invitaciones, felicitaciones, notas, avisos, folletos...
- Composición a partir de modelos, de diferentes textos sencillos, utilizando expresiones y frases muy conocidas oralmente, para transmitir información, o con diversas intenciones comunicativas.
- Utilización de las tecnologías de la información y la comunicación para leer, escribir y transmitir información.
- Interés por el cuidado y la presentación de los textos escritos.

Bloque 3. Conocimiento de la lengua**Conocimientos lingüísticos**

- Identificación de aspectos fonéticos, del ritmo, acentuación y entonación de la lengua extranjera y su uso como aspectos fundamentales de la comprensión y producción de breves textos orales.
- Reconocimiento y uso de léxico, formas y estructuras básicas propias de la lengua extranjera, previamente utilizadas.
- Asociación de grafía, pronunciación y significado a partir de modelos escritos, expresiones orales conocidas y establecimiento de relaciones analíticas grafía-sonido.
- Iniciación al conocimiento y uso de las estrategias básicas de la producción de textos (elección del destinatario, propósito, planificación, redacción del borrador, revisión del texto y versión final) a partir de modelos muy estructurados.
- Interés por utilizar la lengua extranjera de forma correcta en situaciones variadas.

Reflexión sobre el aprendizaje

- Uso de habilidades y procedimientos como repetición, memorización, asociación de palabras y expresiones con elementos gestuales y visuales, observación de modelos, lectura de textos, utilización de soportes multimedia, para la adquisición de nuevo léxico, formas y estructuras de la lengua.
- Reflexión sobre el propio aprendizaje y aceptación del error como parte del proceso.
- Utilización progresiva de medios gráficos de consulta e información y de las posibilidades que ofrecen las tecnologías.
- Confianza en la propia capacidad para aprender una lengua extranjera y valoración del trabajo cooperativo.

Bloque 4. Aspectos socio-culturales y conciencia intercultural

- Interés por conocer información sobre las personas y la cultura de los países donde se habla la lengua extranjera.
- Conocimiento de algunas similitudes y diferencias en las costumbres cotidianas y uso de las formas básicas de relación social entre los países donde se habla la lengua extranjera y el nuestro.
- Actitud receptiva hacia las personas que hablan otra lengua y tienen una cultura diferente a la propia.

Table [12] BOE nº 293, pages 43092-93 (2006)

References to vocabulary mostly appear in block 3, as this part is mainly devoted to linguistic knowledge. What we discover about vocabulary is a statement which reads: “Reconocimiento y uso de léxico, formas y estructuras básicas propias de la lengua extranjera, previamente utilizadas. [Recognition and use of vocabulary, forms and basic structures which have been previously used]” (BOE 2006: 43092-93).

The assessment criteria section seems to include slightly more specification about vocabulary. For the second cycle of Primary Education, we can find the following statement: “Se evalúa la capacidad de expresar necesidades inmediatas como pedir permiso, pedir en préstamo objetos cotidianos, localizar objetos o personas, hablar sobre el tiempo atmosférico o sobre gustos o habilidades. [Assessing the ability to express immediate needs such as asking for permission, borrowing everyday objects, finding objects or people, talking about the weather, likes or abilities] (Minimum Contents Curriculum 2006: 96).

There is an attempt to specify certain semantic fields which will be addressed at this stage of compulsory education. For example, we find topics such as likes and dislikes or the weather, but there is no mention of the notions which correspond to each of these fields. This lack of specification is materialized in a haphazard picture mirrored by foreign language coursebooks. Accordingly, we can easily find several coursebooks which deal with the same foreign language and focus on the same audience, but with important vocabulary divergences both in quantitative and qualitative terms (more about vocabulary and coursebooks in section 3.2.2.2).

3.2.2.2. *Vocabulary and materials design: The coursebook*

Arguably, the textbook² is not the only source of vocabulary input for learners, but “for many learners in foreign language settings it will be the principal source of the words

² The use of the words ‘coursebook’ and ‘textbook’ is interchangeable in this doctoral thesis.

they learn” (Milton 2009: 159). Hence, coursebooks can be considered sources for words (Thornbury 2002) and can exert a great influence on the learning process. When used correctly, they constitute a useful tool for language teachers. In fact, Jiménez Catalán and Mancebo define textbooks as “containers of vocabulary input” (2008: 3). Materials presumably mirror the syllabus and the curricular aims – which, at the same time, regulate L2 teaching. Sheldon (1988: 237) states that “the textbook is for a variety of reasons an inevitable teaching partner [...] and the visible heart of a programme”. Given its relevance in the foreign language classroom, the textbook is expected to influence what teachers teach and what learners learn (McGrath 2002).

For this reason it is interesting to analyse the role of vocabulary in textbooks, how it has been addressed, and its current situation. Vocabulary has always been present in didactic materials, although the attention it has received has waxed and waned throughout the history of L2 teaching. The way vocabulary has been approached has varied over time. We have seen a clear shift of perspective from the lists learners had to rote-memorize in the Grammar-Translation Method, towards the use of vocabulary as a mere support for linguistic structures in the Audio-lingual Method, then on to the implicit treatment of vocabulary in the Communicative Method.

At present, vocabulary in textbooks is contextualized in dialogues, narrations, songs and other kinds of texts. Vocabulary input is integrated in text-based activities, grammar explanations and task instructions (Thornbury 2002). The influence of the Communicative Method on teaching nowadays is one of the reasons why vocabulary presentation adopts this format. This approach is based on the way L1 speakers acquire their mother tongue. Exponents of the in-context practice (Brown et al. 1989; Watson and Olson 1987; Nagy 1997) warn about the limitations of vocabulary lists, maintaining that they normally offer a reduced number of words. This is why they propose techniques such as the book flood program (Elley 1991; Scott et al. 1997), which consists of the implicit introduction of vocabulary by means of continuous and considerable reading practice.

However, some authors have expressed their doubts about the efficiency of this practice (McKeon 1993; Schmitt and Schmitt 1995; Ito and Bauman 1995). They state that a massive introduction of input is not the panacea for vocabulary learning. They justify their opinions based on three main reasons. First, some learners react to unknown words by simply skipping them, or by deciphering their meaning momentarily without

really processing it. Second, in order to infer meaning from context, it is necessary to know most of the words in a given text. As mentioned above, at least 95% of words in a text must be known by the learner if he/she wants to infer the meaning of unknown words (Laufer 2005). Third, not all learning situations allow for a massive introduction of input. For instance, formal teaching contexts provide limited contact with the foreign language. The learners' chances to use the foreign language are almost completely restricted to the English lessons, which normally take up two or three hours a week. These facts make us question the use of context alone at lower levels and especially in situations of formal instruction.

Until the end of the 70s and even at the beginning of the 80s, vocabulary tended to be limited to not much more than illustrating and supporting grammatical structures. In Sinclair and Renouf's words (1988: 143): "Vocabulary fleshes out the structures, introduces variety and promotes practice of the structure in question". Nonetheless, EFL teaching has evolved considerably since the 1980s to the present day. This evolution can be seen not only in coursebooks but also in didactic guides – although some of them are still very limited in terms of pedagogical references to vocabulary.

By having a look at several didactic guides we can familiarize ourselves with the pedagogical bases of the project as well as its main endeavours. Among them we can highlight written and oral comprehension and production, an interest in other cultures, and the use of new technologies in L2 communication. However, no direct references to vocabulary are to be found. At best, one appendix provides a list of the so-called target words that the children will cover in each unit. We normally find a combination of the Communicative and Task approaches, but there are no comments about how to proceed with vocabulary itself. Therefore, despite the development of syllabi over the years, vocabulary issues still lag behind – much more so than in other aspects.

Another important point to make regarding vocabulary in textbooks is the lack of importance given to how much and which vocabulary should be included. Jiménez Catalán and Mancebo (2008) carried out a study where they analysed two Elementary and two Secondary education EFL textbooks. They observed that the two Elementary education courses did not differ in the number of types. The difference between the two was of only 23 types. The situation was not the same regarding tokens, where the difference amounted to more than 1,200 units. As for the Secondary education courses, significant divergences were found for both types and tokens. For the former there is a

gap of over 500 units, whereas for the latter this gap increases to over 8,000 tokens between the two courses.

In a similar vein, Alcaraz-Mármol (in press) highlighted the considerable disparities between two EFL courses for Elementary education children. She focused on the didactic units for the second school term. The two textbooks were internationally well known and targeted at children between the ages of eight and nine. Despite their similar level and target audience, one of them contained 802 tokens and 168 types, whereas the other one contained over 500 tokens more (1,310) and almost 60 types more (227). The difference in terms of tokens is more than considerable taking into account that it was just one part of the textbook, not all of it, which was analysed. Regarding types, the divergences may not seem very significant at first sight, but we have to consider the context of analysis: 60 types of difference in only one school term and at a beginner's level is quite a considerable number. This divergence would possibly not be all that relevant at the advanced level.

As for which vocabulary to include, authors traditionally relied on their own intuition or sometimes took inspiration from other publishers. Nowadays, the major modern publishers have their own corpora. The problem is that the selection criteria on which those corpora are compiled are not explained (Rixon 1990). Nevertheless, recent research points towards a combination between frequency and functionality as the two bases in the selection of the lexical content for textbooks (Alcaraz-Mármol 2009) (more about frequency and functionality in section 3.2.1. of the present chapter).

This trend was corroborated by Tschichold (2008), who compared the corpus of several French as a foreign language coursebooks with the *français fundamental lists* for levels 1 and 2. These two lists contain approximately 3,500 words. The words correspond to the Français Fundamental Corpus, a record of highly frequent items in French which are considered essential for communication and progress in this language. Tschichold observed that the corpus of 3,341 lemmas resulting from the four books analysed highly overlapped with the words in the lists. Percentages were also high in Alexiou and Konstatakis' (2007) comparison of several EFL textbooks against the British National Corpus (BNC). Their coverage of the BNC list ranged from 85% to 74%. On top of this, as was to be expected, the more advanced the course level, the less the coverage of the most frequent items in the BNC.

Another example is offered by Alcaraz-Mármol (2009). She compared two EFL textbooks for elementary students against the General Service List (West 1953). The author observed that frequency was taken into consideration by designers. Some didactic units reached 70% of vocabulary falling within the 2,000 most frequent words in West's list. Yet she realized that the selection of a considerable part of the target vocabulary in these textbooks was not based on frequency but functionality. She concluded that, rather than frequency, target vocabulary is primarily selected in terms of usefulness for the learners. Indeed, words such as *ant* or *notebook* are very common in didactic materials, even though their frequency level is considerably lower in general discourse. In this sense, the high amount of frequent vocabulary in textbooks may be partly due to a casual and not a causal effect.

The need for functional vocabulary is also apparent in Milton and Vassiliu's (2000) analysis. The 1,396 lemmatised types in an EFL coursebook were compared with Nation's (1984) vocabulary lists. About 46% of the vocabulary syllabus was made up of infrequent vocabulary. Only around 7% belonged to the second 1,000 most frequent words. This low amount of frequent vocabulary is also noted in other studies (Vassiliu 1994; Alcaraz-Mármol in press).

The considerable amount of infrequent vocabulary, Alcaraz-Mármol (2009) concludes, may be due to the mismatch between frequency and functionality. These two criteria may not always coincide. There are highly functional words which do not belong to the most frequent words for one reason or another. This is the case of some food or animal names. They are highly functional for elementary learners, but they are not frequent enough in general discourse.

In relation to this issue, Reda (2003) states that textbook vocabulary is dominated by topics of general interest. Sheldon (1988) and Bell and Gower (1998) criticize the stagnation of vocabulary in coursebooks, precisely due to the limited number of general interest topics. Table [13] shows the most common topics appearing in EFL textbooks.

Time and dates	Colours and shapes	and	Clothes and fashion	Animals and plants	Family and relationships	Work and employment
Crime and punishment	Holidays and travel	and	Transport and roads	Education and learning languages	Politics, war and peace	Accidents, health and illnesses
Sports, exercise, leisure, entertainment and hobbies	Geography, countries and nationalities		Describing looks, moods, and personality	Shopping, economy, and money terms	Cooking, food, and drink	Home, furniture, housework, and daily routine
Performing simple communicative tasks and socializing	The language of measurement and statistics		The weather	The human body	Social class	Media terms

Table [13] Topics of general interest in EFL textbooks (Reda 2003: 262)

Moreover, Reda (2003) argues that the pattern adopted for the incorporation of vocabulary in textbooks is based on prototyping. The author offers the example of a well-known English coursebook entitled *Headway* (Soars and Soars 1986). This is a multi-level course for adult learners published by Oxford University Press. Reda comments on the way the textbook series introduces vocabulary about crime and punishment throughout the different levels. This topic is present in all levels from Elementary to Advanced. Vocabulary related to this topic is introduced from being more prototypical to less prototypical. The lowest level talks about robberies, the police and prison, whereas the higher levels focus on legal issues which are related to the topic, but are less prototypical.

Nevertheless, despite the recognized importance of vocabulary in SLA, “evidence suggests that lexical input can vary a good deal” (Milton 2009: 159). The problem does not seem to be a lack of L2 vocabulary acquisition research, but rather a lack of coordination and solid design criteria. Put another way, there are numerous studies and entire books about this field of second language research. However, their results differ considerably – sometimes even surprisingly – from each other. This heterogeneity is the main drawback designers are faced with when creating homogeneous materials.

Heterogeneity is given in both quantitative and qualitative terms. Concerning quantity of vocabulary, dissimilarities are not new. They can even be found in studies dating back to the early part of the last century. Milton and Benn (1933) and Robson (1934) analysed foreign language materials in terms of the amount of vocabulary they contained. Milton and Benn analysed 30 first-year French courses. They found

dissimilar volumes of input ranging from 320 to 2,364 words. Along the same lines, the 16 coursebooks analysed by Robson contained anywhere from 212 to 1,112 different words. We can also find many more recent examples. In an analysis of nine major EFL textbooks, Renouf (1984) showed that in the first book of each series, the number of different word forms introduced ranged from 1,156 to 3,963.

This situation, which was defined as “potentially anarchic” by Gairns and Redman (1986: 56), can also be found in the 21st century. Vassiliu (2001) analysed three different textbooks for the first year of EFL instruction. These three courses targeted the same audience: beginners aged 7 to 8. Despite coinciding in terms of level and foreign language, their amount of vocabulary was different. The textbooks contained 781, 900 and 1,070 words, respectively. Even though these divergences are not insurmountable, there is a clear divergence between the three courses.

Quantity in global terms, as well as the distribution of this quantity in textbooks, both tend to be highly irregular. Authors such as Gairns and Redman (1986) estimate that 8 to 12 new words introduced per lesson is a reasonable amount. Scholfield (1991) is more accurate in his statements, recommending 9 new words per lesson. Having said that, these figures are merely theoretical, and do not have empirical support. Moreover, the authors do not specify the learners’ level or whether these figures are applicable to all types of learners.

Scholfield (1991) applied his vocabulary rate plot to five different courses for intermediate learners. The introduction of new vocabulary items ranged from almost 100 in just one unit to 0 in others. This is also the case of the three textbooks analysed by Vassiliu (2001). In textbook A, the number of new words introduced per unit ranged from 22 in unit 20 to 104 in unit 1, with an average of 39 new words per didactic unit. Textbook B contained 19 new words in unit 9, increasing the introduction of vocabulary items up to 89 in unit 1. The average introduction was estimated to amount to 45 new words per unit. Finally, textbook C had an average of 51 new words per unit, ranging from 5 words in unit 20 to 125 in unit 7.

In the same vein, Alcaraz-Mármol (2009) observed the different distribution of two EFL coursebooks with respect to their lexical content. She carried out a double analysis. On the one hand, she examined the lexical content in terms of tokens (see figure [5]) and lemmas (see figure [6]). The distribution of tokens indicates a descending trend in textbook A, whereas it adopts a quadratic shape in textbook B. Regarding

lemmas, textbook A maintains its descending trend, whereas textbook B presents an ascendant one on this occasion.

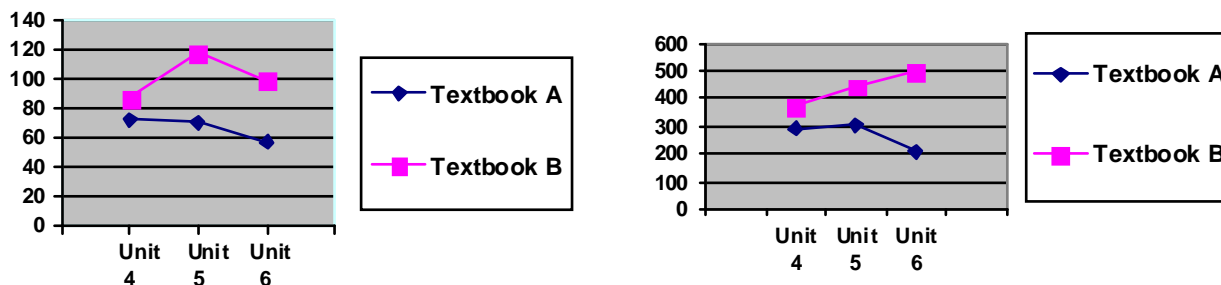


Figure [4] Number of tokens in textbooks A and B Figure [5] Number of lemmas in textbooks A and B

As for the quality of vocabulary in textbooks, the situation is not more homogeneous. Jiménez Catalán and Mancebo (2008) identified the *top fifty* content words in two Elementary and two Secondary EFL textbooks. They observed that the top lists did not contain the same words. Moreover, only 62% of the words appear in both Elementary education textbooks. The two Secondary education textbooks show a similar pattern with only 68% of words in common. These amounts should not be considered enough, as many of the shared units are auxiliary verbs and grammatical words such as *a, and, is, the, with*, which are expected to occur in all courses.

Along the same line, Milton and Benn (1933) were surprised at the fact that, out of the more than 6,000 different types used across 30 textbooks, only 19 appeared in all of them. In the same vein, Milton and Vassiliu (2000) reviewed the content of three beginner textbooks in terms of their vocabulary selection (see figure [6]). The authors removed personal names and other irrelevant material from the three corpora. They observed that less than 20% of the lexical content coincided.

A more serious case is that illustrated by Alexiou and Konstantakis (2007). Their study focused on two groups of textbooks. Each group contained five courses of the same level. Group A comprised coursebooks for beginners at the first stage, whereas group B comprised coursebooks for beginners at a second stage – which is known as *false beginners*. The coursebooks in group A shared 108 out of the 949 total number of types, which is around 11% of the vocabulary content. The number of common types across all five books in group B was even lower, with just 54 out of 1,551 (3.4%).

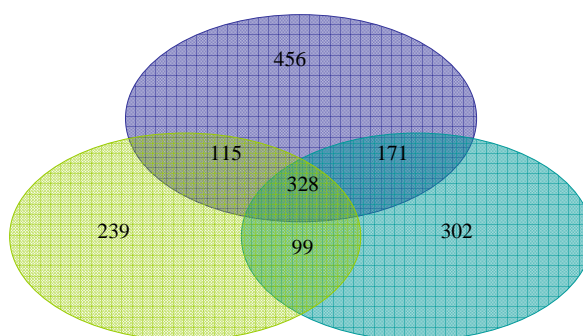


Figure [6] Vocabulary overlapping in three beginner textbooks (Milton 2009: 166)

The reasons why textbooks normally show a low degree of homogeneity are not clear. It is fair to say, though, that a lack of L2 vocabulary research does not seem to be the cause. As stated above, a vast amount of books and papers specifically dealing with L2 vocabulary have been published since the mid-seventies, and especially from the 90s onwards. What is more, the ultimate goal for any type of research is to be useful and applicable. In this case, L2 vocabulary research is expected to be a guide for foreign language instruction, and, consequently, for the materials used in foreign language teaching.

The problem seems to stem from the weak link between L2 vocabulary research and materials design. One of the reasons why research fails to make it into the classroom may be due to the fact that there is simply no intention on the part of designers to apply research postulates to textbooks. Thus, there is the feeling that textbooks have their own dynamics, somehow independent from research activity. Even if we agree with Byrd that materials design is a noble “professional track” (1995: 6), we cannot forget that it is also business. Hence, the competition found between the different publishing houses can invalidate the real aim of didactic materials. In fact, as early as the late 70s, Brumfit warned about the “masses of rubbish [being] skilfully marketed” (1979: 30) to students. It is not unusual to often find “publishers representatives calling round and dazzling us with their new books. Many of these books are beautifully presented with jazzy covers and attractive artwork which distracts the eye and dulls the brain” (Grant 1987: 119).

It would be unfair, however, to place all the blame on the publishers. Another possible reason for the lack of connection between coursebooks and L2 research may be

the multiple perspectives offered by this field of investigation. L2 vocabulary research has lately been characterized by its huge production. Indeed, the many proposals and views on the issue have led us to an enormous and rich, but at the same time disorderly, field of research. A publisher's aim to get closer to research may be eclipsed by the fact that they do not know how to approach such a wide spectrum of possibilities. What is worse, they might misinterpret or mix different research postulates, which can have a counter effect on learning.

There is a great need for a connection between research and teaching, since this combination can be very positive for education (Sánchez 2006; Bjork 2002). However, for one reason or another, it is a fact that there is an important gap between L2 vocabulary research and what the learner receives. It is unclear whether this situation is the result of a lot of talk and little action or the absence of a well-founded reason to use textbooks to this end. The reality is that textbooks present few pedagogical criteria which are specifically devoted to vocabulary. It is also true that the input students are exposed to has to go through several filters before it reaches the learner. We cannot avoid all these filters, but we may be able to achieve coordination among all the parts involved, so that the recommendations made by L2 vocabulary researchers reach the L2 vocabulary learners (see figure [7]).

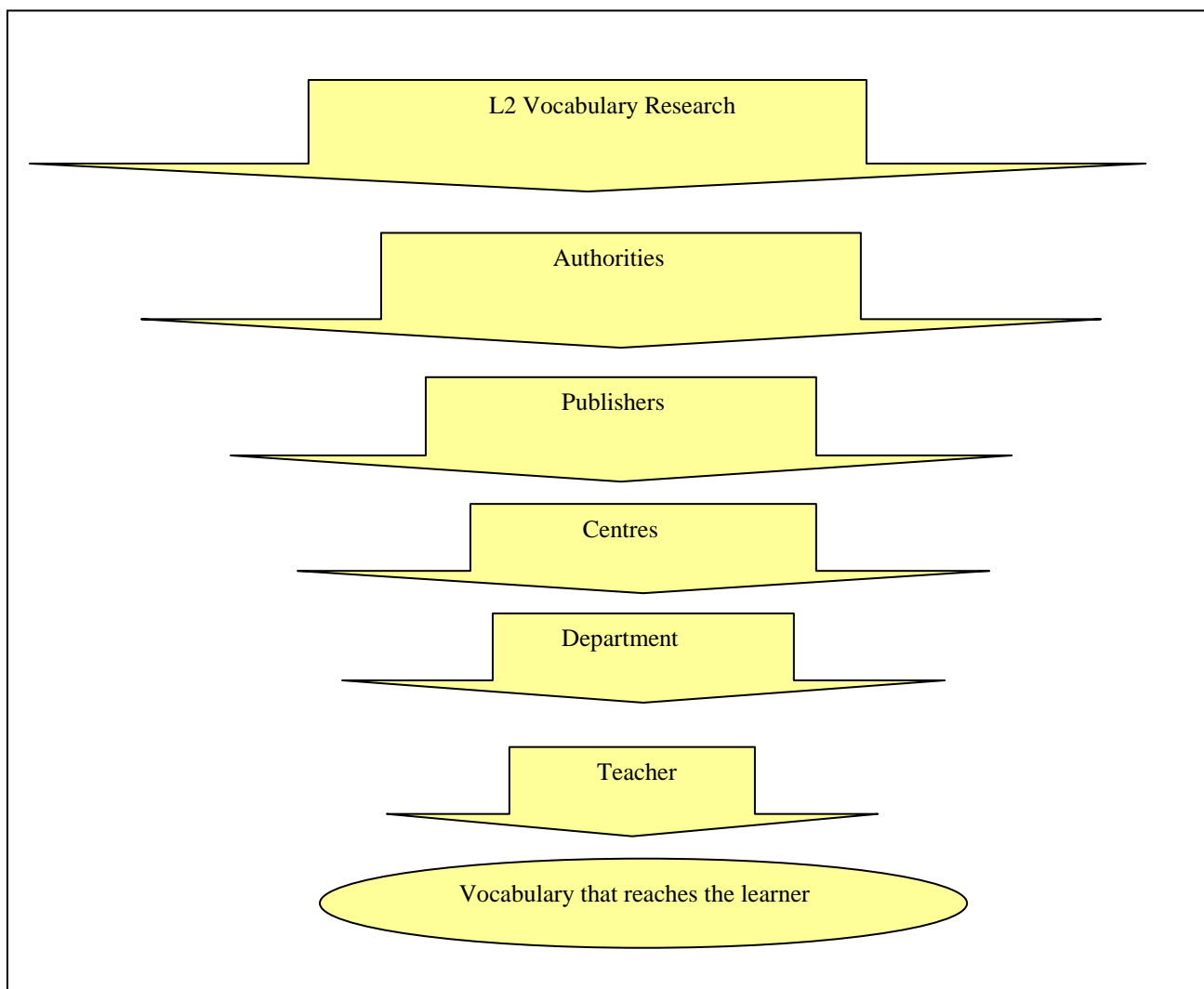


Fig. [7] From L2 vocabulary research to L2 vocabulary learners

3.3. Description: External and Internal Non-systematicity – Its Reflection on Research and the Classroom

The term *non-systematic* is not specific to the field of L2 vocabulary. It is used in many other disciplines such as business and computer science. In all cases *non-systematic* means random, that is, the opposite of order and planning. For instance, in business, an unsystematic risk is that which lacks general application to the whole market.

The field of L2 vocabulary – whether in terms of research or the teaching/learning process – has always been shrouded in non-systematicity. When tackling L2 vocabulary studies, we find the problem of heterogeneity, that is, studies which work with several learners' profiles regarding level, L1 and the learning context, coupled with the different natures of the study (cross-sectional or longitudinal).

However, even today we are still searching for a straightforward, once-and-for-all theory about L2 vocabulary acquisition. The several trends regarding this issue present a panorama of eager production but scarce organization. The current situation of this area of research can be compared to a mushroom field, where a plethora of studies grow without any order, in an indiscriminate way.

Unavoidably, this is reflected in the teaching/learning context, where the introduction of L2 vocabulary input is normally non-systematic. By *non-systematic* vocabulary input we mean input which lacks regularity in its introduction and/or distribution. One caveat is in order, though. The fact that L2 vocabulary input is introduced and/or arranged non-systematically does not mean that patterns cannot be found at some point. Yet, the potential patterns that may appear are to be viewed as merely accidental or the fruit of chance, and not the result of well-founded criteria.

This situation is favoured by the methodological trend that is currently followed in most didactic materials, which implies a non-systematic approach to vocabulary presentation, resulting in a highly random selection process for the words in a textbook (Scott 2005).

Nonetheless, the most worrying fact is not the absence of a regular pattern, but the absence of a rationale behind introduction and arrangement. Put another way, it may be the case that a pattern of L2 vocabulary introduction is identified at some point in the textbook, but no justification is found for that pattern. It is merely fortuitous.

Indeed, lack of systematicity in L2 vocabulary fieldwork renders a direct comparison among studies difficult. The studies which we will discuss hereafter differ in aim and scope, revealing the difficulties we face in comparing them. One possible way of ironing out divergences among these studies is by transforming their acquisition outcomes into vocabulary uptake per contact hour. In order to do that, we need to know for how long – in terms of hours – the participants were exposed to the target vocabulary, together with the amount of time the study took. We divide the number of words acquired by the number of hours exposed to said words.

In addition, we can classify the studies into two groups: those which aim to measure vocabulary size and those which assess the acquisition of a specific group of words at a certain time. Regarding the first set of studies, they estimate the total number of words that students know in their foreign language. This is carried out by means of fairly standardized vocabulary tests such as the widely used Vocabulary Levels Test

(Nation 1982, 1990, 2001; Schmitt et al. 2001), the Eurocentres Vocabulary Test (Meara and Jones 1990), the Lex30 (Meara and Fitzpatrick 2000) and the X_Lex (Milton and Meara 2003), among others.

For the first group, Quinn (1968) discovered that university students had a very low level in their second language despite having studied it for several years. On average, students had only managed to acquire 1,000 word families after seven years of instruction. Considering the amount of time they had been exposed, it is estimated that these students had learned between 2 and 3 words per contact hour. The results uncovered by Jiménez Catalán and Terrazas (2008) and Jiménez Catalán and Moreno Espinosa (2005) did not fair much better. Similar to Quinn, these two studies estimated that Elementary school children acquired around 3 words per hour, roughly the same rate of acquisition found in López-Mezquita (2005). Secondary school students presented a vocabulary size of around 940 receptive units in their last year of compulsory education (4° ESO). This figure corresponds to a rate of acquisition of over 2 words per contact hour. Comparing the four studies, we can observe that the rate of acquisition is similar regardless of the students' age.

The second category of studies corresponds to those which assess the acquisition of specific vocabulary in a given period of exposure within the learning process. The tools which are used in most of these studies contain, specifically, the words encountered by students. The period of exposure in these studies varied from a few weeks to several months.

Among the studies which took just a few weeks, we can mention those of Donzelli (2007) and Ito and Bauman (1995). Donzelli's study assessed the vocabulary acquired by 17 nine-year-old Italian children in their second year of EFL instruction. Participants were exposed to the input of three lessons in the textbook, from which 20 words were randomly extracted for assessment. On average, the children acquired almost six words per contact hour. In the same vein, Ito and Bauman (1995) also found that Japanese participants studying English as a Foreign Language for six weeks presented a rate of acquisition of six words per contact hour. In this case the students were adults, but the age difference between Donzelli's and Ito and Bauman's participants does not seem to affect the rate of vocabulary learning. Both cases present a similar pattern of acquisition.

More frequent studies are those which take the whole academic year for their analysis. Technically speaking, one academic year does not stand for a whole natural year – that is twelve months – but rather nine months. Results in the rate of acquisition are more heterogeneous in this type of study than in previous cases. Figures range from 2-3 words to 8-9 words per contact hour.

The highest results were identified by Vassiliu (2001). The participants, aged between 8 and 11, were Greek students at an Elementary level, where the textbook served as their principal source of foreign language input. The method of instruction adopted here was no different from the one which is normally followed in other centres or European countries. Vassiliu's data estimate a rate of vocabulary acquisition between 11 and 14 words per hour of instruction. An interesting feature of this study is the participants' young age and level. Considering that their level at the beginning of the study was zero, tests revealed that by the end of the course the students had a vocabulary size of between 600 and 1,000 words. These figures correspond to those which the average student is expected to obtain after several years of instruction and not just after one course, and even less so if the course is for complete beginners or breakthrough level students.

Vassiliu's results are followed by Laufer (1998). In this case, Israeli Secondary Education students learning EFL acquired 1,600 new word families in just one academic year. The author highlights that a considerable amount of vocabulary in a language can be acquired even in a foreign language environment – that is, outside of the country where that language is spoken. Nonetheless, there are two possible reasons why the students' rate of acquisition in Laufer's study might have been overestimated. First, it is fair to say that a standardized test, and not a specific-content test, was used by the researcher. Second, most participants were highly motivated, both intrinsically and extrinsically, since they liked learning English and they knew that they had to pass an English exam to gain entry to university.

Milton and Meara's study (1995) yielded similar results. They analysed a group of advanced learners studying French as a Foreign Language at university. Participants were exposed to the foreign language three hours a week during an academic year. Their total acquisition for that period amounted to 500 new word families. Under these conditions, it was estimated that students had acquired around 7.5 words per contact hour. The authors considered 7.5 quite a low rate of acquisition in comparison to what

they had observed for students learning French in a French-speaking country. Those studying French in a naturalistic context acquired, on average, 2,500 new word families over a similar period of time. However, in a naturalistic context it is more difficult to calculate the rate of acquisition per contact hour, as exposure hours are hard to control.

An important group of studies point towards a rate of vocabulary acquisition between 4 and 6 words learned per hour, despite differences in the participants' age, level and second/foreign language. The most optimistic results are found in López-Mezquita (2005), Laufer (1995) and Milton (2009), which point to around 6 words acquired per hour. López-Mezquita obtained the highest figures. She observed that sixteen-year-old students learning EFL in a Spanish secondary school increased their vocabulary size to 600 in one academic year – which amounts to a rate of 6.5 words per hour.

Another study by Laufer (1995) produced similar figures, where native speakers of Hebrew were assessed after six months learning English at university. The author observed that, on average, they acquired around 300 words or, put another way, 6 words per contact hour. These results on the rate of acquisition in adults and teenagers does not differ significantly from results in lower levels such as in the case of Elementary students, where Milton (2009) estimated an acquisition of between 5.4 and 4.7 words per hour.

Results in Milton and Meara (1998) are those which are closer to a lower rate of acquisition – roughly 4 words per hour. Their study reports annual rates of vocabulary growth in different areas of Europe. In Greece, students reach a figure of 4.4 words per hour, whereas German students only manage 4 words. The lowest results are found in British students of French, who find themselves unable to reach the figure of 4 words per contact hour. Indeed, the British are the ones who show the lowest rate of acquisition of all the studies reviewed here. Milton's study (2009) supports this claim, with British students of French showing a rate of acquisition under 3 words per hour.

Learners	FL	W/h	Source	Aim
Greek	En	11-14	Vassiliu (2001)	ST*
Israeli	En	8-9	Laufer (1998)	ST
British	En	7.5	Milton and Meara (1995)	ST
Spanish	En	6.5	López-Mezquita (2005)	ST
Japanese	En	6	Ito and Bauman (1995)	ST
Israeli	En	6	Laufer (1995)	ST
Italian	En	5.8	Donzelli (2007)	ST
Hungarian	En	5.4	Milton (2009)	ST
Greek	En	4.7	Milton (2009)	ST
Greek	En	4.4	Milton and Meara (1998)	ST
German	En	4	Milton and Meara (1998)	ST
British	Fr	3.8	Milton and Meara (1998)	ST
Spanish	En	3.3	Jiménez Catalán and Moreno Espinosa (2005)	VS
Spanish	En	2.7	Jiménez Catalán and Terrazas (2008)	VS
Spanish	En	2.4	López-Mezquita (2005)	VS
British	Fr	2.4	Milton (2009)	ST
Indonesia	En	1.7 – 3.3	Quinn (1968)	VS

Table [14] Studies on the rate of L2 vocabulary acquisition

<p>*VS: Vocabulary Size ST: Specific group of words at a certain time</p>

The figures based on the rate of acquisition in table [14] are only estimates, that is to say, the participants were not tested after every hour of vocabulary instruction. This vocabulary acquisition was measured after a few weeks or even months. What is more, many of these studies did not test the specific input the learners were exposed to, but rather based their conclusions on standardized tests.

The main drawback of using estimates to predict rate of acquisition is the assumption that L2 vocabulary learning is a regular, continuous and unalterable process. Some scholars propose specific figures for the regular introduction of vocabulary. Scholfield (1991) suggests introducing 9 new words every contact hour in a Foreign Language. He uses graphs to show the ideal input from a foreign language textbook. On their part, Gairns and Redman (1986) point to a vocabulary introduction of 8 to 12 words

per hour. The number of new words presented, they maintain, should vary depending on the students' level. The relationship between foreign language level and vocabulary acquisition is also commented by Milton (2009), who states that vocabulary uptake may vary according to the level of the learners. Gairns and Redman recommend 8 words for those learners with the lowest level. Introduction is to increase as the learners' level increases until reaching the maximum of 12 new words introduced per hour of instruction. Both works presuppose that equal vocabulary loading per unit or hour of learning might be an intelligent norm. In fact, this is in line with other studies which recommend regular vocabulary acquisition (Milton 2006; Orosz 2009).

However, there are many other cases where the acquisition process is irregular. In these cases, unexplained plateaus where no vocabulary growth seems to occur combine with relatively strong acquisition peaks and troughs. Milton (2006) observes how vocabulary learning in British schools is irregular, registering little noticeable progress in vocabulary knowledge. As an example, while learners acquire around 300 words at the end of the first year of French instruction, less than half this figure is added in the next two years.

The truth is that knowing how the process of vocabulary acquisition develops is not an easy task. Rodríguez Sánchez (2001) tried to predict the pattern of lexical acquisition in a foreign language by means of a statistical matrix. The idea was to find a simple way of tracking the complexity of the development of certain aspects of vocabulary knowledge. As stated above, the author confirms that we cannot assume the L2 vocabulary acquisition process to always be linear and incremental. In Rodríguez's words, "this is a reductionist and simplistic approach [...] The L2 vocabulary acquisition process is a phenomenon where learners forget some of the words acquired and where some of the words forgotten are spontaneously regenerated" (Rodríguez Sánchez 2001: 78).

The key tenet regarding the use of the matrix is that it is expected to make long-term forecasts describing the subjects' current vocabulary and predicting how words will change state over a certain amount of time. Yet, absorbing states were found in the results provided by the matrix. Statistically speaking, an absorbing state attracts words, and does not allow these words to move on to other states. This implies that sometimes the matrix may not contemplate the possibility of recovering some words which have been forgotten at one point in time: "If we have a multistate model where once a word is

forgotten it always remains forgotten, and has no chance of spontaneous regeneration, then the system as a whole will eventually be absorbed in this state, and all the words will eventually be forgotten” (Meara 1989: 71).

As we can see, statistics – at least as they are used nowadays – do not seem to comprehend all the complexities in L2 vocabulary acquisition. For instance, López-Mezquita (2005) states that her students acquired 660 new words in one academic year. However, the vocabulary level of these students was about 940 at the beginning of the course. This amount of vocabulary is the result of seven years of formal instruction. If we compare the rate of vocabulary acquisition from the year before – that is 6.5 w/h – with the learning rate from previous years – that is 2.4 w/h – we can see that the rate from the year before was almost three times greater than that of previous years; in other words, in the last year students learned over a third more of their whole vocabulary size – which has been shaping over the last seven years.

Another case worth commenting on is that of Laufer (1998), where students were able to acquire up to 1,600 new items in just one year. Had this rate been constant in previous years, we would have found learners with a native-like vocabulary size of around 15,000 words – which is rarely achieved by a L2 learner. However, this does not mean that a L2 learner cannot reach these kind of figures. In a recent study, Cervatiuc (2008) reported that his L2 learners know, on average, around 16,500 words. In this sense, these students can be considered native-like speakers, at least in terms of their vocabulary size, but this is by no means the norm. It is important to point out that these participants had spent over a decade in a foreign country where their second language was spoken; an uncommon situation for foreign language students who, in many cases, learn English in a formal context where time and content is particularly limited.

Furthermore, the aforementioned scholars came to their conclusions on the basis of systematized, regular input. By contrast, this is not the kind of input that is normally found in naturalistic and formal contexts of learning. As discussed in previous sections (see section 3.2.2.2 on textbooks), we usually find non-systematization in the input to which learners are exposed. At times, learners have access to a considerable amount of new vocabulary concentrated over a short period of time, whereas on other occasions the concentration of new input is very small. What is more, the distribution and repetition of input, which are also important factors for optimum acquisition, are normally irregular. Some words may appear frequently over a given period of time to then disappear for a

long time. This is perhaps not the ideal context of learning, but there is no doubt it is the *real* context that learners face when acquiring a second language. This is as good a reason as any to pay more attention to this type of non-systematic input.

Therefore, we can observe that this complex reality warrants further research. Human beings, their brain and the vocabulary learning process are all highly intricate in nature, where many factors play a role. Some of these will be addressed in the next section.

3.4. Possible Factors Influencing L2 Vocabulary Acquisition

3.4.1. Introduction

From a holistic standpoint, anything related to the phenomenon of L2 vocabulary acquisition has a potential effect on it. It is fair to say, though, that the two underpinnings for L2 vocabulary acquisition are the L2 unit and the learner. If either of these two elements is missing, acquisition is virtually impossible. Each of these elements has different features, which make L2 vocabulary acquisition a complex process. In this regard, Laufer (1997) distinguishes between two types of factors. She talks about intralexical and extralexical factors. The former are understood as referring to the form and meaning of words. As for the latter, although the author does not specify what those factors are, she defines the extralexical factors as those which are presumably related to the learner.

However, some important factors such as frequency are missing from Laufer's discussion. She states that "frequency is not of our concern here since it is a usage factor dependent on the type of language input that the learner receives" (Laufer 1997: 141). Contrary to Laufer's view, I believe that frequency and other factors do play an important role in L2 vocabulary acquisition, and the fact that they are dependent on usage should not exclude them from a discussion about factors, as is the case here.

In an attempt to go beyond Laufer's classification, I propose a three-pronged approach to L2 vocabulary factors instead of traditional dichotomies. This section focuses on three categories of factors: intralexical, interlexical and extralexical. Regarding the first category, we will follow Laufer's view by dealing with aspects related to the word itself. The second category, which is not contemplated by Laufer, relates to the word, although its components cannot be considered intrinsic to the word itself. Interlexical factors are those concerned with the word as part of discourse. The

extralexical factors, on their part, include the learner's cognitive and affective characteristics.

3.4.2. Intralexical factors

3.4.2.1. The learner's L1

The fact that someone uses their L2 does not mean their L1 stops being active at that moment (Oxford and Scarcella 1994). Sunderman and Kroll (2006) observed that students experience their L1 influence regardless of their different levels of L2 proficiency. The effects of the L1 are present at all levels, even at the highest ones. In fact, the authors maintain that “acquiring proficiency in a L2 does not imply that the individual has acquired the ability to switch off the influence of the L1” (Sunderman and Kroll 2006: 388).

L1 and L2 interaction can be present both in the oral and written form of a word. With regard to phonology, Rodgers (1969) and Papagno et al. (1991) have proven that L2 words with similar L1 pronunciation rules are easier to acquire than those which the students feel have unfamiliar sound combinations. Feldman and Healy (1998) studied the effect of unfamiliar phonological structures on lexical acquisition. They confirmed that students normally avoid learning the meaning of words with phonological patterns that are unfamiliar to them. At the same time, they observed that familiar phonological combinations were more readily acquired. This study is in line with the idea that less familiar-sounding words are more difficult to keep in the short-term phonological store than those with similar phonological L1 patterns (Service 1992). This is the first step towards long-term retention.

The written representation of a word is also influential. The use of a different code in the L1 and the L2 increases the learning burden. For instance, a native speaker of Spanish using the Roman alphabet would find it more difficult to learn Chinese or Persian vocabulary than English vocabulary. The first two languages have different codes and they do not even follow the left-to-right order found in most Western languages. Hence, before starting to learn vocabulary itself, the native speaker of Spanish should become familiar with the new symbols, which means an extra load for the L2 learner.

In addition to this, we are faced with a lack of correspondence between sound and written symbols in many languages. This is particularly problematic for native

speakers of Spanish who study English. The degree of sound-script correspondence is much higher in Spanish than it is in English. Except for the cases of g/j, y/ll and h/b, the sound-script correspondence is almost identical. However, this is not the case for the English language, especially when it comes to vowel combinations. In this sense, a native speaker of Spanish will find it more difficult to learn English vocabulary than Italian, as the degree of coincidence between script and sound in the second case is higher.

The L1 effect on L2 learning can be considered either a positive or a negative interaction. The L1 has a counterproductive effect in the case of *false friends*. False friends are L2 elements which are very similar in form to some L1 words, but their meaning is totally different to that of the mother tongue. Students may be misled into considering some L2 words similar to L1 words in form and meaning, when in fact they are not (Holmes and Ramos 1993). Native speakers of Spanish learning English as their L2 can easily confuse words such as *actually* or *sensible*. The first one is normally identified with *actualmente* (at the moment), when it really means *in fact*. The written form of the second example reveals an exact correspondence with the Spanish word *sensible* which means *vulnerable* or *easily affected*, whereas in English *sensible* means having or showing good sense or judgement³.

However, L1 interaction can also be positive in cases of cognateness. Cognates share similar – although not always identical – meaning and form in two or more languages, which makes them easier to learn than other L2 words (Cohen and Apeh 1980). Cognateness is gaining currency as a powerful tool in L2 vocabulary acquisition (Blachowicz et al. 2006: 533). Not only is this positive effect noticed in learning, but also in lexical priming where cognates are recognized faster than non-cognates (Dijkstra et al. 1998). Anderson and Jordan (1928) also verified the effect of cognates on vocabulary learning. They compared the acquisition of three types of Latin-English word pairs differing in their degree of similarity: identical pairs (similar in form and meaning) such as *provincia-province*; association pairs (derived English words which are closely associated to the Latin word in sound and meaning) as in the case of *fuga-flight*; and finally, non-associated pairs such as *domus-house*. Results confirmed the positive effect of the L1, as participants performed better with associated words than with non-associated members.

³ The word meanings provided are all found in the Collins Concise Dictionary (2001)

The phenomenon of cognateness can have a useful pedagogical application. García (1996) found that intermediate Spanish students use their L1 knowledge to learn L2 vocabulary even if they have never been trained to do so. In fact, cognate awareness is also confirmed by Jiménez et al. (1996) and Cunningham and Graham (2000). They showed that even young children with very low L2 proficiency are aware of the advantages of cognates.

However, one caveat should be considered when we talk about cognateness. Put another way, which words should be considered cognates? For instance, the Spanish *provincia* and the English *province* can clearly be taken as cognates, but the case of the Spanish *fuga* and the English *flight* is not so obvious. They may well have the same origin and slightly similar forms, but the doubt remains that students may identify them as cognates.

Cognate awareness seems to point to new learning techniques. New directions have opened up, as recent findings have revealed that the construct of cognate awareness can actually be measured (Malabonga et al. 2008). Swan (1997) suggests that learners should be trained to make use of the *equivalence hypothesis* when trying to learn new L2 words. The strategy is about viewing “everything as the same unless you have a good reason not to” (Swan 1997: 166). Therefore, cognate recognition, although somewhat natural, must be refined and controlled, and students must be monitored in this respect (Moss 1992). Hence, learners should be instructed on the nature and limits of crosslinguistic correspondences. In this sense, not only will cognate awareness be powerful, but also reliable.

3.4.2.2. *The L2*

The L2 system in and of itself can influence the process of L2 vocabulary learning. Three main intrinsic factors can be linked to words themselves, which, to a certain extent, may determine their degree of difficulty in terms of acquisition. They are word length, part of speech and imageability. It is important to point out, though, that all three factors are controversial, and not all literature supports the idea that they may have an effect on lexical acquisition.

With regard to length, authors such as Philips (1981), Coles (1982) and Schmitt (2000) found that shorter words are easier to learn than longer words. This fact is based on the logical thought that “the longer the foreign language word, the more to be

remembered [...] and thus the more room for error” (Ellis and Beaton 1993: 568). A possible explanation for these outcomes is related to Zipf’s law (1935). One of its tenets states that short words are more frequent than long words. As shorter words appear more frequently than longer words, they are learned earlier. Thus, maybe it is not length itself which really contributes to learning, but the fact that shorter words are more frequent than longer words in discourse, and this is what really makes it easy to acquire them.

Other authors such as Rodgers (1969) and Laufer (1997) oppose the idea that length is a negative factor for L2 vocabulary learning. Rodgers found no significant effect of syllable length on the acquisition of different words. What is more, Laufer does not see length as a handicap but as an advantage. This is to say that many long words are the result of compositionality, so they are easier to retain than others which are shorter. For instance, although the word *unbelievable* is longer than *monk*, the former may be easier to acquire than the latter, as long as we know the word *believe* and the meaning of the affixes *un-* and *-able*. Controversy about the effect of length remains to be solved. The reason is that a proper way to isolate this variable has not yet been found. We will have to wait for the isolation of the length variable before we can make solid conclusions about this aspect.

The second factor mentioned above corresponds to the part of speech or grammatical category of a word. Several studies seem to have confirmed the hypothesis that the grammatical category affects acquisition. Rodgers (1969), Allen and Valette (1972), Philips (1981) and Ellis and Beaton (1993) observed that nouns and adjectives are easier to learn than verbs and adverbs. It seems that the effect of the part of speech was inversely proportional to the learner’s level (Philips 1981). Put another way, the lower the L2 level of the learner, the higher the effect of the part of speech for the words which are to be learned.

Contrary to the scholars above, Laufer (1997) argues that the learning difficulty attributed to the grammatical category of words is actually due to other factors such as phonological confusion or morphological complexity. I agree with Laufer that maybe it is not the part of speech itself which influences learning. Yet, what that part of speech contains may have an effect on acquisition. In other words, the concept represented by a noun, a verb, an adjective or an adverb may have some influence on its acquisition. Normally, nouns are more ‘imageable’ than verbs or adjectives, and even more so than most adverbs.

The idea mentioned above is closely related to the third factor being discussed here, that is, imageability. Gairns and Redman (1986) suggest that concrete items which can be represented visually may also be more economical to teach and learn than abstract items and ideas. In the same vein, Jones (2004) found that various post-listening tasks yielded scores three or four times higher when accompanied by images. Studies such as Kellogg and Howe (1971) and Gildea et al. (1990) compared learning new vocabulary with the help of pictures and translation in one case, and learning new vocabulary with the help of pictures and definitions in another. In both cases, learning with the aid of pictures yielded better results. Yet, some scholars warn that these types of comparisons should be treated with caution. Admittedly, translations or definitions are not totally comparable to pictures as “pictures [...] are not encoded in the same manner as words” (Deno 1968: 206). What is more, Kellogg and Howe (1971) found that a large minority of over 30% preferred translation over pictures.

On their part, Lado et al. (1967) recommend the combination of pictures and some other techniques such as translation or definitions. The fact is that not all learners prefer the same sources of meaning, and to conclude that imageability is the best way to learn a word must be taken with caution.

3.4.3. Interlexical factors

3.4.3.1. Frequency

Frequency has previously been treated as a criterion for vocabulary selection (see section 3.2.1.1.). The reasons for its importance and the different suggestions for its use have been discussed. In the present section, frequency is approached from a different standpoint. Here, we focus on studies which explore the effect of frequency on L2 vocabulary acquisition.

Frequency is one of the hotly discussed issues in L2 vocabulary acquisition. In the main, frequency refers to the number of times words occur. Occurrences can be estimated according to different types of discourse. We can count the number of times a word concords with a corpus of general discourse or in more specific compilations such as books or didactic materials. Accordingly, we can distinguish between general frequency and specific frequency. The former refers to occurrences in general discourse such as the British National Corpus, whereas the latter corresponds to word occurrences in a given text. In this sense, it is not unusual to find words with a high specific

frequency in a textbook, for instance, yet a low frequency in general discourse, and vice versa. This is common when a second language is learned for a specific purpose, namely for Medicine or Law. Words such as *scalpel* or *appeal* will clearly have a much higher frequency in these contexts than in general discourse.

General frequency has proven to be a determining factor in L2 vocabulary acquisition (Brown 1993). Based on general frequency, Meara (1992) designed a model of frequency profile which seemed to be accurate in the way it characterized vocabulary growth in groups of learners. According to this model, learners are sensitive to the general frequency of occurrence of the words they encounter. Logically enough, words with higher frequency are expected to occur more often in discourse, providing learners with more chances to acquire them.

Yet, a large part of the L2 community learns vocabulary in non-naturalistic environments, where the second language becomes a foreign language, not a L2. These formal contexts limit exposure almost exclusively to the classroom. The classroom is a microcosmos where most learning processes develop. Consequently, the learners' vocabulary acquisition will mainly depend on the input provided by the teacher and the textbook, which may or may not coincide with the general discourse of that language.

Thus, from the standpoint of a foreign language context, I consider specific frequency to be of greater interest than general frequency, given the pedagogical applications it may offer. In fact, especially in non-naturalistic contexts of learning, "individual texts within each corpus can vary from one to another and from the overall frequency list which a corpus produces" (Milton 2009: 25). As stated above, the specific frequency of a word may differ from general frequency. What is more, knowing the number of times a word is to be encountered for acquisition would help designers create reading materials adjusted to the learners' needs.

Unfortunately, to date, there is no agreement on the number of occurrences that are necessary for acquisition. What is more, we do not even know whether all words need to be encountered the same number of times. A number of studies have focused on this issue. Scholars have tried to determine, as accurately as possible, the number of times a word needs to occur to enable acquisition. What we find in this respect are various different outcomes, ranging from 5 and 20 occurrences.

According to studies carried out by Kachroo (1962), Horst et al. (1998) and Rott (1999), a word needs to appear at least 6 to 8 times for the learner to have a real chance

of acquiring it. Rott (1999) compared three groups of learners with different amounts of exposure to the same words – 2, 4 and 6 occurrences. The group with the highest exposure, that is 6 times, was the one which could experience a significant degree of acquisition. Kachroo (1962) observed that most learners acquired words occurring 7 or more times. These results dovetail with those of Horst et al. (1998), showing that no significant gains were possible for a word with fewer than 8 occurrences.

Other scholars increased the number of occurrences to 9 or 10 times in order for a word to be learned. This is the case of Saragi et al. (1978), Reyes (1999) and Webb (2007). These authors state that an impact on vocabulary acquisition can only be observed when the word appears over 9 times. Recent studies are even more sceptical about the role of specific frequency in acquisition. Waring and Takaki (2003) and Pigada and Schmitt (2006) maintain that it takes 20 occurrences or more for a significant frequency effect to become noticeable. In light of these results, it appears that 2 or 3 encounters with a word imply no gaining of knowledge. It is true that encountering a word once or twice may not be enough for discerning its meaning, but it can trigger, at least, word recognition (Hulstijn et al. 1996). In fact, Nagy and Herman claim that “even a single encounter with a word in context [might push it] a little bit higher on the scale of knowledge” (1987: 25). Unfortunately, these little steps are sometimes ignored, mainly because of the lack of tests that are able to perceive them. More sensitive tests and methods are needed in order to offer more accurate answers regarding specific frequency.

Specific frequency can also affect other aspects of word knowledge besides form and meaning. Although these two elements are seen as the bases of vocabulary knowledge (Laufer 1998), there is more to word knowledge than this. Aspects such as grammar and syntax are also part of vocabulary knowledge. In this sense, it has been observed that different aspects of word knowledge develop to such an extent independently from others (Schmitt 1998). On the basis of this fact, we could say that not all word aspects need the same number of occurrences in order to be acquired. The factor which is normally more sensitive to frequency is orthography – experiencing changes practically from the first encounter (Webb 2007). By contrast, grammatical and syntactic knowledge require more occurrences than orthography (Pigada and Schmitt 2006).

Another important aspect to consider is that specific frequency can have an effect on delayed retention as opposed to immediate retention. It is stated that knowledge decreases dramatically after immediate acquisition and then grows gradually, eventually getting established over time (Nagy et al. 1987). Research on the role of specific frequency regarding mid-term and long-term vocabulary retention is still in its infancy. Nonetheless, some studies have addressed this issue. Rott (1999) tested vocabulary retention on two occasions: one week and one month after exposure. She found that frequency had an effect on retention, especially in the receptive knowledge of the word. Waring and Takaki's results (2003) are slightly less optimistic. They estimated that learners only had a 10% to 15% chance of remembering word meanings after three months, even with eighteen encounters.

In conclusion, it seems that a high number of encounters with a word favours its acquisition and retention. However, the sheer amount of conflicting results reveals two main points. The first one is that to date "there is no set number of repetitions that will ensure learning" (Nation and Wang 1999: 363). The second one is that the relationship between frequency and vocabulary does not seem in any way unambiguous (Pigada and Schmitt 2006: 19).

3.4.3.2. Learning context

Within the learning context, we focus on two aspects: intentional/incidental learning and vocabulary presentation. Each aspect is discussed in the present section. From a theoretical standpoint, it is difficult to come to grips with possible definitions of intentional and incidental learning. To make things more complex, McGeoch (1942) pointed out that it was hazardous to assert that incidental learning can be ever found in its purest sense. In other words, we cannot prove that subjects under incidental conditions do not have an intention to learn. In line with McGeoch's views, Postman (1964) suggested that we abandon the intentional-incidental dichotomy. At the same time, he is aware of the distinction and recommends the concepts of intentional and incidental learning as operational terms. Eysenck states that the two terms can be easily distinguished when it comes to "the use of instructions that either do, or do not, forewarn subjects about the existence of a subsequent retention test" (Eysenck 1982: 198).

By contrast, Hulstijn states that it is not the presence or absence of a post-test or the learner's intention which leads to acquisition but "the quality and frequency of the

information processing activities [...] which determine retention of new information” (Hulstijn 2007: 271). The author focused on the pedagogical perspective of the two concepts with regard to L2 vocabulary acquisition. The pedagogical tenets of incidental and intentional acquisition when it comes to L2 vocabulary are defined as follows:

“incidental vocabulary learning refers to the learning of vocabulary as the by-product of any activity not explicitly geared to vocabulary learning, with intentional vocabulary learning referring to any activity aiming at committing lexical information to memory” (Hulstijn 2007: 271).

In this sense, incidental and intentional learning are considered a question of task aim. The most recommended way to promote incidental vocabulary learning is by means of extensive reading (Nagy and Herman 1987; Nagy 1997). Extensive reading is related to the input-oriented theory. Its main tenet states that learners will make meaning-form connections while processing meaningful and contextualized input. According to Grabe and Stoller (2002: 259) “extensive reading exposes learners to large quantities of material within their linguistic competence”. What is more, extensive reading is considered pedagogically effective as it triggers the simultaneous development of two activities at the same time, namely reading skills and vocabulary acquisition. Another important pedagogical advantage of this practice is its contribution to the learning autonomy of students. As they read, they can monitor their own vocabulary learning.

Several studies have shown the positive effect of extensive reading on L2 vocabulary acquisition. Nation and Wang (1999) observed that graded readers were an important source of vocabulary learning in EFL students. In the same vein, results in Horst (2005) showed that participants had learned around 50% of the unknown words encountered in the readers. A recent study by Pigada and Schmitt (2006) pointed to the possibility that an even higher degree of vocabulary acquisition can be registered than in previous studies such as Horst (2005).

Despite the general consensus that reading is an important source for vocabulary acquisition, there are some arguments which play down this notion. For instance, Huckin and Coady (1999) state that reading for meaning does not automatically lead to vocabulary acquisition. In other words, we have to distinguish between the action of guessing meaning in order to understand ideas in a text and actually retaining that meaning once we continue reading: “one can figure out what a word means for immediate comprehension purposes without retaining any long-term memory of the

meaning or even the form of the word, once the reading task is completed” (Read 2000: 60).

Moreover, there is no need to understand the meaning of every single word in a text (Zahar et al. 2001). We can skip the words we do not understand simply because we can get the gist of the text without them. The benefits of extensive reading have been relativized, especially when extensive reading is compared to reading activities and supplementary word-focus activities (Knight 1994; Laufer 2000). There is more to the relationship between extensive reading and vocabulary acquisition which warrants further research. What is clear for now is that extensive reading may play a role in L2 vocabulary acquisition, but this role is still “unpredictable and not necessarily the most effective” (Paribakht and Wesche 1997: 175).

Given this situation, scholars have emphasized the importance of making L2 learners aware of their vocabulary learning task and teaching them strategies for vocabulary learning (Hulstijn 1997; Sökmen 1997). Thus, intentional vocabulary learning promotes attention and focuses on form, which is one of the first steps towards processing information.

Criticisms about intentional vocabulary learning are common in academic literature. Prejudices against this practice include definitions such as this one, where intentional vocabulary learning is viewed in the following terms: “[it] removes the word as completely as possible from any communicative context that might help the learner remember and that might provide some notion as to how the word is actually used as a part of the language” (Oxford and Crookall 1990: 9-10). In line with this idea, Judd (1978: 73) states that words taught in isolation are generally not remembered. This type of idea is partly influenced by the Communicative Method, which, to a degree, promotes a naturalistic context of learning where the student is expected to learn by means of communication, in a similar fashion to the L1. However, a word that is learned in isolation does not necessarily mean that it will not be used for communicative purposes.

Another widely held belief is that time spent on explicit vocabulary teaching is a waste as “few words are retained from those which are learned or taught by direct instruction” (Harris and Snow 2004: 55). Many scholars support this idea on the basis of students’ vocabulary size results. They state that the amount of L2 vocabulary that students must know cannot be explicitly taught, and that most vocabulary has been acquired implicitly. However, there is evidence that “the vocabulary uptake from truly

incidental exposure is usually negligible and successful learners acquire large volumes of vocabulary from words explicitly taught in the classroom” (Milton 2009: 4).

As we have seen, both incidental and intentional vocabulary learning have been used in the vocabulary learning/teaching process, and each of them has their supporters and detractors. Regarding the ideas above, the best way to deal with vocabulary learning would be to adopt a complementary perspective which merges and reinforces the two types of acquisition. This would give rise to some different kinds of knowledge: focused, efficient and in the case of intentional learning, reliable and multicontextual knowledge which allows one to use words in appropriate contexts (Nation 2001).

We now turn to vocabulary presentation and its influence on acquisition. There are numerous ways in which L2 vocabulary can be presented to students. Two of them are commonly adopted by teaching material designers in order to promote learning. These two approaches are in-context presentation and semantic grouping. With regard to context, Miller (1992) distinguishes between three different types of contextual information: situational, topical and local. The situational context stands for the speaker’s world knowledge. It provides the deictic information necessary to carry out the goals and purposes of a specific communicative interaction. The topical context represents, to a certain degree, the topic on which the text is based. This type of context is especially useful for the disambiguation of polysemous and homonymous words. Some words have different meanings in texts about different topics. For instance, in a sports-related text, the word *bat* will almost surely refer to the object used to hit a ball in baseball, whereas in a text about veterinary science, the same word is likely to refer to the nocturnal flying animal. My final point is about the local contextual information provided by the words in a text. This type of information is also known as co-textual, and it helps to clarify the meaning of words that are unfamiliar to the reader.

My intention here is not to contest the value of situational and topical contextual information but rather to focus on the local context. I will explore how language contributes to the acquisition of unknown vocabulary in a text. Studies such as Christ and Petrone (1977) and Gipe (1979) have proven how the local context can provide support for L2 vocabulary learning. Christ and Petrone compared the presentation of vocabulary in context with the presentation of new words accompanied by their definitions. Gipe, on the other hand, compared context with dictionary searches. In both cases, context was more effective than the other two methods.

Although the positive effect of context has been observed, Mondria and Wit-de Boer (1991) fine-tune this idea by stating that it is the *pregnant* context which can really benefit vocabulary learning. The *pregnant* context is a type of local information which adopts the shape of word definition. However, some authors have themselves identified potential limitations with regard to this kind of context. For instance, it has not proven to be very effective in terms of delayed retention. It was suggested that this ineffectiveness was caused by a lack of mental word associations when learning from this type of *pregnant* context. Put another way, a definition-like presentation does not appear to prompt cognitive effort or deeper processing. A second limitation of the *pregnant* context is that it is not the norm in texts. It is only found in pedagogically designed texts, that is to say, it does not usually arise spontaneously.

Despite the advantages that context may offer L2 vocabulary acquisition, we cannot always rely on this technique. In fact, context can even become a double-edged sword. Laufer (1997: 27) comments on some factors that condition the role of context in L2 vocabulary learning:

- Nonexistent contextual clues. Not all contexts provide clues for the words unknown to the reader. As stated above, the *pregnant* context is an exception to the norm, unless we are dealing with graded readers or specifically designed materials (Kelly 1990; Bensoussan and Laufer 1984).
- Unusable contextual clues. This second case points to the existence of some clues for the unknown word; however, these clues are not known by the reader, which means that they can be considered useless for the reader. In fact, it is estimated that vocabulary learning from context is only possible and reliable when the student understands between 95% or 98% of the text (Laufer 2005). This means that the learner must know at least 3,000-3,500 words in order to be able to infer meaning in authentic, non-specialized texts (Nation 1990). This situation begs one question: what about the beginners? Are they able to make use of context? Nuttall (1982) compares the situation of the low level learners to a 'vicious circle'. As the beginners' knowledge of the foreign language is very limited, it is difficult for them to learn new vocabulary from context. If

they do not know enough vocabulary to learn new meanings from context, they cannot increase their vocabulary size. Thus, if they cannot increase their vocabulary knowledge, they cannot make use of context. This is known as the *beginners' paradox*. In this case, some explicit vocabulary teaching is required before they are able to use context as a learning tool.

- Misleading and partial clues. Sometimes the learner mistakenly thinks he/she has inferred the meaning of an unknown word. For instance, if we think we know the meaning of the words around an unknown item, our guessing may be completely wrong because of our misuse of context. Alternatively, it may also be possible that we can partially infer the meaning of an unknown word, albeit we have not really grasped its meaning. The sentence *the cyclone crippled the harbour* is an example. We think that *crippled* must mean something negative for the harbour, as we know that a cyclone is a destructive meteorological phenomenon. However, we do not really know the meaning of *cripple*. The contextual clue has only provided us with partial knowledge of the unknown word. Therefore, learners must be aware of these misleading or partial clues, as in Laufer's words: "what looks right may be wrong; and reliance on what is more or less right may sometimes produce an irresponsible interpretation" (ibid. 30).
- Suppressed clues. Sometimes the learner does not make use of the contextual clues simply because he/she does not need to. Their background knowledge (topical context) prompts them to expect a certain type of information, which means that they end up automatically disregarding other information.

As we can see, we should approach with caution Krashen's suggestion that vocabulary learning will occur naturally from exposure to the L2 (Krashen 1989). What is more, stating that context contributes to L2 vocabulary acquisition is too ambiguous an assertion. A more accurate statement would be to say that context is effective under certain circumstances.

A second way of presenting vocabulary is within semantic groups. However, the use of semantic settings is not free from controversy. Arguments for and against this

practice are found throughout literature on L2 vocabulary. There are a considerable number of studies which oppose semantic grouping (Tikham 1993; Baddeley 1997; Waring 1997; Tekin and Erten 2008). They all agree that semantic grouping promotes cross-association among words. The detractors of this technique affirm that presenting words which are semantically related might set the learner on a confusing path: “presenting new vocabulary that belongs to the same semantic set together may cause interference due to cross-association and may even hinder vocabulary learning” (Tekin and Erten 2008: 207). Waring (1997) even argues that vocabulary presentation in semantic groups is basically due to conventions, methodology and convenience, and that there is no real empirical evidence that proves it has a significant and positive effect on vocabulary acquisition.

However, there is a firm belief among scholars that the mental lexicon may be organized into semantic groups. Accordingly, vocabulary presented in semantic sets can possibly reflect the natural organization of the mental lexicon (Aitchison 1996). If this is indeed the case, then two main advantages can be derived from presenting items organized into semantic groups. First, the learning of some words would probably reinforce the learning of others (Haycraft 1993). Second, learners would be engaged in deep mental processes as they have to distinguish between words which share certain semantic information (Craik and Lockhart 1972).

Nonetheless, there are still some gaps with regard to the effects of presenting vocabulary in semantic groups. Sánchez (2004) and Tekin and Erten (2008) propose some solutions to this controversial issue. Sánchez suggests organizing the semantic settings by taking into account the cognitive disposition of the L2 learners. On his part, Tekin and Erten (2008) proposes presenting vocabulary in thematic sets instead of semantic ones. They offer an example in order to compare these two group types. A typical semantic set would contain words such as *scarf, tie, coat, pants* and *skirt*, all of them garments. By contrast, a thematic set would comprise words such as *sweater, changing room, try on, wool* and *striped*. They are all words related to the semantic field of clothes, but they do not share a superordinate term, which at the same time is shared by the semantic group.

Beyond the debate about these two techniques, they are still widely used in different learning contexts. Their extended use does not mean that everything there is to say about learning vocabulary in context or in semantic sets has been said. Nevertheless,

more research is needed in order to optimize these two methods of presenting vocabulary and their effect on learning.

3.4.4. Extralexical factors

3.4.4.1. Age

Attention given to age with regard to SLA varies depending on the linguistic branch involved. The age factor has been given pride of place in syntax, morphology and phonology, but has been left on the sidelines in vocabulary: “the age factor as it relates to second language lexical acquisition is not a matter that receives a great deal of attention” (Singleton 1995: 10). Some scholars have tried to find an explanation for the dearth of studies which directly relate L2 vocabulary and age. Miralpeix (2006) mentions two possible causes. First, vocabulary is acquired explicitly on many occasions (Hulstijn 2003), especially among adults. This is the reason why it is apparently less related to age than to other areas such as phonology or syntax, where age is an important determinant. The second reason has a neurolinguistic foundation. It seems that the age factor exerts more influence on the areas of the brain which control grammar rather than those which control vocabulary (Miralpeix 2006).

The lack of concrete ideas about L2 vocabulary acquisition in relation to age means that scholars tend to adopt the popular and widely used thought ‘the sooner the better’, which is based on the well-known Critical Period Hypothesis (CPH). According to the CPH, “there is a period of neurological ‘language readiness’ with rigid limits outside of which language acquisition of any kind is difficult” (Singleton 2001: 82). This tenet was initially put forward to account for pronunciation differences observed between young and adult L2 learners.

The CPH was extended to other Second Language areas such as vocabulary, without any real evidence to support the age effect. In this sense, it was to be expected that an early start in Second Language Learning “would help pupils to acquire a wider vocabulary” (Burstall et al. 1974: 69). Similarly, Snow and Hoefnagel-Höhle (1978) observed that although their late starters seemed to perform better in the short-term, early starters would probably end up overtaking them.

While the belief that ‘the sooner the better’ may ring true for some linguistic areas, we have to take into account the fact that not all Second Language branches necessarily develop in the same way. Studies by Yamada et al. (1980) and Singleton

(1995) showed that better immediate performance in late starters is also maintained in the long term. What is more, recent studies of English as an L3 in Catalonia and the Basque Country have gone further by claiming there is no significant difference in L3 vocabulary size between early and late starters (Muñoz 2006).

A possible explanation for the success of later starters observed in the aforementioned studies might come down to the explicit learning processes found in adults and teenagers. The development of their L2 vocabulary knowledge seems quicker, more efficient and clear to the eye (Torrás 2003). Oxford and Scarcella (1994) comment that adults find it easy to learn vocabulary because they are not limited by conceptual abstractness, as children may be. These tenets are, to a degree, related to Piaget's theory of cognitive development (1947). He did not specifically focus on language learning or indeed Second Language Learning, but his ideas have been, and still are, referred to in the field L2 education. Piaget proposes seven cognitive stages experienced by human beings: sensimotor (from 0 to 2 years), pre-operational (from 2 to 7 years), concrete-operational (from 7 to 12 years), and finally, the formal operational stage from approximately 12 onwards. This is a key stage when the child starts thinking in more abstract terms and starts using deductive-hypothetic thinking.

If we 'transpose' Piaget's considerations to the field of L2 vocabulary acquisition, we could say that adults and older children have the advantage of being able to deduce from rules, for instance, in word formation. Being aware of this type of phenomenon helps learners acquire new words in their L2. For instance, people at the formal operational stage are able to understand that *unavoidable* derives from *avoid*. The prefix *un-* plus the verb *avoid* and the suffix *-able* give rise to a new word like *unavoidable*. By contrast, young children are unable to understand why *unavoidable* is related to *avoid*. This example illustrates the main problem at the concrete-operational stage. It is not until the age of 12 that the child is able to relate systems and coordinate different perspectives by formulating rules.

In conclusion, even though the age effect is one of the most explored topics in L2 acquisition, there is still a long way to go with regard to vocabulary learning. Recent research supports the idea that an early start may be significantly better for some linguistic areas, namely pronunciation, but this is not necessarily the case for all aspects of L2 acquisition. Vocabulary acquisition might prove advantageous for an early or late start, but other interrelated factors could also play a role in the learning process. There is

definitely a need for further research on L2 vocabulary acquisition and age, with an emphasis on how and to what extent age and other factors interact.

3.4.4.2. Gender

There are many studies which address Second Language Acquisition in relation to gender (Alcón 1996; Bacon 1992; Berton 2007; Block 2002; Brantmeier 2001; Ekstrand 1980; Sunderland 2000). Most of them point to the advantages female learners have over male learners in terms of L2 acquisition. This idea is in line with the traditional belief that girls are generally better in human sciences and languages, whereas boys are better in technical sciences and maths.

Research on gender and SLA has traditionally focused on areas other than vocabulary acquisition. Few studies have specifically dealt with this relationship and those which have differ in their aims, scope and conclusions. Some of these studies show significant differences between girls and boys in terms of L2 vocabulary. Although most of them comment on the girls' superior performance (Jiménez Catalán and Ojeda 2008; Jiménez Catalán 2003; Jiménez Catalán and Moreno 2004; Jiménez Catalán 1992; Loulidi 1990; Place 1997), there are a few cases where males outperform females. Hurlburst (1954) found that boys were better at recognition and recall tasks. Along the same line, Edelenbos and Vinjé (2000) observed that boys learned words faster than girls.

Nonetheless, these studies where boys do better than girls are the exception to the rule. Most studies show female superiority. For instance, Jiménez Catalán and Moreno (2004) found that Elementary Education girls outperformed their male classmates in a vocabulary association task, where girls acquired almost the double amount of vocabulary than boys. What is more, not only is female superiority registered in controlled activities such as association tasks, but it is also recorded in free production, where girls show a wider vocabulary range and a higher number of tokens in their written work (Jiménez Catalán and Ojeda 2008). However, these differences should be taken with caution. The authors themselves recognize that girls and boys have different interests. Girls are normally more interested in topics such as love or family, whereas boys tend to focus their attention on terrorism or unemployment. The writing task in Jiménez and Ojeda's (2008) study asked the students to describe themselves, their family and friends. Perhaps this topic fits into the interests of the girls more than the

boys. If we take this to be true, then this could have influenced the higher range and amount of vocabulary found in the girls' compositions.

Vocabulary differences between girls and boys go beyond the product and can also be studied in terms of the process. For instance, Jiménez Catalán (2003) observed that the vocabulary strategies were more numerous and varied in girls than in boys. According to Grace (2000), this difference between girls and boys may be due to the different learning processes that they adopt when facing vocabulary acquisition. In the study by Grace, male participants prefer L1 translation, whereas most girls opt for contextual guessing. In this regard, Agustín (2005) comments that male and female divergences regarding vocabulary might not be qualitative, but more a question of learning pace. Nonetheless, this last idea merits more research before we are able to reach solid conclusions.

However, female superiority in L2 vocabulary acquisition is not always given. Some studies have shown that the differences are “not as striking as expected considering girls' superiority in second language learning” (Agustín et al. 2005: 39). No significant divergences were found in receptive L2 vocabulary size between Elementary Education boys and girls (Jiménez Catalán and Terrazas 2008; Agustín et al. 2005). Even though males and females can differ in their approach to vocabulary, results can be quite homogeneous between the two groups (Grace 2000).

Yet Jiménez Catalán (1992) states that as children get older, gender differences seem to become more noticeable: “greater differences [in L2 vocabulary acquisition] are found in older learners” (Jiménez Catalán and Terrazas 2008: 18). Accordingly, we can consider the possibility that gender and age are somehow interrelated. Studies which focus their attention on these two factors and their interrelation would be of great interest.

3.4.4.3. Learning style

There is empirical evidence to suggest that not everyone learns in the same way. Our own experiences as teachers and/or learners show us that not all pedagogical approaches and teaching techniques exert the same effect on all students. This fact can be explained by the different learning styles and methods of processing information that have been identified by scholars.

On the basis of human senses, Dunn (1983) describes four different channels through which information is collected and processed: visual, auditory, kinaesthetic and tactile. Visual learners mostly learn through seeing, whereas auditory learners rely on listening; they benefit from tone, pitch and speed. By contrast, tactile and kinaesthetic learners are normally discussed together, as both are based on physical contact and world examination. In other words, tactile and kinaesthetic learners collect information by touching, moving, tasting, smelling and doing.

In the 1990s a more elaborate theory was presented by Gardner (1993). It was called the Multiple Intelligences theory. Unlike Dunn, Gardner's theory explores types of intelligences and not channels, for this theory is deep-seated in the cognitive framework. He offers a more detailed and varied description of the different ways information can be processed and acquired. The author identifies eight types of intelligences: verbal-linguistic, logic-mathematic, musical, kinetic, visual-spatial, interpersonal, intrapersonal and naturalistic (see table [15]).

Intelligence	Definition
Verbal-linguistic	Linguistic sensibility in the oral and written dimension
Logic-mathematic	Ability to track down patterns, to discern deductively and logically
Musical	Ability to recognize and reproduce melodies and tones. It is closely related to the verbal-linguistic intelligence
Kinetic	Ability to use the body in order to express ideas and solve problems
Visual-spatial	Ability to identify, retain and represent shapes, colours and sizes
Interpersonal	Ability to understand the other's feelings, movements or intentions
Intrapersonal	Ability to know yourself: your weaknesses and strengths
Naturalistic	Ability to identify animals, plants, machines or tools in general

Table [15] Types of intelligences. Multiple Intelligences theory (Gardner 1993)

However, the fact that one learning style or one type of intelligence predominates in a human being does not mean that others are completely absent. In other words, there is one learning style which stands out in each individual, but we should not err in thinking that the learner cannot process information in any other way. In fact, students might resort to, or develop, other intelligences or channels, since they are by no means incompatible.

In conclusion, taking into consideration the way learners collect and process information is of paramount importance in pedagogical terms. Institutions, material designers and teachers should adapt, as much as they can, L2 vocabulary teaching methods and materials to the different learning profiles they will come across in a group of students.

3.4.4.4. Memory

There are different – in some cases even opposing – theories about the nature and development of memory. A detailed discussion of each theory is beyond the scope of this chapter. Instead, I will offer a general perspective on the role of memory in L2 acquisition, especially with regard to vocabulary.

In the theoretical discussion about memory almost everything has changed, except for its definition (Reber 1985). I have extrapolated the main descriptive aspects of memory from definitions offered by two experts: Baddeley (1990) and Loward (1990). Both scholars agree that memory is (1) a cognitive ability that (2) is applied deliberately and consciously (3) with the aim of reproducing information (4) accurately (5) in a specific moment. In turn, Tulving (1972) tweaks the definition of memory by distinguishing between episodic and semantic memory. The former consists of remembering specific facts, for example, one's first kiss, whereas the latter refers to linguistic and world knowledge in general, such as being able to name some Spanish rivers.

The role of memory has waxed and waned throughout the history of methodology in general, and L2 vocabulary acquisition in particular. The Grammar-Translation Method (GTM) and the Audiolingual Method gave pride of place to memory. Students had to memorize vocabulary lists in the case of the GTM and practice the well-known drills promoted by the Audiolingual Method.

These techniques fell by the wayside with the advent of the Communicative Method. Memory went from being a guest of honour to being near the bottom of the list. In a sense, this was to be expected. On the one hand, the rejection of memory turned out to be a natural reaction against the previous methods. On the other hand, memorizing without understanding and reasoning is not worthwhile in the mid and long-term. In other words, “if by rote learning is meant repetition of information without understanding the meaning of the information being repeated, then rote learning will

hardly have a useful place in the L2 curriculum” (Hulstijn 2007: 280). Thus, the introduction of unrelated words contained in vocabulary lists – as it was done in the GTM – would barely help students retain them. Similarly, the audiolingual drills which were memorized without any kind of reflection or attempt at understanding would not likely lead to mid and long-term acquisition.

Nowadays, not only has memory fallen out of favour, but it has even been considered counterproductive in L2 vocabulary acquisition. This situation is well illustrated by a statement Stevick made, which was quoted with the approval of Lewis (1994: 118): “if you want to forget something, put it in a list”. Stevick’s words show the “abhorrence” (Hulstijn 2007: 280) towards memory, which has dominated SLA in the last 30 years.

Contrary to Stevick’s ideas, memory has recently proven paramount to L2 vocabulary acquisition (Loward 1990; Jiménez Catalán 1998; Sánchez 2002, 2004). Memory plays a relevant role at all stages of language learning, but it is especially important at the beginning of the process. In fact, some of the first signs in the learner’s interlanguage consist of several formulae and whole extracts that have been stored as complete units, where learners sometimes do not even know exactly what the members of these units mean separately (Torras 2003).

The efficiency of memory is closely related to attention, motivation, association and systematization. In this regard, if we want to remember a new L2 word, the first step should be to pay attention to that word – nowadays known as noticing. Motivation also has a bearing on memorization, as it is intimately tuned to attention. That is, if we are interested in a word, we are expected to devote our time and attention to it (Baddeley 1990).

As for association, Aristotle had already pointed to the importance of this element in his explanation of memory processes. Several centuries later, evidence showed that the memory stores information in nodules connected by links which allow the interchange of information. Accordingly, memory should not be seen as just a large store where pieces of information are kept; rather, it is a net where information is categorized. Thus, the better organized and communicated the nodules are, the more efficient memory will be.

Sánchez (2002, 2004) offers an interesting attempt to show how memory associations work. She implemented a new vocabulary teaching technique with the aim

of influencing the way learners stored and associated new vocabulary in their mental lexicon. This technique consisted of presenting new target words in diagrams and semantic maps which would presumably imitate the native learner's cognitive association of that vocabulary. Her hypothesis was that vocabulary presented this way would be better for acquisition. The hypothesis was confirmed, and this kind of instruction proved to be more effective for the learners' vocabulary retention than traditional, non-native presentation (more about association in chapter 2, section 2.3.4.1.).

With regard to systematization, the work of the psychologist Ebbinghaus (in Ellis 1994) is worthy of mention here. He claimed that memorization is more effective through systematic repetition. This repetition should be organized according to a schedule. The most critical period for memorization is the first 24 hours after the initial contact with the word. During this period, up to 80% of information may be forgotten. When the critical period has passed, the rate of forgetting gradually slows down.

Hence, in Meara's words, "forgetting what a word means is just as much a part of the vocabulary acquisition process as remembering it" (Meara 2004: 215). De Groot (2006) wanted to find out how much information had been lost one week after advanced university students of Dutch had memorized a group of L2 words. He discovered that the amount of knowledge which had been lost varied from 29% to 40% – which is not the high figure of 80% observed in the first 24 hours, but it is still relatively high.

In turn, Waring and Takaki (2003) took De Groot's study further in two ways. First, they analysed the behaviour of vocabulary knowledge at three different points in time: immediately after encountering the words, one week later, and three months later. Second, they focused on three different aspects of word knowledge: word-form recognition, meaning recognition and translation. They observed that there was a higher loss of knowledge one week after the encounter than compared to three months later. These results seem to confirm the gradual stabilization of knowledge over time.

Despite advances in memory investigation, there are still important gaps which need to be addressed. Memory will perhaps become an efficient or, dare I say, a fundamental tool. The only condition is that more research on this issue is needed. Current advances in the field of Neurolinguistics can help find solid answers. Results from this kind of inquiry will allow us to make optimal use of this potentially powerful instrument of cognition.

In conclusion, it seems that L2 vocabulary acquisition can be affected by different types of factors. They are classified into three categories according to their nature. It is important to state, though, that the effect of each of them stills remains to be firmly established (see figure [8] for a graphic representation of all the factors being considered).

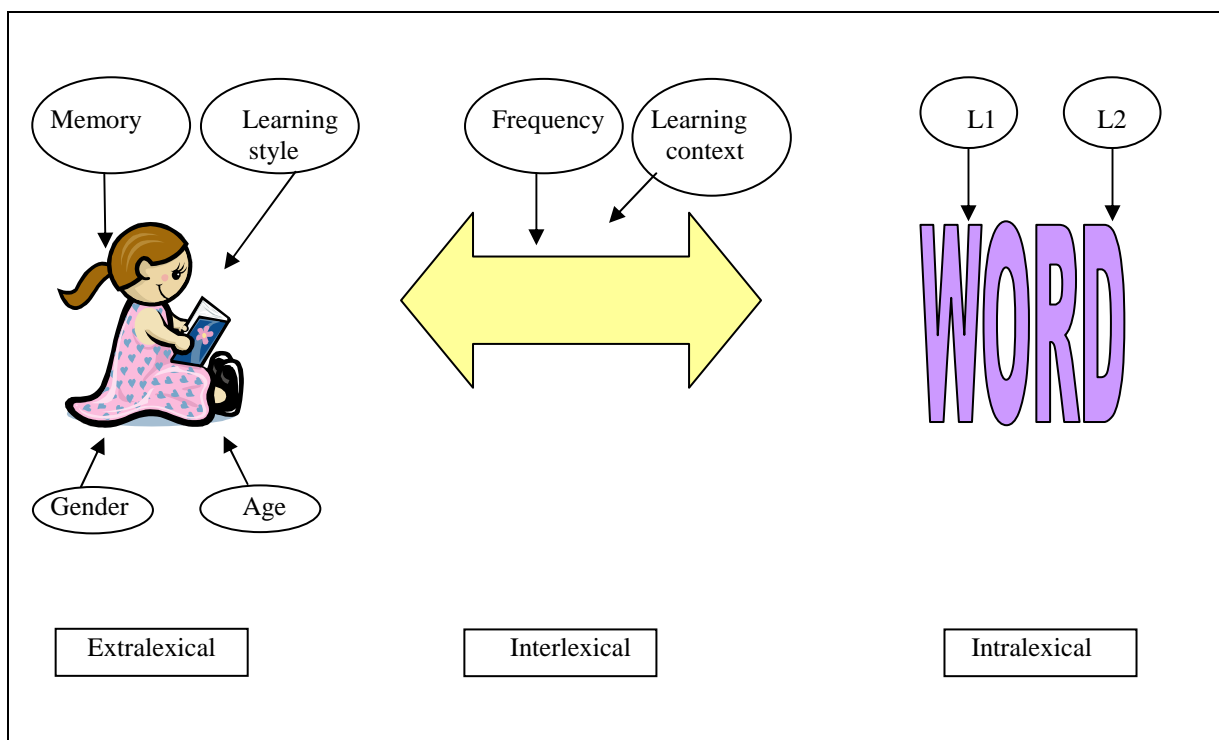


Fig. [8] Intralexical, interlexical and extralexical factors in SLVA

3.5. General Conclusion

The present chapter addresses three of the underpinnings on which L2 vocabulary acquisition relies: what learners should learn (prescription), what they really know (description), and some factors which potentially influence L2 vocabulary acquisition. With regard to prescription, we have highlighted frequency, distribution and functionality as the main criteria for vocabulary selection, as well as the role of the curriculum and the textbook, given that they are the main regulating factors of foreign language input.

The section devoted to description looks at the different studies which reflect the gap between what is expected from students and their reality with respect to learning. Finally, the third part of the chapter focuses on a series of factors which can, to a degree,

determine L2 vocabulary acquisition. It has been suggested that these factors are not completely independent from each other, and some interaction among them is expected.

Chapter 4

The Study: Hypothesis, Research Questions and Method

4.1. Hypothesis Generating

The present study raises the following hypothesis:

Non-systematic presentation of vocabulary might be related to vocabulary learning.

4.2. Research Questions

If non-systematic presentation of vocabulary is related to vocabulary learning, then the following three questions need to be answered:

1. How many words are acquired?
2. At what rate are they acquired?
3. Which words are acquired in terms of frequency and distribution?

4.3. Method

4.3.1. Introduction

The method addresses the different steps followed in the development of this study. The present section is made up of six main parts: the design, the variables, the sample, the instruments, the procedure, and the statistical techniques to be applied in the data analysis.

The first part describes the nature of the research carried out in the study. The second part introduces the dependent and independent variable, which constitute the basis of the study. The third part of the method describes the sample of participants and their learning context. Instruments are discussed in part four. They are classified into different sub-sections depending on their function. The way these instruments are used is

explained in the procedure section. Finally, an account of the statistical techniques used in the data analysis is provided.

4.3.2. Design

The design of the current study relies on a combination of primary and secondary research. According to Brown and Rodgers (2002), primary research deals with original data, whereas secondary research is based on bibliographical resources such as scientific books and papers. A sample of secondary research can be found in chapters 2 and 3, where the theoretical bases of the present study are established. On its part, we can say that primary research starts here, with the method. This chapter offers detailed information about the *how* of the study.

The study seems to straddle descriptive and quasi-experimental design. On the one hand, it is descriptive in the sense that it is expected to portray “an accurate profile of people, events and situations” (Porte 2002: 17). A description of the quantity and the rate at which vocabulary is acquired in the classroom – which is the case of this study – does not seem too simplistic or far-fetched, especially given the limited number of studies which explore this issue in depth. Indeed, a descriptive study like this can provide the background from which analytical, experimental, or quasi-experimental studies may emerge.

On the other hand, the study can be classified as quasi-experimental. Quasi-experimental design is recommended for the social and human sciences. Wuensch (2003) states that “sometimes, you cannot accomplish random assignment, especially when dealing with human subjects” (2003: 1). This is why quasi-experimental designs are applied in educational contexts where groups are normally pre-established, and where it is rather impractical – even impossible – to deal with the whole population.

Quasi-experimental studies are developed in natural environments. In this sense, they do not suffer the same problems of artificiality as compared to well-controlled laboratory settings. In a sense, their findings might be applied to other subjects and settings, allowing for some generalizations to be made about population.

However, causal inferences should be always treated provisionally and with caution. In fact, Campbell (1963) refers to quasi-experimental designs as *queasy* experiments because they give experimental purists a queasy feeling. Along these lines, Trochim warns about “their inherent messiness and greater susceptibility to threats of

internal validity” (Trochim 1998: 407). Despite this criticism, Shadish et al. hold that researchers – especially those interested in investigating applied research questions – should move beyond traditional experimental design and take advantage of the possibilities which are inherent in quasi-experimental designs (Shadish et al. 2002).

Normally, quasi-experimental studies compare two or more groups of participants who find themselves under certain circumstances. The present study does not compare two groups, but, in a sense, can be considered quasi-experimental, the reason being that there is one group of students who are pre-tested and post-tested after receiving certain vocabulary treatment based on non-systematic input.

4.3.3. Variables

4.3.3.1. Dependent variable

The dependent variable is defined as the main variable to be measured or observed. In this case, it corresponds to the students’ acquisition of target words contained in the coursebook. Word knowledge is understood in receptive and productive terms (see chapter 2). Acquisition is tested regarding the learner’s ability to recognize a form and link that form with its L2 or L1 equivalent. Here, word knowledge is understood as a construct made up of different aspects. Each of them constitutes a type of word knowledge which is measured by an instrument (see section on instruments for further information about the dependent variable and the types of word knowledge which are tested).

4.3.3.2. Independent variable

The independent variable is the element that is believed to relate to, or influence, the dependent variable. In the present study, the independent variable is the coursebook that is followed by the learners. There are some who claim that this type of materials may take the initiative away from the teachers (Richards 1993; Brumfit 1979) and can never satisfy local needs (Allwright 1981; Cunningsworth 1995). We will not get into the debate about the pros and cons of using textbooks here. Information about this topic can be found in chapter 3, section 3.2.2.2. Controversy aside, it is a fact that the coursebook is one of the protagonists in the EFL classroom, constituting the basis of the course in general, and of the lesson in particular.

The textbook which is used in the study is entitled *Bugs 3* (Macmillan 2004). This course is specifically intended for young EFL learners in their third year of Elementary Education. It enjoys a high degree of popularity among English teachers and the student community. In addition, *Bugs 3* is widely used in Spanish schools. The present section deals with this textbook in depth. First, a general description of *Bugs 3* is offered, where the method, the structure and the activities of the textbook are discussed. Second, vocabulary input is addressed, presenting a detailed account of the quantitative and qualitative aspects.

a) *BUGS 3*: GENERAL DESCRIPTION

Bugs 3 targets EFL students in their third year of Elementary Education. It is part of a general project comprising six different levels which aim to fulfil the students' needs at the stage of Elementary Education. This EFL textbook series is internationally recognised and is used in EFL teaching contexts in many countries around the world, Spain included. The Bugs project is divided into three parts corresponding to the three Elementary Education cycles in Spain: first cycle (6-8 year olds), second cycle (8-10 year olds), and third cycle (10-12 year olds). *Bugs 3* is the third coursebook of a series published by Macmillan in 2004.

The coursebook relies on the development of communicative skills and language use together with sociocultural aspects. *Bugs 3* focuses on the gradual introduction of reading and writing skills by means of short and simple texts. As for the sociocultural aspects, the coursebook reflects customs, traditions and personal relationships. It also promotes effort and self-confidence. According to the didactic guide of this textbook, *Bugs 3* pursues the following general goals⁴:

- To encourage students' interest in the Foreign Language
- To develop students' ability to understand and respond to oral messages
- To enhance students' use of verbal and non-verbal processes in order to communicate
- To develop students' practice of intensive and extensive reading of short and simple texts
- To help students to write very short and simple texts

⁴ This is an English translation of the general goals proposed by the didactic guide of *Bugs 3*, which is published in Spanish.

-
- To develop students' ability to identify and reproduce phonetic patterns and rhythmical patterns in the Foreign Language
 - To enhance students' awareness of the value of the Foreign Language as a means of communication
 - To encourage students' use of Information and Communication Technologies as a way of developing and reinforcing Foreign Language learning

Bugs 3 makes use of the story as the organizing axis of its content. The story establishes the linguistic context for the introduction of input in each unit, motivating the students and involving them in different reading tasks. It also prepares them for very simple writing tasks. Stories in *Bugs 3* adopt the comic book format in an attempt to look familiar to the students and attract their attention. Three types of stories can be found in *Bugs 3*: humour, fantasy and everyday situations. They are inspired in consolidated literary genres for children, where the protagonists are bugs, children, animals or fantastical beings.

The coursebook focuses on the integration of the four basic skills: listening, reading, speaking and writing. Each activity mainly fosters the practice of one skill or the combination of several skills. Listening tasks are based on songs, rhymes, poems and dialogues where vocabulary and linguistic structures are introduced. Most of the listening activities are based on the story. The children listen to the story before reading it. From the very beginning they are encouraged to make predictions about what is happening by looking at the pictures related to the story. This activity helps them to gain an overall understanding of the story. Phonological skills are also developed by means of word repetition and different rhythm games where intonation and syllable accents are practiced. The speaking tasks focus on establishing the bases for the communicative discourse, which will be developed over the following years. In this sense, children are encouraged to use English by singing songs and reciting poems or rhymes.

Regarding reading and writing, the coursebook is based on the *shared reading* technique, where the teacher reads the story aloud while the children listen⁵. At the same time, the children are encouraged to look at the text. The teacher's function is to focus

⁵ The shared reading model was developed by Holdaway (1979). According to Wells (1986), this type of reading is a critically important factor in young children's reading development.

on the form of the words and their meanings. Special attention is also given to the sound-letter patterns and the differences between the written and the spoken form. As stated above, in the case of writing, the tasks are very simple, basically restricted to the word level.

Bugs 3 consists of eight didactic units plus one introductory section. The set is completed by two special sections about Christmas and Easter (the Pancake unit). Each didactic unit deals with one or two different main topics which are intended to capture the students' interest as well as help them improve their communicative abilities. As an attempt to accomplish these two characteristics, the units deal with topics such as food, sports, family and school (see table [16] for the complete list of topics).

	Topics
Introduction	Introducing yourself + Numbers
Unit 1	Pets + School materials
Unit 2	Clothes + Family + Halloween
Unit 3	Wild animals + Body parts
Unit 4	Food
Unit 5	Sports + Numbers (II)
Unit 6	Daily routines + The time
Unit 7	Holidays + The weather
Unit 8	Stories + Story characters
Christmas section	Christmas presents + Typical Christmas objects
Easter section	Typical Easter objects + Pancake recipe

Table [16] Topics in Bugs 3

Each unit is divided into seven lessons which share the same general structure:

- Lesson 1. Some target vocabulary of the story is presented to the students. There is an introduction to the main topic of the story in order to help the children understand the story in the following lesson.
- Lesson 2. The focus is on the story itself. The story is listened to and visual support is provided in order to help understanding.
- Lesson 3. The students listen to the story again and then read it for the first time.

- Lesson 4. The main topic of the story is further developed with an accompanying song, where new vocabulary is normally introduced. Afterwards, different textbook activities are proposed.
- Lesson 5. This part of the unit is devoted to transversal issues. The children read a short text about an issue related to the main topic of the unit. Afterwards, some activities are proposed.
- Lesson 6. This lesson consists of pronunciation practice and extra activities about the different elements covered in the unit.
- Lesson 7. This is considered the self-evaluation lesson where the teacher can check how much knowledge the students have acquired in each didactic unit.

b) *BUGS 3*: VOCABULARY INPUT

Vocabulary is introduced both implicitly and explicitly by means of the different stories, texts and activities contained in the coursebook. *Bugs 3* presents the same number of activities in all main units. Units 1 to 8 each include 10 activities. The number of activities is reduced to 5 in the case of the Introduction and Christmas sections, and to 4 in the section devoted to Easter (see table [17]).

In general terms, the activities are designed to improve the linguistic and sociocultural development of the English learners. Focusing on the linguistic content, the activities combine the practice of skills with vocabulary learning. These activities are mainly integrative in nature, where at least two skills are involved and where vocabulary is treated both receptively and productively.

	Introduction	U1	U2	U3	U4	U5	U6	U7	U8	Christmas	Easter	Total
Textbook	5	10	10	10	10	10	10	10	10	5	4	94

Table [17] Number of activities in *Bugs 3*

The receptive approach to vocabulary – as it is presented in the activities – consists of processing information, such as is the case with listening to and reading the main story of the unit or identifying the different words in the story. With regard to the productive approach, it is still highly controlled. In other words, it is based on dichotomous or very simple answers such as yes/no, right/wrong, single words and very short sentences. Activities where vocabulary is taught include singing, drawing,

matching and circling. Table [18] shows the different types of formats adopted by the activities and their receptive and/or productive treatment of vocabulary.

Activity	Vocabulary treatment
Listen + read/point/circle/draw/number/tick/find	Receptive
Listen + say/act/write	Productive
Read + point/match/circle	Receptive
Write + tick/ask and answer/number/find	Productive
Play with the web/guessing/board game	Receptive + Productive
Craft	Receptive

Table [18] Types of activities and vocabulary treatment in Bugs 3

Bugs 3 contains a different number of tokens, types, families and lemmas which are distributed across the different didactic units of the coursebook (see section 4.2.5.1 for a detailed description of the coursebook analysis). Table [19] contains the number of tokens, types, families and lemmas found in the textbook as a whole and in each unit.

		Intro	U1	U2	U3	U4	U5	U6	U7	U8	Xmas	Easter	Total
Tokens	BNC	124	305	311	519	380	320	517	459	547	224	105	3811
Tokens	GSLA	124	305	311	519	380	320	517	459	547	224	105	3811
Types	BNC	73	103	95	108	91	123	101	105	143	82	45	541
Types	GSLA	73	103	95	108	91	123	101	105	143	82	45	541
Families	BNC	58	85	76	72	79	98	86	84	118	70	41	373
Families	GSLA	57	85	74	76	76	93	83	83	112	65	40	354
Lemmas	BNC	72	99	91	95	86	117	100	102	137	80	44	488
Lemmas	GSLA	72	99	91	95	86	117	100	102	137	80	44	488

Table [19] Tokens, types, families and lemmas in Bugs 3

The tokens, types, families and lemmas are classified according to both the BNC and the GSLA. The distribution is presented in tables [20], [21], [22] and [23], and in figures [9] to [16].

	Intro	U1	U2	U3	U4	U5	U6	U7	U8	Xmas	Easter	Total
1 BNC	108	263	267	397	286	271	458	363	450	188	72	3123
2 BNC	5	16	21	47	55	30	41	53	45	12	14	339
3 BNC	5	5	6	11	14	6	7	20	30	3	8	115
Nf ⁶ BNC	6	21	17	64	25	13	11	23	22	21	11	234
1 GSLA	101	253	260	412	282	257	425	355	440	175	72	3032
2 GSLA	14	31	28	37	62	27	73	74	56	24	21	447
3 GSLA	0	0	0	0	0	10	1	0	0	0	0	11
Nf GSLA	9	21	23	70	36	26	18	30	51	25	12	321

Table [20] Number of tokens in Bugs 3

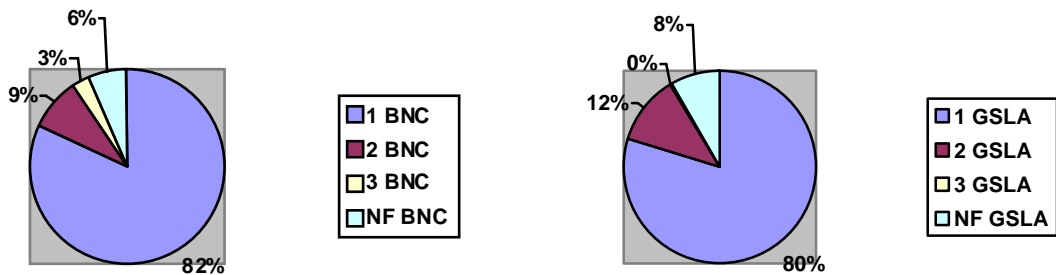


Fig. [9] Distribution of tokens according to the BNC

Fig. [10] Distribution of tokens according to the GSLA

	Intro	U1	U2	U3	U4	U5	U6	U7	U8	Xmas	Easter	Total
1 BNC	60	78	76	58	60	98	79	72	111	66	36	313
2 BNC	5	11	10	17	15	15	12	16	16	6	6	90
3 BNC	4	3	3	5	7	3	3	6	7	3	3	43
Nf BNC	4	11	6	28	9	7	7	11	9	7	3	95
1 GSLA	60	75	73	65	61	94	73	71	106	61	33	308
2 GSLA	7	17	13	19	17	16	17	22	22	10	9	117
3 GSLA	0	0	0	0	0	2	1	0	0	0	0	2
Nf GSLA	6	11	9	24	13	11	10	12	15	11	3	114

Table [21] Number of types in Bugs 3

⁶ Nf stands for Not found

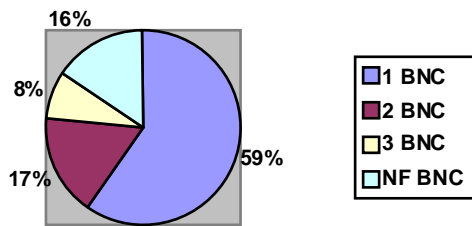


Fig [11] Distribution of types according to the BNC

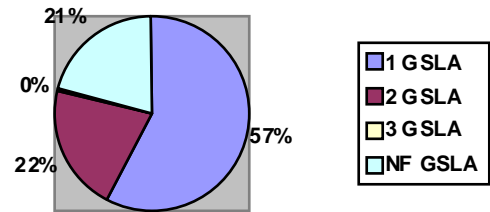


Fig [12] Distribution of types according to the GSLA

	Intro	U1	U2	U3	U4	U5	U6	U7	U8	Xmas	Easter	Total
1 BNC	50	71	63	53	58	82	71	63	96	61	32	255
2 BNC	5	11	10	16	15	13	12	15	15	6	6	80
3 BNC	3	3	3	3	6	3	3	6	7	3	3	38
Nf BNC	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
1 GSLA	50	69	62	59	59	77	65	63	91	56	32	251
2 GSLA	7	16	12	17	17	15	17	20	21	9	8	102
3 GSLA	0	0	0	0	0	1	1	0	0	0	0	1
Nf GSLA	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx

Table [22] Number of families in Bugs 3

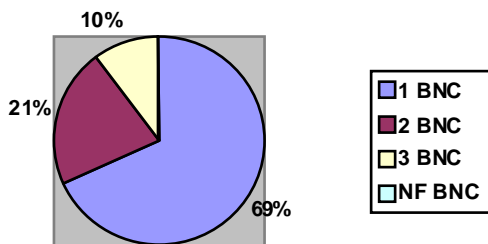


Fig [13] Distribution of families according to the BNC

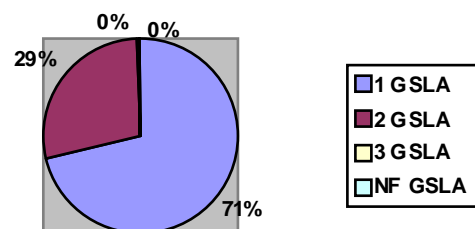


Fig [14] Distribution of families according to the GSLA

	Intro	U1	U2	U3	U4	U5	U6	U7	U8	Xmas	Easter	Total
1 BNC	60	75	72	55	59	95	76	70	105	63	33	284
2 BNC	5	11	10	16	13	12	12	14	15	6	6	78
3 BNC	3	3	3	4	6	3	3	6	7	3	3	39
Nf BNC	4	10	6	20	8	7	9	12	10	8	2	87
1 GSLA	60	73	70	61	60	90	70	70	101	58	33	278
2 GSLA	7	16	12	18	15	15	16	19	21	10	9	103
3 GSLA	0	0	0	0	0	1	1	0	0	0	0	1
Nf GSLA	5	10	9	16	11	11	13	13	15	12	2	106

Table [23] Number of lemmas in Bugs 3

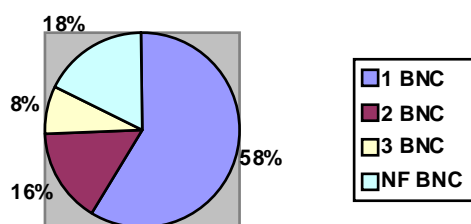


Fig [15] Distribution of lemmas according to the BNC

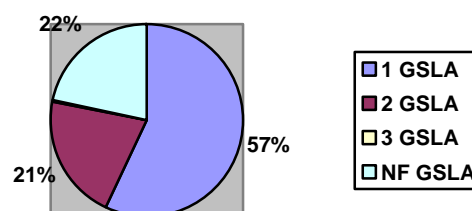


Fig [16] Distribution of lemmas according to the GSLA

Each of the four tables corresponds to a different linguistic unit: tokens, types, families and lemmas. The figures obtained for the types of linguistic unit will differ due to their different nature (for a detailed description of linguistic units see chapter 1 of the present thesis). The number of tokens, types, families and lemmas is given for both the whole coursebook and each didactic unit and additional section (Introduction, Christmas and Easter).

Eight frequency categories are identified in the tables. The first four categories belong to the BNC: 1 BNC represents those units among the 1,000 most frequent words; 2 BNC is concerned with those units among the 1,001 and the 2,000 most frequent words; in the same line 3 BNC contains those units among the 2,001 and 3,000 most frequent words; and the Nf BNC category stands for those units which are not found among the 3,000 most frequent words in the BNC.

The other four frequency categories correspond to the GSLA. The units among the 1,000 most frequent words fall within 1 GSLA; those among the second 1,000 most frequent words correspond to 2 GSLA; and 3 GSLA refers to the third 1,000 most frequent words extracted from the AWL (Academic Word List). Like the BNC, there is a

Nf GSLA category which contains the rest of the units which do not fit any of the GSLA categories above (these two lists will be described at length in the section devoted to the instruments).

Vocabulary introduction in *Bugs 3* is reflected in a rate plot (figure [17]). The rate plot presents the number of new words introduced per didactic unit, that is to say, the target vocabulary which is especially relevant for the unit.

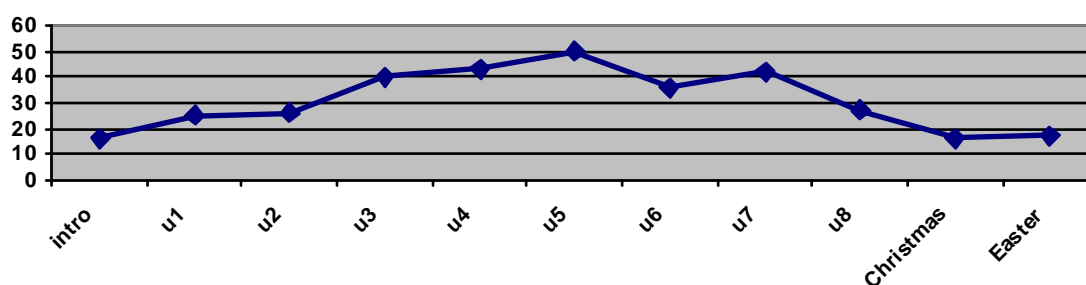


Fig. [17] Rate plot of vocabulary in Bugs 3

A total of 129 target words were tested. By target words we mean new nouns, verbs, adjectives and adverbs that are introduced in the coursebook during the period of development of the study. The amount of ‘new vocabulary’ introduced per session ranged from 13 to 27 words, with an average of 21.5 words per session. The concept of ‘new vocabulary’ is operationalized for the sake of study validity. Operationalization in vocabulary studies is a common accepted practice (Porte 2002). One of the reasons for this practice is the lack of a common framework for L2 vocabulary acquisition research. ‘New vocabulary’ in the present study is defined as the target words in units 4, 5 and 6 of *Bugs 3* (see chapter 2, section 2.2. for the discussion about word definition) that may or may not have appeared in previous units, but which are unknown by the students and which receive attention in units 4, 5 and 6. Therefore, the term ‘new’ refers to what is unknown to the students rather than what is new in the coursebook.

These words are distributed throughout units 4, 5 and 6, and the students’ knowledge of these words is tested in six sessions. Sessions 1 and 2 correspond to unit 4; sessions 3 and 4 represent unit 5; and finally, sessions 5 and 6 reflect unit 6. Table [24] shows how many and which words are introduced per session. At the same time, figure [18] represents the introduction of the target words in the six sessions.

Session 1 (n=22)	Session 2 (n=21)	Session 3 (n= 23)	Session 4 (n=27)	Session 5 (n=23)	Session 6 (n=13)
bread	ache	bad	ball	bed	bedtime
canteen	animal	basketball	butterfly	breakfast	day
chips	cereal	bike	fifty	brush	dinnertime
delicious	cheese	can	finger	children	early
eat	chicken	competition	forty	clean	garden
fish	come	end	game	dinner	go away
here	egg	famous	hundred	dirty	great
hungry	fly	fantastic	kilometres	get dressed	half past
ice cream	food	football	listen	get up	help
juice	fork	goals	metres	giant	late
like	fruit	incredible	minutes	go	lunchtime
love	glass	luck	pass	lunch	o'clock
macaroni	good	play	point	morning	party
orange	grains	ride	quick	munch	
rice	knife	rollerblade	run	school	
salad	now	score	seconds	shampoo	
sausages	plant	skateboard	shoot	shower	
see	plate	star	sixty	smell	
sit down	spoon	sure	skate	soap	
time	tummy	tennis	spin	splash	
today	vegetables	thirty	swim	stretch	
want		tonight	thousand	teeth	
		turn	throw	zip	
			twenty		
			whistle		
			win		
			winner		

Table [24] Introduction of 'new vocabulary' in Bugs 3

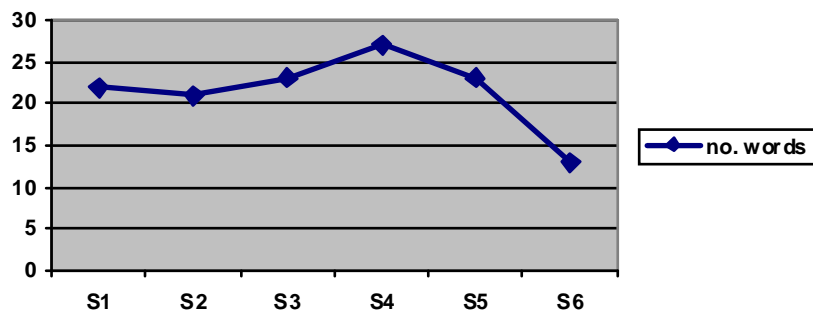


Fig. [18] Number of target words introduced per session

Each of these words falls within a level of general frequency. General frequency refers to the place that words occupy in the BNC and GSLA frequency lists. This place may change depending on the list under which the words are analysed. Table [25] shows all the target words for units 4, 5 and 6 together with their levels of general frequency according to the BNC and the GSLA. Figures [19] and [20] show the percentages of general frequency in both corpora. As we can observe, around a quarter of the tested vocabulary is not found among the most frequent words in general discourse. This shows that frequency is not among the main criteria used by the coursebook.

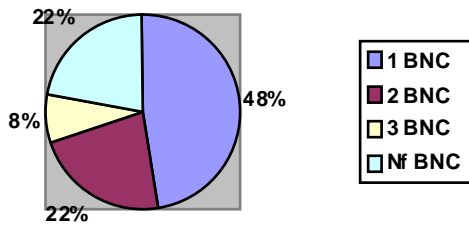


Fig. [19] General frequency of target vocabulary BNC

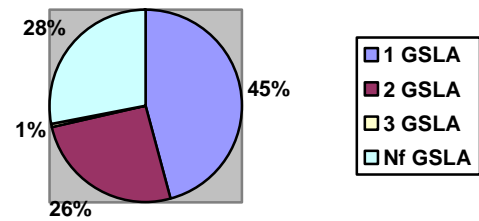


Fig. [20] General frequency of target vocabulary GSLA

Chapter 4

Session 1			Session 2			Session 3			Session 4			Session 5			Session 6		
Word	BNC	GSLA	Word	BNC	GSLA	Word	BNC	GSLA	Word	BNC	GSLA	Word	BNC	GSLA	Word	BNC	GSLA
Bread	2	1	Ache	3	2	Bad	1	1	Ball	1	1	Bed	1	1	Bedtime	Nf	Nf
Canteen	3	Nf	Animal	2	1	Basketball	Nf	Nf	Butterfly	Nf	Nf	Breakfast	2	2	Day	1	1
Chips	2	Nf	Cereal	Nf	Nf	Bike	2	Nf	Fifty	1	1	Brush	2	2	Dinnertime	Nf	Nf
Delicious	Nf	Nf	Cheese	2	2	Can	1	1	Finger	2	2	Children	1	1	Early	1	1
Eat	1	1	Chicken	2	2	Competition	2	2	Forty	1	1	Clean	1	2	Garden	1	1
Fish	1	1	Come	1	1	End	1	1	Game	1	1	Dinner	1	2	Go away	Nf	Nf
Here	1	1	Egg	1	1	Famous	2	1	Hundred	1	1	Dirty	2	2	Great	1	1
Hungry	2	2	Fly	1	1	Fantastic	Nf	Nf	Kilometres	Nf	Nf	Get dressed	Nf	Nf	Half past	Nf	Nf
Ice cream	Nf	Nf	Food	1	1	Football	1	2	Listen	1	1	Get up	Nf	Nf	Help	1	1
Juice	2	2	Fork	3	2	Goal	2	3	Metres	Nf	Nf	Giant	3	Nf	Late	1	1
Like	1	1	Fruit	2	2	Incredible	2	Nf	Minutes	1	1	Go	1	1	Lunchtime	Nf	Nf
Love	1	1	Glass	1	1	Luck	1	2	Pass	1	1	Lunch	1	2	O'clock	Nf	Nf
Macaroni	Nf	Nf	Good	1	1	Play	1	1	Point	1	1	Morning	1	1	Party	1	1
Orange	2	2	Grains	3	2	Ride	2	1	Quick	1	2	Munch	Nf	Nf			
Rice	Nf	2	Knife	2	2	Rollerblade	Nf	Nf	Run	1	1	School	1	1			
Salad	Nf	Nf	Now	1	1	Score	1	Nf	Second	1	1	Shampoo	Nf	Nf			
Sausage	Nf	Nf	Plant	2	1	Skateboard	Nf	Nf	Shoot	1	1	Shower	2	2			
See	1	1	Plate	2	2	Star	2	1	Sixty	1	1	Smell	2	2			
Sit down	Nf	Nf	Spoon	3	2	Sure	1	1	Skate	Nf	Nf	Soap	Nf	2			
Time	1	1	Tummy	Nf	Nf	Tennis	3	Nf	Spin	3	2	Splash	3	Nf			
Today	1	1	Vegetables	2	Nf	Thirty	1	1	Swim	2	2	Stretch	2	2			
Want	1	1				Tonight	1	2	Thousand	1	1	Teeth	2	2			
						Turn	1	1	Throw	1	1	Zip	Nf	Nf			
									Twenty	1	1						
									Whistle	3	2						
									Win	1	1						
									Winner	1	1						

Table [25] Target vocabulary of units 4, 5, 6 in Bugs 3

Regarding foreign language context, more important than general frequency is specific frequency. By specific frequency we mean the number of times a linguistic item occurs in a certain cotextual environment such as a newspaper, a textbook or a conversation. Put another way, specific frequency refers to the frequency of exposure to the learner, rather than the occurrences in a language in general. Thus, in a foreign language context – which is the case of the present study – it seems more appropriate to pay attention to the number of times the learners encounter the target words.

However, frequency of occurrence in isolation may sometimes be a misleading indicator of the overall importance of a word (Gries 2008; Leech et al. 2001). In fact, frequency of occurrence can run into problems when the dispersion of elements is not taken into consideration. Gries (2008) holds that dispersion is highly relevant both in and of itself, as well as a factor that can strongly influence other corpus linguistics statistics. Some general indices of dispersion are the range, the maximum-minimum difference, the standard deviation, the variation coefficient, the chi-squared, or those proposed by authors such as Carroll (1970), Julliard et al. (1970), Lyne (1985) and Zhang (2004). Yet there are two main problems with all these measures: either they are not specifically geared to the dispersion of linguistic items in texts or, if they are, they are too complicated to calculate.

As an alternative to these indices of dispersion, we follow Gries' proposal, which he calls the deviation of proportions (DP). According to the author, the DP is “conceptually simpler and more versatile than many competing measures” (Gries 2008: 197). This measure allows us to quantify the dispersion of lexical items, and does not rely on the unwarranted assumption of equally-sized corpus parts. What is more, it is not a measure of statistical significance; hence, it avoids the theoretical problems of the hypo-testing paradigm⁷.

To determine the DP of a word *W* in a corpus with *N* parts, three steps are to be taken:

1. The first step consists of determining the sizes of each of the corpus parts. These are normalized against the overall corpus size and correspond to expected percentages which take differently-sized corpus parts into consideration.

⁷ According to the hypo-testing paradigm, in a scientific experiment the resolution is the hypothesis. What the paradigm proposes is to defend the resolution by proving it true in every instance. The resolution, or hypothesis, can be disproven by a single example.

2. In the second step we need to determine the frequency with which W occurs in the N corpus parts. They are normalized against the overall number of word occurrences W and correspond to an observed percentage.
3. Finally, we need to compute all N pairwise absolute differences of observed and expected percentages, add them up, and divide the result by two.

Chapter 4

Word	DP	Word	DP	Word	DP	Word	DP	Word	DP	Word	DP	Word	DP
Ache	0.90	Clean	0.90	Football	8.18	Hundred	1.63	Now	4.45	See	3.63	Thirty	4.36
Animal	1.63	Come	5.09	Fork	2.27	Hungry	7	O'clock	16.36	Shampoo	1.63	Thousand	0.90
Bad	0.90	Competition	0.90	Forty	1.81	Ice cream	7.27	Orange	2.54	Shoot	0.90	Throw	4.54
Ball	6.54	Day	7.45	Fruit	1.63	Incredible	0.90	Party	1.81	Shower	6.54	Time	9.63
Basketball	1.81	Delicious	2.45	Game	2.18	Juice	2.45	Pass	2.27	Sit down	3.27	Today	1.63
Bed	2.27	Dinner	2.45	Garden	0.90	Kilometres	0.90	Plant	2.18	Sixty	0.90	Tonight	0.90
Bedtime	0.90	Dinnertime	0.90	Get dressed	2.27	Knife	3.63	Plate	1.63	Skate	1.81	Tummy	0.90
Bike	1.81	Dirty	0.90	Get up	6.36	Late	1.63	Play	11.09	Skateboard	2.27	Turn	2.45
Bread	0.90	Early	0.90	Giant	2.27	Like	10.09	Point	3.63	Smell	0.90	Twenty	3.27
Breakfast	7.27	Eat	5.09	Glass	0.90	Listen	0.90	Quick	3.27	Soap	0.90	Vegetables	0.90
Brush	7.36	Egg	3.27	Go	13	Love	4.36	Rice	3.63	Spin	1.63	Want	3.81
Butterfly	0.90	End	1.63	Go away	0.90	Luck	0.90	Ride	1.81	Splash	2.27	Whistle	0.90
Can	35.81	Famous	2.27	Goal	9	Lunch	4.09	Rollerblade	1.81	Spoon	0.90	Win	0.90
Canteen	0.90	Fantastic	1.81	Good	1.63	Lunchtime	0.90	Run	4.36	Star	3.27	Winner	0.90
Cereal	0.90	Fifty	2.27	Grains	0.90	Macaroni	6.36	Salad	2.45	Stretch	3.63	Zip	2.27
Cheese	0.90	Finger	0.90	Great	4.09	Metres	3.27	Sausages	4.54	Sure	1.81		
Chicken	3.27	Fish	9.90	Half past	10.90	Minutes	2.27	Score	5.45	Swim	5.27		
Children	2.27	Fly	1.63	Help	8.72	Morning	9.09	School	6.36	Teeth	8.18		
Chips	8.18	Food	0.90	Here	11.72	Munch	2.27	Seconds	3.63	Tennis	3.63		

Table [26] DPs of target vocabulary in Bugs 3: units 4, 5 and 6

We will obtain a figure which is expected to be between 0 and 100. Those DPs close to 0 indicate that W is distributed across the N corpus parts as one would expect, in accordance with the sizes of the N corpus parts. Values far from 0 indicate that W is distributed across the N corpus parts exactly the opposite way one would expect. That is to say, the further from 0 the more uneven the distribution of the word (see table [26] for the DPs of the target vocabulary in units 4, 5 and 6 of *Bugs 3*).

4.3.4. Sample

The sample initially comprised 50 EFL students in their third year of Elementary Education. However, some subjects did not attend one or more of the data collecting sessions, and others already knew some of the target words. For this reason the final sample ended up including 44 of the initial 50 subjects. All of the students were between 8 and 9 years of age. At the time the study was carried out, they had all received around 186 hours of English instruction, equating to an Elementary level of English.

All 44 students were born in Spain and speak Spanish as their mother tongue. They attend an elementary school in the Region of Murcia, located in the southeast of Spain. This institution is a state school in Archena, a medium-sized town 23 kilometres from the capital city. The centre has been active since 1940. It is located in the town centre and it is the oldest school in Archena. It has 627 pupils distributed across 22 groups. There are two groups per year ranging from kindergarten (3, 4 and 5 year olds) through to the sixth year of Elementary school (12 year olds). The centre has 21 teachers, three of whom are English teachers⁸.

Most students come from families whose parents were born in Spain. English is taught as a compulsory foreign language from the first to the sixth year of Elementary Education. Students receive two hours and forty-five minutes of formal English instruction per week. Spanish is normally used as the vehicular language in the classroom, while the foreign language is only present in some formulae such as *thank you*, *goodbye* and *please*. English is mainly and almost exclusively found in the input provided by the coursebook.

⁸ Data taken from the annual school report

4.3.5. Instruments

The several instruments used in the present study can be classified according to their function: (1) coursebook analysis by means of a computer program which is based on corpora, and Gries' formula of dispersion which is only applied to the target vocabulary; (2) student identification comprising several instruments (identification file, questionnaire and vocabulary size) which are intended to provide personal and academic information about the participants; (3) teacher identification, where her personal and academic information is collected by means of an identification file and a questionnaire; (4) classroom control carried out by means of observation charts, teacher worksheets and the researcher's diary; and (5) different vocabulary tests in the section devoted to vocabulary acquisition assessment.

4.3.5.1. Coursebook analysis

The coursebook is analysed using RANGE, a software program which allows the researcher to obtain the number of linguistic units in a text as well as the general frequency of occurrence of those units. The program can be used with different corpora and frequency lists. In this case, linguistic units are quantified according to two different lists. One of them belongs to the British National Corpus (BNC). The BNC is a 100 million word collection of samples of written (90%) and spoken (10%) language.

Its sources cover a wide spectrum of texts among which we can find national newspapers, specialist periodicals and journals for all ages and interests, academic books and popular fiction, published and unpublished letters and memoranda, school and university essays, orthographic transcriptions of unscripted informal conversations, and spoken language collected from different contexts, ranging from formal business and government meetings to radio shows and phone-ins.

It is designed to represent a wide cross-section of British English from the later part of the 20th century. In fact, 91.58% of its content belongs to texts published between 1985 and 1993. Work on the corpus began in 1991. It took three years to complete the final version which was ready in 1994. It is important to note that the project was revised in the years that followed, but no new texts have been added since the BNC was completed.

The second corpus is a combination of two different frequency lists, viz, the General Service List (West 1953) for the first 2000 most frequent words, and the Academic Word List (Coxhead 1998) for those words between 2001 and 3000. From this combination was born the so-called General Service List of General and Academic English (GSLA). The General Service List of English words (GSL) contains 2000 headwords which Michael West considered to be the most important vocabulary for the English learner, even though they are not among the most widely used. This is the reason why some low-frequency items were included. Words such as *whistle* or *reproduce* may not be among the most frequent items of the English language, but the concepts they represent cannot be easily replaced by other more frequent terms.

West's list is the result of selecting words from a corpus of 5 million words. Despite being old – the headwords in the list have not changed since 1936 – it is still a “source of useful information” (Nation 1990: 22). In fact, it has been compared to other more recent lists with a high degree of overlapping (Nation and Hwang 1995). One of the most important characteristics of the GLS is the fact that it takes into consideration word polysemy. Put another way, not only is the headword frequency provided, but so too is the frequency of the different meanings that the headword may have. Each meaning is given a percentage so that the user of the list can decide which meaning and use is the most important.

On its part, the Academic Word List (AWL) contains 575 word families (Coxhead 1998). It appears as an alternative to the University Word List (UWL) (Xue and Nation 1984). Nation describes it as “a small list of words [which] is very important for anyone using English for academic purposes” (Nation 2001: 12). In fact, most frequency lists are not enough for some students who need a more specialized or specific vocabulary.

RANGE offers three different sets of data based on the two lists. One set refers to the raw number and percentages of tokens, types and families found in the text which has been run through the program. The second set classifies words according to their level of general and specific frequency. The third set of data lists the headwords of the different families identified together with the number of members which appear in the text. The way in which RANGE is used will be explained in section 4.2.6.3. of the present chapter.

4.3.5.2. *Student identification*

a) PERSONAL AND ACADEMIC INFORMATION: IDENTIFICATION FILE

The aim of the identification file is to elicit the students' personal and academic information. It consists of 19 questions which can be grouped into five different blocks. The first block contains personal information, viz, the participants' age and gender. The second block is about the participants' socioeconomic status. It includes three questions about the students' home town and their parents' occupations. The third block deals with academic issues. Participants are asked about their global English mark from the previous year and whether they are resitting the course.

The last two blocks focus on linguistic issues. In the fourth block, the researcher wants to know whether students have, or have ever had, contact with the English language outside the classroom, and, if so, what kind. Accordingly, students are asked about the possibility of extra English lessons, stays in an English-speaking country, as well as access to English books, music, movies or video games. Finally, it might be the case that participants have spoken or come into contact with other languages besides Spanish and English. In this sense, it is interesting to know whether students have immigrant parents whose mother tongue is not Spanish. Participants are also asked whether they are currently studying other foreign languages or whether they have studied other foreign languages before. If they have, they are asked to specify which ones.

The identification file is written entirely in Spanish so that the children can understand the questions and express themselves with no added difficulty. The format aims to be 'child-friendly' in order to attract the children's attention. A sample of the original identification file and an English version of the document can be found in Appendices 1 and 2, respectively.

b) ATTITUDINAL INFORMATION: QUESTIONNAIRE

The purpose of the student questionnaire is to collect information about the participants' views and attitudes towards the English language in general and vocabulary in particular. As the participants are of a young age, the questions try to be clear, concise, direct and adapted to their cognitive status. The questionnaire is written in Spanish with a 'child-friendly' format. A sample of the student questionnaire and an English version of the document can be found in Appendices 5 and 6, respectively.

The questionnaire consists of 4 closed-ended questions. These questions were formulated following the five-scale survey method, where closed-ended questions require the participants to choose from a limited number of responses. Regarding the first closed-ended question, the children have to answer whether they like English or not and to what extent. They have to circle one of the five options provided: *Sí, me gustamucho* (Yes, I like it very much); *Sí* (Yes, I do); *Regular* (Not very much, but it's OK); *No* (No, I don't like it); *No. De hecho lo odio* (No, I don't like it. In fact, I hate it).

The second closed-ended question asks the children to complete the following sentence: *Creo que el inglés es...* (I think English is...). In order to do this, they have to select one of the following options: *La asignatura más importante* (The most important subject); *Una de las asignaturas más importantes* (One of the most important subjects); *Una asignatura ni más ni menos importante que las demás* (A subject which is neither more nor less important than the others); *Una asignatura no muy importante* (A subject which is not very important); *Una asignatura nada importante* (A subject which is not important at all).

The third closed-ended question asks the children about the role of vocabulary in learning a foreign language. They have to complete the following sentence: *Para aprender inglés aprender palabras nuevas es ...* (In order to learn English, learning new words is ...). Five options are provided: *Lo más importante* (The most important thing); *Una de las cosas más importantes* (One of the most important things); *Una de las cosas que se hacen para aprender inglés pero ni más ni menos importante que otras* (One of the things that we do to learn English, but no more or less important than other things); *No muy importante* (Not very important); *Nada importante en absoluto, de hecho no pasa nada si no se aprenden palabras* (It is not important at all. In fact, it doesn't matter if you don't learn any words).

Finally, the children have to choose their favourite topic for the English lesson from nine different options. These options are taken from the most common topics that dominate EFL coursebooks, especially in Elementary Education (Reda 2003). The options provided are (a) animals, (b) clothes, (c) family, (d) food, (e) holidays, (f) the house, (g) routines, (h) school, and (i) sports.

c) VOCABULARY SIZE: THE VOCABULARY LEVELS TEST

In order to measure the students' vocabulary level of English, a vocabulary size test is administered: the Vocabulary Levels Test – hereafter VLT – (Nation 1990, 2001), which has been widely used in L2 vocabulary studies.

The rationale behind the Vocabulary Levels Test (Nation 1983) stems from the idea that vocabulary size is related to the number of infrequent words known by a learner. That is to say, the higher the amount of infrequent words, the higher the total amount of words known in a language. In fact, research has shown that not all words occur with the same frequency. There are words which are more frequent than others in general discourse. Therefore, according to the theory behind the VLT, if two EFL learners are compared, the learner who knows a higher amount of infrequent words is also supposed to have a higher vocabulary size in general.

The VLT was originally designed by Paul Nation as a diagnostic vocabulary test. Given the considerable number of international students who applied every year to Victoria University in Wellington, New Zealand, there was a need to assess these students in terms of their English proficiency before they could be accepted. The teachers were not satisfied with the standardized tests that were used for this purpose, as they did not seem to really reflect the vocabulary size that these learners could handle. Thus, the VLT stood out as a good alternative for diagnosis.

The VLT first appeared in 1983 and was later republished in *Teaching and Learning Vocabulary* (Nation 1990). The test had considerable international impact and soon became a key reference in vocabulary studies. Since it came to light in 1983, it has been used in several teaching contexts as an assessment tool. Hence, some authors have stated the importance of the test. Meara declared that the VLT is “the nearest thing we have to a standard test of vocabulary” (1996: 38). Along the same line, Schmitt et al. hold that “the closest thing the field has to such a [widely accepted] vocabulary test is the Vocabulary Levels Test” (2001: 2).

The VLT is divided into different sections. Each section measures the knowledge of words from a specific frequency level. Words from four different levels are assessed: the second 1,000 most frequent words (2k), the third 1,000 most frequent words (3k), the fifth 1,000 most frequent words (5k), and the tenth 1,000 most frequent words (10k). In an attempt to be as representative as possible, the words were extracted from three of the most important frequency lists at the time: Thorndike and Lorge's list

(1944), Kučera and Francis' LOB (1967), and West's General Service List (GSL) (1953). The first list contains 30,000 lemmas which, according to Goulden, Nation and Read (1990), are equivalent to 13,000 word families. The second one is based on the *Brown Corpus of Standard American English* by Francis and Kučera themselves, and it contains one million words from different text types. The third list is made up of 2,000 dictionary-like entries. Despite its age and weaknesses (Nation and Hwang 1995), the GSL is still widely used and is a key reference in the design of frequency lists, principally because of the range of details provided about frequency of meaning and the thorough selection criteria applied by the author (more about the GSL in section 4.3.5.1).

A fifth part is normally added to these four frequency levels; it contains academic vocabulary, that is, words which are especially frequent in academic discourse. These words were taken from the University Word List (UWL) (Xue and Nation 1984) which is composed of 808 words and divided into 11 levels. It was designed to be a list of specialized vocabulary for students who know about 2,000 generally common words and who plan to study in an English-language college or university. Some years later the UWL was replaced by the Academic Word List (AWL) (Coxhead 1998). The AWL contains 570 word families based on a 3,500,000 token corpus of academic English from four different areas of study: Arts, Science, Law and Commerce. The list appears to provide "slightly better coverage" (Nation 2001: 188) of academic vocabulary than the UWL (more about the AWL in section 4.2.5.1).

The VLT adopts the multiple choice format in an attempt to detect partial word knowledge. Initially, each section of the test consisted of 6 items. Later versions have increased the number of items up to 10 per section. The test is offered in monolingual and bilingual versions (Japanese, Korean, Mandarin Chinese, Russian, Samoan, Tagalog, Thai, Tongan and Vietnamese). In the monolingual version each item contains six L2 words and three L2 definitions. The test consists of matching the L2 definitions with the corresponding L2 word (monolingual version), or the L1 words in each item to the L2 equivalent (bilingual version). The bilingual version is composed of items with six L2 words and three L1 words. Students have to match three of the L2 words with the L1 words which are equivalent to the former.

According to its creator, this particular format was chosen because of validity and practicality reasons. On the one hand, it was sensitive to partial knowledge,

allowing learners to “make use of whatever knowledge they had of the meaning of a word” (Nation 1990: 261) – something which a productive test might have missed. On the other hand “it was easy to make and easy to mark” (Nation 1990: 261), which is an important point to take into consideration, especially when the research involves a large group of subjects.

The words in each VLT section were intended to be representative of all the vocabulary found at the corresponding frequency level, whether it be 2k, 3k, 5k or 10k. Names of people, countries and cities were avoided. The words constituting each item were not related in their meanings. That is to say, synonyms, antonyms and words from the same semantic field were not to appear together. The aim of the test was to detect word knowledge, even if that knowledge was minimal. Thus, it was designed so that people who only had a rough idea of the meaning of the tested word were able to match it correctly.

The validity and reliability of the VLT have been proven on several occasions by several authors. In order to find out whether the VLT was reliable, Read (1988) correlated the VLT results from a group of students with an implicational scale. In both cases it was shown that knowing lower-frequency words tended to imply knowing higher-frequency words. In this sense the VLT was valid, as its rationale was based on this assumption. Another validation study was performed by Beglar and Hunt (1999) more than a decade later. They found a positive correlation between the VLT scores from different frequency levels or sections and the TOEFL scores.

Nonetheless, the most recent serious attempt at validating the VLT was carried out by Schmitt et al. (2001). They built two new versions of the VLT by following the same steps that Nation had taken. The only difference with respect to the original version was the number of items in each section. Instead of six, they decided to include ten per frequency level. The most important difference between this study and the previous two by Read (1988) and Beglar and Hunt (1999) lies in the use of several techniques instead of just one.

The authors applied up to five different validation techniques. The first one consisted of checking whether native speakers would have any problems with the test. Nine native speakers did the VLT and scored 100% or almost 100%. This technique showed that native speakers were able to obtain the highest score without any difficulty. Low scores would have indicated that there was something wrong with the test. The

second technique focused on individual items. A Rasch analysis proved the independent behaviour of test items. This technique also dealt with the guessing factor. It was shown that the chances of guessing a wrong alternative are far greater with the VLT format. This fact suggests that the action of guessing is not a serious problem with this format, and that correct answers do reflect some underlying knowledge of the target word. The third technique was aimed at finding out whether learners performed better in the high-frequency sections than in the low-frequency ones. This would confirm the validity of the test as research has shown that learners generally acquire high-frequency vocabulary before less frequent words. It was confirmed, therefore, that the different sections in the test were highly scalable.

Factor analysis was the fourth technique applied in Schmitt et al.'s validation study. The analysis confirmed that vocabulary was the major factor in the test. Very little knowledge of grammar or reading ability was needed to perform well. The last validation technique was in the form of an interview with the test-takers. The goal was to have more direct access to the learners' vocabulary knowledge, so it was necessary to examine whether the vocabulary knowledge reflected by the VLT was really known. The authors carried out individual interviews where they could check whether the learners really knew the words they had correctly matched in the VLT. The interview was also useful when exploring face validity. Very few subjects claimed to have experienced problems with the format.

The reliability and practicality of the VLT were also taken into consideration by Schmitt et al. Results obtained in this study were in line with those found in Read (1988). In the latter, reliability indices (Cronbach's alpha) reached .94, whereas in the case of Schmitt et al. the highest index almost reached .96. As for practicality, this is one of the great advantages of the VLT. The test is estimated to take less than one hour to complete, defined by the authors as "quick and easy" (Schmitt et al. 2001: 72). Schmitt et al. (ibid.) observed that their subjects spent, on average, 30 minutes doing the whole test. The fastest ones took 15 minutes whereas the slowest ones took up to 60 minutes.

The VLT used in the present study is a special version designed by Paul Nation, which is aimed at low-level EFL learners. The vocabulary knowledge of low-level learners is expected to fall into the first 1,000 most frequent words, as our learners can still be classified within the category of *beginners*. Hence, a bilingual version is

considered more appropriate than a monolingual one. For the purposes of this study, we had to create our own Spanish version of the VLT, as the test has not been translated into this language (further information about the translation process can be found in section 4.3.6.4. of the present chapter).

One important difference between the monolingual and bilingual versions is the number of items; that is, whilst the traditional monolingual version contains six items per frequency level, the bilingual version contains ten. The main reason is that the latter only deals with the first 1,000 most frequent words and a higher number of items does not threaten practicality – at the same time it favours validity. Regarding performance, the bilingual and monolingual formats are basically the same: they both consist of matching. Nonetheless, instead of matching L2 words with L2 synonyms or definitions, which is what happens with the monolingual version, in the bilingual version three L1 words have to be matched with three of the six L2 distractors found in each item.

4.3.5.3. Teacher identification

a) PERSONAL AND ACADEMIC INFORMATION: IDENTIFICATION FILE

The aim of the teacher identification file is mainly – though not exclusively – oriented towards eliciting information about the teacher’s career. Besides age and gender, the rest of the questions are devoted to the teacher’s professional background. The teacher is asked about her degree⁹ and her years of experience as an English teacher in Elementary schools. She is also asked whether she has ever been to any English-speaking country as well as the reasons for and duration of her stay. It is also interesting to know whether she has studied any other degrees, and, if so, which ones. Finally, she is asked whether she can speak any other foreign languages, and, if so, which ones.

As in the case of the student file, the teacher file is written in Spanish. Given that only one teacher is involved in the study, the file adopts the interview format. A sample of the original identification file and an English version of the document can be found in Appendices 3 and 4, respectively.

⁹ The question about the degree may seem redundant and unnecessary in this context. However, there was a time were the Spanish Ministry of Education allowed English Studies graduates to teach English at an elementary level in schools as long as they took a ‘bridge course’.

b) ATTITUDINAL INFORMATION: QUESTIONNAIRE

The purpose of the questionnaire is to obtain information about the teacher's attitudes towards the English language in general and the role of vocabulary in particular. Only one teacher is to participate in the study, which favours the interview as the most appropriate method of inquiry.

The teacher questionnaire consists of six questions, four of them being open-ended and two of them closed-ended. In the first open-ended question the teacher is asked why she thinks learning English is given so much importance nowadays: *¿Por qué cree usted que se le da tanta importancia a aprender inglés hoy en día?*. The second and third open-ended questions focus on the coursebook. For the second question the teacher is asked to think of three adjectives which best define the role of the coursebook in the teaching of English: *Diga, por favor, tres adjetivos que mejor definan el papel del libro de texto en la enseñanza del inglés*. For the third question she has to give three characteristics she considers essential in a good foreign language coursebook: *¿Qué tres características cree usted que son esenciales para un buen libro de texto de enseñanza del inglés como lengua extranjera?* In the last open-ended question the teacher has to think of three ways to motivate children to learn vocabulary: *¿Puede decirme tres maneras de motivar a los niños para que aprendan vocabulario?* With regard to the closed-ended questions, she has to determine the degree of importance vocabulary has when learning a foreign language: *¿Cómo de importante cree que es el vocabulario para aprender una lengua extranjera?*. She has to choose from five different options: *Lo más importante* (The most important thing); *Muy importante* (Very important); *Ni más ni menos importante que otras cosas* (No more or no less important than other things); *No muy importante* (Not very important); *Nada importante* (Not important at all). The other closed-ended question asks the teacher's opinion about the best way to teach EFL vocabulary: *A su juicio, ¿cuál cree que es la mejor manera para enseñar vocabulario en inglés como lengua extranjera?*. Three options are provided: sólo implícitamente (only implicitly); sólo explícitamente (only explicitly); una combinación de enfoque implícito y explícito (a combination of an implicit and explicit approach). The original teacher questionnaire and an English version of the document can be found in Appendices 7 and 8, respectively.

4.3.5.4. Classroom control

Leki defines the classroom as a microcosmos, an ecosystem with its own dynamics (Leki 2001). Along the same line, Tudor talks about “the uniqueness of each teaching situation” (Tudor 2003: 10). This is why we should be careful when making general assertions about the Elementary Education classroom. In order to reach solid conclusions about a group of students, it is necessary – among other things – to observe what happens inside the classroom, especially with regard to the different types of situations which can potentially occur.

In order to understand the dynamics of an ESL lesson, it is not enough to just interview the teacher and the students, as some details can be missed and a biased perspective can be formed. Classroom information in this study is compiled using three types of instruments: the observation chart, the teacher’s worksheet and the researcher’s diary. Each of them is described and discussed in the following sections.

a) OBSERVATION CHART

The observation chart aims to collect information about the development of the EFL lesson in the centre where the study is carried out. The chart is written in Spanish. In fact, working with the chart in English would have brought an additional and unnecessary difficulty to the observation process. Greater attention to the language element would have been needed while taking notes, making it more difficult to concentrate on the events – which was the real goal. A sample of the original observation chart and an English version can be found in Appendices 11 and 12. The same format was used in all the observation sessions.

The observation chart comprises two parts. The first part is devoted to collecting information about the general development of the lesson. This part includes the observation date, the language used inside the classroom, the number of activities carried out, the degree of participation on the part of the students and other comments.

The lesson date together with the number of activities developed would also be recorded on the teacher’s worksheets for all the lessons, observed or not, during the entire period of the study (more about the teacher worksheet can be found in the following section). As for the language used during the lesson, notes are taken on the different situations and interactions where the L2 is used: explanations by the teacher,

the teacher addressing a particular student, students addressing the teacher and the interaction among students.

The students' degree of participation is calculated according to the number of teacher-student interactions plus the number of times the teacher requires the students' active collaboration in class, such as approaching the blackboard, responding to questions, and providing the answers for any activity. Other types of information such as possible incidents, the general state of the children (anxious, unruly, especially attentive), and the teacher's mood are also taken into account and included in the section *Other comments*. All of this information is considered relevant because it can provide worthy feedback, helping to draw a picture of the EFL lesson and the group.

The second part of the chart focuses on the role and treatment of vocabulary in the classroom. Both the teacher's behaviour and the students' behaviour are registered every time any of the following two situations take place in the classroom: 1) A new form appears in the lesson or in any activity that is being developed; 2) A student asks for clarification because he or she does not understand some of the words that are being used. These two situations were not chosen at random. They are the most likely ones to occur during an English lesson and the ones which best reflect how vocabulary is managed inside the classroom.

In order to make the observations in this second part clearer and more systematic, the chart contains several options regarding the role of vocabulary and its treatment. As for the situation where a new form appears in the classroom, it is assumed that the teacher might react in the following ways: 1) The teacher translates the L2 form into its L1 equivalent; 2) The teacher uses gestures, pictures or if the concept is in the classroom points to the concept itself without using either the L2 or the L1; 3) The teacher uses the L2 in order to paraphrase the meaning of the new form or to give a synonym; 4) The teacher does not provide any type of clarification, telling the students that the form would be looked at later .

With regard to the students, there are two basic ways in which they are expected to react when a new target form appears: 1) Do something with the information about the new form provided by the teacher; 2) Choose to do nothing with it. Every time one of these situations occurs, it is recorded on the observation chart.

b) TEACHER WORKSHEET

The teacher worksheet is the second instrument used by the researcher for the control of the classroom. Worksheets are to be filled out by the participating teacher. In order to facilitate her work, they are written in Spanish. A sample of the original worksheet and an English version can be found in Appendices 13 and 14.

The teacher is given 36 worksheets, one for each lesson that is scheduled to take place during the second academic term. She is asked to fill one out at the end of every English lesson. The worksheets contain different sections. In the first section the teacher has to write down the date and duration of the lesson – which can be 45 or 60 minutes, depending on the day of the week. In the second section the teacher has to record the number of activities carried out and the corresponding page numbers of the coursebook. The third section requires notes to be taken about the students' behaviour and the general classroom environment. These comments are also expected to reflect the teacher's own attitude that day, without the need to ask directly, thus avoiding any possible indiscretion. A fourth section called *Other comments* is also included for the teacher to make any further suggestions or comments which she considers relevant.

c) RESEARCHER'S DIARY

It was considered important to keep a diary of the investigation. This document records information about the researcher's experience inside the microcosmos of the classroom. The diary consists of a notebook where the researcher's impressions about the observation sessions, the questionnaires and the test sessions are captured in an informal way. The information reflected in the diary has no pre-established order. No special attention is paid to style or orthography and it is written entirely in Spanish. As a general rule, the information takes the form of simple notes or incomplete sentences. Most of the information corresponds to impressions about the students' and teacher's mood and the general classroom environment. In addition, our own scientific behaviour and modus operandi are recorded, as we became part of the microcosmos itself.

4.3.5.5. *Vocabulary acquisition assessment*

a) APPROACH

In the second cycle of Elementary Education (3rd and 4th years), EFL is basically conceived at the word level. Accordingly, the most appropriate perspective to be

adopted for vocabulary testing at this stage is what scholars in the field call a discrete-point approach. This involves testing individual units, which in this case corresponds to a particular group of words from a coursebook. The discrete-point approach is characterized by three aspects (Nation 2001):

- It is discrete. Vocabulary knowledge is considered a distinct construct, separated from other linguistic components as part of communicative competence. Therefore, what makes a vocabulary test discrete is not the way that the construct of vocabulary is presented to the test-takers, but the fact that the test focus is on the construct of vocabulary itself rather than on communicative competence in general.
- It is selective. This approach focuses on the knowledge of particular words rather than vocabulary knowledge in general. Vocabulary researchers (McKeon and Curtis 1987; Nation 1990, 2001; Coady and Huckin 1997; Schmitt and McCarthy 1997; Read 2000) hold that it is meaningful to treat words as independent units and to devise tests that measure whether learners know the meaning of particular words.
- It is context-independent. Vocabulary knowledge is measured without referring to any context. It is important to state that when a test is defined as *context-independent*, it means that context is not essential for the test-taker, nor is it forbidden either. Nowadays, however, some scholars cast doubt on the validity of assessing vocabulary out of context, proposing context-embedded alternatives. There is no intention here to discount the value of these alternatives. Nonetheless, Meara (2004: 215) asserts that “more credit is given for a decontextualized response than for one which illustrates a particular use of the word”. What is more, the use of context – for instance, presenting words in sentences – might be counterproductive at lower levels. First, low-level learners are normally used to working at the word level. Dealing with sentences would be new for them, threatening the face validity of the test. Second, linguistic context may be more of a hindrance than a help to the learner. He/she would try to decipher the meaning of the whole sentence by focusing on each and every word instead of paying attention to the target word itself. This would be an additional handicap in his/her performance. Finally, there is the researcher’s difficulty in constructing sentences with

understandable words for low-level learners, as their amount of vocabulary is considerably small.

b) RATIONALE FOR THE TEST TYPES

We want to move away from Schwartz's assertion that "test constructors sometimes seem to choose a particular measurement technique more or less by whim" (Schwartz 1984: 52). This section discusses the rationale behind the selection of the test formats to be used in the study. Whatever the test types selected, they are dependent on the research problem. Accordingly, there is no point in adopting a standardized test for measuring vocabulary acquisition in this particular case, as the aim is to assess the acquisition of a specific set of words.

Different alternatives are considered: the picture naming test, the free production test, the yes/no test, and the vocabulary knowledge scale. Most of them have been used in previous vocabulary studies (Jones 2004; Paribakht and Wesche 1997; Vassiliu 2001). However, all of these alternatives were eventually ruled out for several reasons. With regard to the picture naming test, the most important drawback was the difficulty in representing some words graphically. Words such as *good*, *incredible* and *time* could have led to confusion on the part of the participants, as their graphic representation would be far from accurate. The free production test was discarded because of the participants' low level coupled with the aims of the test itself. We needed a test which measures the knowledge of specific words. Given the level of specificity required, the yes/no test was considered insufficient. Finally, practicality reasons did not support the use of the vocabulary knowledge scale (Wesche and Paribakht 1996). Scales are normally used with a very small number of items and participants, which was not the case here.

Hence, the selection of the test formats for the present study was based on three main considerations:

1. They have to be familiar to the students.
2. They have to provide as direct and valid information as possible about the vocabulary knowledge to be assessed.
3. They have to take up as little of the students' time as possible.

According to Takala (1984: 146), “the best pay-off between validity, reliability, and practicality was shown by test types which ask students to write FL or L1 equivalents to written decontextualized stimulus words”. On the basis of Takala’s words, a L1-L2 translation test for productive knowledge and a L2-L1 translation test for receptive knowledge were selected. In addition, a multiple choice test was added as a second receptive test. These tests formats seem to fulfil the three criteria established above.

c) VOCABULARY PRE-TEST AND GLOBAL POST-TEST

A vocabulary pre-test and post-test are administered to the students. They contain all the target words assessed during the second school term. The pre-test is aimed at ensuring that the students do not know the words which would be tested in the future. The post-test is expected to provide a general picture of the vocabulary acquired at the end of the second term. Both tests adopt the L2-L1 translation format, so they can reflect the possible partial knowledge that the participants might have about those words.

d) L1-L2 TRANSLATION TEST

The aim of the L1-L2 test is to assess productive vocabulary knowledge of individual words. This consists of checking whether learners can recall a series of L2 word forms. Students are presented with a list of L1 words from which they have to find the L2 equivalents. This type of test was chosen for two main reasons: first, as stated above, it complies with the three selection criteria which had previously been drawn up; second, it is considered a reliable instrument for assessing productive vocabulary knowledge (Takala 1984; Read 2000).

Although there seems to be a general feeling of rejection towards the use of L1-L2 translation for vocabulary assessment, Nation asserts that “this attitude is quite wrong. Translation is one of a number of means of conveying meaning and in general is no better or worse than the use of pictures, real objects, definitions, L2 synonyms and so on” (Nation 2001: 351). Furthermore, the use of the first language in vocabulary testing is especially recommended in the case of students with an elementary level of the foreign language. The mother tongue “allows learners to respond to vocabulary items in a way that does not draw on second language knowledge” (Nation 2001: 351). In fact, the use of the second language in a vocabulary test increases difficulty in the learner’s

performance. Therefore, we consider that resorting to the L1 as a stimulus is a “very efficient” (Nation 2001:351) way of eliciting the L2.

As for the L1-L2 test used in this study, a series of L1 words are arranged alphabetically. Each word is followed by a line of dots where the test-takers are asked to provide the L2 equivalent of the corresponding word. The number of words in the test is not fixed. It varies according to the input that has been introduced by the coursebook at that time. Instructions are provided in Spanish so that the students clearly understand what it is they have to do. An example of how to proceed is also included.

One of the arguments against the L1-L2 format is the possible ambiguity derived from the polysemous nature of words. Yet, the type of vocabulary that is presented to young learners at beginner stages leaves very little space for ambiguity. Put another way, it is unlikely that the concepts represented by the target words will lead to confusion or misunderstanding on the part of the learners. Most of them are usually concrete words which should not pose any comprehension problems for the learners. What is more, it is highly improbable that children know more than one meaning of the words introduced in the test. Indeed, at low-level EFL stages, children are normally exposed to only one and the most common word meaning (Nation 1990). Samples of each L1-L2 test used in the study can be found in Appendices from 17 to 22 and 35 of this thesis.

e) L2-L1 TRANSLATION TEST

This test type requires the L1 equivalent of a series of L2 words. The L2 words are arranged alphabetically and presented to the children. Each word is followed by a line of dots where the test-takers are asked to provide the L1 translation of the corresponding word. The number of words in the test is not fixed. It varies according to the input that has been introduced each time by the coursebook. As in the case of the L1-L2 test, instructions are provided in Spanish. An example of how to proceed is also included. Samples of each L2-L1 test used in the study can be found in Appendices 16, from 23 to 28 and 36.

The L2-L1 test fulfils the three criteria established above. This format might pose the problem of not being able to deal with the polysemous nature of words, as one and the same L2 form may have several L1 equivalents. This fact should not be a problem at the lower level. Core meaning rather than more specialized or marginal

meanings is the one to be taught to and handled by the learners at the initial EFL stage. In fact, there is a very low degree of probability that participants know more than one meaning for each word, given their elementary level (Nation 1990). Thus, confusion over meaning or wrong L1 equivalents should not be caused by polysemy.

Yet, there is some disagreement on the type of knowledge assessed by this format. Schmitt (1998) argues that this test provides evidence of active knowledge. According to this author, the L2-L1 translation test should be considered a productive tool given that an oral or written answer is actually elicited. If this is so, tests in which the students are asked to read aloud a series of L2 words should also be considered productive, as they involve some kind of production. In fact, few scholars would agree that a pronunciation test – which has a phonological aim – should be seen as productive.

We are more in line with those who describe the L2-L1 translation test as receptive. In fact, a test should not be labelled receptive or productive just because of the type of answer required, but rather because of the cognitive mechanisms used by the participants in providing that answer (Waring 1997). Just like in the L1-L2 translation test, the participants have to produce an answer in the L2-L1 test. However, the nature of this answer differs from that of the L1-L2 translation test. First, the L2-L1 answer is provided in the participant's mother tongue, which requires less cognitive effort than L2 production. Second, the L2-L1 translation test consists of going from form to meaning. Put another way, the student is expected to recognize the L2 form and its meaning in order to provide the L1 equivalent of the corresponding L2 word. Thus, according to Scholfield (1991: 13) "if the task is simply to remember one meaning of the new word [...] more items may be mastered than if the task is to remember the exact spelling, etc. of the word and be able to use it".

f) MULTIPLE-CHOICE TEST

In the multiple-choice test students are required to match the English word with its Spanish equivalent. The aim is to find out whether students can recognize the word and choose the correct meaning from a number of options. As such, the multiple-choice format belongs to the category of psychometrics, the science which gives rise to objective testing (Spolsky 1995). The tests of passive word recognition such as this one "work well and provide useful data" (Milton 2009: 75).

The multiple-choice test used in the present study does not have a fixed number of items. This varies according to the amount of input introduced by the coursebook. The selection of distractors is one of the key issues in the design of the multiple-choice format. The use of one kind of distractor or another can make a great difference in the test results (Goodrich 1977). For instance, broad versus fine distinctions in meaning largely determine whether the students are able to find the correct answer or not. In this case, distractors are selected according to three criteria: first, they have to belong to the same grammatical category; second, they must not be the equivalent of any other distractors in the item; and third, they must not be semantically related to the target word. Each item presents an English word (stimulus) followed by four options. Three of them are L1 words and the other one is an *I don't know* option. Instructions are provided in Spanish together with an illustrative example. Samples of each multiple-choice test used in the study can be found in Appendices from 29 to 34 and 37.

The multiple-choice format is, however, a controversial one. It has been questioned in many areas, not only in vocabulary. The notion of artificiality, the guessing factor and the selection of distractors threaten the validity of the results provided by this type of test. It is argued that multiple-choice tests do not reflect realistic situations in the use of a foreign language. However, does a test need to be realistic – whatever that means – in order to offer valid information? For instance, someone could argue that an association test does not reflect a realistic use of the language. Thus, when we use words in communication we are not normally aware of the fact that our elicitations come from mental associations with other words. This is not reflected in language use per se, but neither does it mean that these associations do not occur.

Along this line, the multiple-choice test may not represent a real use of the language; however, it may lead us to realistic situations. Imagine the word *bread* as one of the target words in a multiple-choice vocabulary test. The three L1 distractors *camisa* (*shirt*), *primo* (*cousin*) and *caballo* (*horse*) together with the Spanish equivalent of *bread* (*pan*) are provided. The three distractors belong to different semantic fields: clothes, family and animals. The student may not know the exact meaning of *bread*, but he/she knows that it is some kind of food. Maybe they cannot distinguish *bread* from *cheese*, *apple* or *ham*, but they can identify *bread* as some kind of food. This already shows some knowledge about the word. In this sense we can suggest that there is a

realistic background behind the multiple-choice test, as this format shows that the learner associates *bread* with food, even though he/she is not sure about the specific meaning of the word.

Another important issue with the multiple-choice format is claimed to be that of guessing. In this respect, Paul et al. (1990) interviewed a group of learners about their mechanisms applied when doing a multiple-choice test. The answers provided by the learners were classified into two groups: those which were the result of some kind of linguistic knowledge, and those which had to do with the format itself. With regard to the answers related to linguistic knowledge, we can find:

- Knowing the answer: the option was chosen because the learners really knew the correct answer.
- Association: the option was chosen because it could be related to something known by the learners.
- Elimination: the learners chose a certain option by discarding the others.

The three techniques above show that the learners can resort to their partial linguistic knowledge when selecting an option.

Other responses, however, are favoured by the multiple-choice format itself. This is the case of learners who chose an option because of:

- Position: the option was chosen simply because of its place in the test item. That is, some learners were prone to choose the first, the last or the middle option if they did not know the answer.
- Readability: sometimes the learners did not understand all of the options provided, so they chose the option they could understand.
- Guessing: when they did not know the answer, some learners took a guess, selecting one answer at random.

The results reveal that in almost 70% of all occasions, the learners resort to techniques based on linguistic knowledge rather than non-linguistic knowledge. Non-linguistic techniques are only used as the last resort. In light of these results, two conclusions are reached: first, partial knowledge is actually used in multiple-choice tests by means of the linguistic technique of association, and second, guessing is not used as much as we originally thought.

Despite the drawbacks that come with using distractors, the multiple-choice format is widely used because it has been proven to be objective and highly reliable (Nation 2001). There is a degree of respectability associated with this format, an example being its use in standardized tests such as the TOEFL. This type of test is also sensitive to the learners' partial knowledge. In fact, a multiple-choice format can offer a distinct kind of receptive vocabulary knowledge which differs from other receptive tests such as L2-L1 translation – which is also applied in the present study.

4.3.6. Procedure

4.3.6.1. Data collection: Calendar

The whole study was carried out from 4 December 2008 to 18 June 2009. The Elementary school year is normally divided into three terms. The second term was selected for the development of the main part of the study. There were practical and pedagogical reasons for the selection of this term, with the amount of time being the main one. The first and third school terms were considered too short as they did not cover the three whole months of instruction required. The first term started on 15 September and finished on 20 December, with the first two weeks devoted to introductory issues. What is more, there were two bank holidays at the beginning of November and December, which could have affected the initial planning stage. The third school term did not constitute three whole months either, starting on 15 April and finishing on 23 June.

From a pedagogical standpoint, the teacher involved in the study believed that the students would perform best during the second term of the school year. The children needed an adaptation period, which took place during the first term; they would feel tired and more anxious during the last term. Therefore, their concentration levels were expected to be at their highest during the second term.

The students had three English lessons a week. Two of them were sixty minutes long while the other one lasted just forty-five minutes. The lessons took place on Tuesdays, Wednesdays and Thursdays. The lessons on a Tuesday lasted forty-five minutes while those on a Wednesday and Thursday lasted a whole hour each (see table [27] for the timetable). Thursday was chosen as the day for the vocabulary acquisition assessment sessions. There were two main reasons for this. First, Thursday's lessons were one hour long, which was preferred to the 45-minute lesson. Second, they were the

first class of the morning, which meant that the students were less likely to show signs of tiredness and lack of concentration.

	Day of the week	Time	Duration
English lessons a week	Tuesday	10.45-11.30	45 min
	Wednesday	12-13	60 min
	Thursday	9-10	60 min

Table [27] Timetable of English lessons

The study was divided into three different blocks, where the total number of sessions with the students amounted to ten. The first block took place from 4 December 2008 to 11 December 2008. This first part of the study was made up of three sessions. They covered the filling-in of the students' and the teacher's identification files and questionnaires, the pre-test session and the Vocabulary Levels Test session. The first session was held on 4 December 2008 and dealt with the identification files and the questionnaires; the pre-test session was developed on 9 December 2008; and the session devoted to the Vocabulary Levels Test took place on 11 December 2008.

The second block lasted from 22 January 2009 to 3 April 2009. It consisted of six sessions. Sessions took place every two weeks. The decision to assess vocabulary on a fortnightly basis was the result of the research needs and the teacher's advice. On the one hand, it was desirable to have a considerable number of acquisition samples so as to be as accurate as possible when analysing the students' curve of vocabulary acquisition. On the other hand, it was necessary to negotiate the research schedule with the teacher, whose initial planning was likely to be altered by the study.

In principle, the options of weekly and monthly measures were considered, although they were finally ruled out. Weekly sessions were discarded based on the teacher's recommendations. Monthly sessions were also rejected because we could not obtain enough acquisition samples. The ideal scenario was to reach a happy medium between what the researcher needed and what the teacher was willing to allow. In the end, fortnightly measures were agreed. Accordingly, a considerably acceptable number of samples would be obtained and the teacher's schedule would be minimally affected.

The second term started on 7 January 2009, which meant that the first session was carried out fifteen days later on 22 January. The following sessions were held on 5 February, 19 February and 5 March, respectively. According to the pre-established calendar, Session 5 was expected to take place on Thursday 19 March. However, this date corresponded to a bank holiday, so, as a result, session 5 was moved to 18 March. The sixth session was carried out on Thursday 2 April, just before the Easter holidays.

Finally, the third part of the study consisted of one single session with three global post-tests (L1-L2 translation, L2-L1 translation and a multiple-choice test). This last session took place on 18 June, just four days before the end of the course (see table [28] for the chronogram).

4.3.6.2. Selection of the research context

The research context was selected based on the aims of the study and the availability of the centre. With regard to the aims of the study, the third year of Elementary Education was chosen. There were two main reasons for this. The first one was that this level has rarely been explored in terms of vocabulary acquisition. In fact, the few studies that have been carried out on L2/FL vocabulary acquisition have mostly involved university or secondary school students. In addition, those exploring Elementary education have mainly focused on the third cycle (5th and 6th years). Another important aspect accounted for the fact that the teacher involved in the study followed the coursebook to the letter, choosing not to introduce extra teaching materials.

As for the availability of the centre, five different schools were contacted at the start. Two of them were located in the metropolitan area of the city of Murcia, whereas the other three were located in Archena, a town 23 kilometres from the capital city. We requested a meeting with the headmaster of each centre and the English teachers working with students in their third academic year. The meeting revolved around two main points: to present the project and to discuss the requirements of the study. The headmasters and the teachers were provided with a written report where the aims, methodology and procedure of the study were explained.

Three out of the five centres agreed to collaborate. However, the teachers at two of them often introduce extra teaching materials besides the textbook. This fact would affect the results of the study, and, as a result, these two centres were excluded. In the

end, only one of the centres located in Archena accepted, meeting the pertinent requirements of the development of the study.

As the participants were underage, the school's staff had to give their permission and the parents had to be informed of their child's participation in the study. The teacher put herself forward to talk to the parents and ask for their written permission (see written permission both in Spanish and English in Appendix 10).

	Date	Session Content
BLOCK I	4 Dec 2008	Students' Identification File + Teacher's Identification File + Students' Questionnaire + Teacher's Questionnaire
	9 Dec 2008	Pre-test
	11 Dec 2008	Vocabulary Levels Test
	22 Jan 2009	Vocabulary Acquisition Tests Immediate Session 1
	5 Feb 2009	Vocabulary Acquisition Tests Immediate Session 2
BLOCK II	19 Feb 2009	Vocabulary Acquisition Tests Immediate Session 3
	5 Mar 2009	Vocabulary Acquisition Tests Immediate Session 4
	18 Mar 2009	Vocabulary Acquisition Tests Immediate Session 5
	2 Apr 2009	Vocabulary Acquisition Tests Immediate Session 6
BLOCK III	18 Jun 2009	Post-test session

Table [28] Chronogram of the study

4.3.6.3. Coursebook analysis

Despite the fact that only target vocabulary in units 4 to 6 was tested, the whole coursebook was analysed. In order to carry out the analysis, the coursebook was digitalized, cleaned up and saved as *txt* documents. Headlines, proper nouns and onomatopoeic sounds such as *hurray* and *oh* were removed from the analysis. On their part, linguistic contractions were transformed into simple units. For instance, *isn't* became *is not* and *she's got* became *she has got*. All of the texts in the coursebook were run through the computer program RANGE¹⁰ (a description of the program can be found in section 4.2.5.1. of the present chapter).

RANGE quantifies the units of a text in terms of tokens, types and families. Tokens make reference to each of the forms in the text, whether repeated or not; for example, the number of times *table* occurs in the text. Types refer to each of the different forms in a text. This means that terms such as *lamp* and *lamps* are to be counted as two different words. As regards the category of word family, *bed* and *bedroom* are considered the same form. However, something halfway between the type and the family is desirable. The reason for this is that the concept of family points to the fact that knowing a headword such as *bed* also implies knowing the word *bedroom* – which is not necessarily the case.

The lemma seems to solve this gap. It has *lamp* and *lamps* as the same word, but not *bed* and *bedroom* (more information about different linguistic units can be found in chapter 2 of the present thesis). In order to analyse the coursebook in terms of lemmas, the texts were digitalized taking into account the following two points: 1) each word is always considered either singular or plural so that the program cannot distinguish between types. For instance, *peas* would always appear in plural and *lamp* in singular. The second measure consists of taking – as one single form – some words such as *ice cream* (icecream) or *living room* (livingroom) so that the program can recognize the word as just one form corresponding to one single meaning.

Two different types of analysis were carried out in this respect. The first kind of analysis was purely quantitative. The coursebook in general, and each unit and special section in particular, were analysed in terms of the number of tokens, types, families and lemmas they contained. The second kind of analysis also represented a quantitative

¹⁰ RANGE can be downloaded for free from Paul Nation's webpage <http://www.victoria.ac.nz/lals/staff/paul-nation.aspx>

basis, but this time the words in the coursebook were classified according to the frequency levels found in the BNC and the GSLA corpora.

Furthermore, the coursebook was analysed taking into account the introduction of new vocabulary. Accordingly, we followed Scholfield's way of dealing with this issue. Vocabulary introduction was represented by two axes. The vertical one (axis X) represented the number of new words introduced, whereas the horizontal one (axis Y) represented the different didactic units of the coursebook. In this way we could observe the evolution of vocabulary introduction in the coursebook as a whole (see figure 9).

4.3.6.4. Student identification

a) PERSONAL AND ACADEMIC INFORMATION: IDENTIFICATION FILE

The identification file was administered on 4 December 2008. The teacher asked the children to sit apart from each other the way they would in an exam. The teacher handed out the identification files to all the students. They were asked not to start until they had all received one and the teacher had given the instructions. The teacher used the children's L1 to explain what they had to do. The researcher had previously informed her about the content of the file and what the children were expected to do with it.

At the same time, we were at the other end of the classroom observing and taking notes of everything which we considered relevant to the study. The completion of the identification file was estimated to take thirty minutes.

As for the computabilization of the data, the identification file contained different types of questions which required answers of a different nature. Questions answered dichotomously (either ... or ...) scored 1 or 2. These type of answers were responses to questions such as *gender* or *Have you ever been to an English-speaking country?* Other types of questions were open to more varied answers. These were questions such as *What was the reason for your stay in the English-speaking country?* or *What is your mother's job?* They required open answers which were identified by numbers ranging from 1 to 6 and even 9, depending on the variety (see Appendix 1 and Appendix 2 for a Spanish and English version of the document).

b) ATTITUDINAL INFORMATION: QUESTIONNAIRE

The student questionnaire was administered in the same session as the identification file. The children took a five-minute break between the questionnaire and the identification file. The students were sat apart while they answered the questions. Like in the case of the identification file, the teacher gave the instructions in the children's L1 and solved any doubts that might arise during the performance. She had previously been informed about the content of the questionnaire and what the children were expected to do.

Our role here was similar to the one we adopted during the identification file stage. We sat at the other end of the classroom, observing and taking notes of what happened during the course of the questionnaire. Answers to closed-ended questions scored between 1 and 5. Open-ended questions were grouped under different categories ad hoc.

c) VOCABULARY SIZE TEST: THE VOCABULARY LEVELS TEST

The students were administered the VLT on 11 December 2008. Similar to the other sessions, the teacher was the one who addressed the students. She asked the children to sit apart from each other like they would in an exam. The VLT was handed out and the students were asked not to start until they had all received a copy and the instructions were given.

The children's L1 was used in order to explain what the students had to do. The teacher was previously informed by the researcher about how the children were expected to proceed. The students were familiarized with the multiple-choice format but for them the VLT involved a slightly higher degree of difficulty, as each item presented three elements to match instead of one. This is why special attention would be paid to explaining how to approach this test. L1 instructions were provided both in the test paper and orally. No time limit was established. Test performance was expected to take around 15 or 20 minutes. After all the students had finished, they were asked to answer two L1 questions found at the end of the document: *¿Has entendido lo que tenías que hacer en la prueba?* (Did you understand what you had to do?) and *¿Te ha parecido difícil?* (Did you find it difficult?). Sitting at the back of the classroom, we continued filling our diary with observations about important things that occurred during the session.

A bilingual version (English/Spanish) of the Vocabulary Levels Test was used. Paul Nation's webpage offers bilingual versions in several languages, but does not include Spanish. Therefore, distractors for our version would be translated into Spanish. The translation process presented no difficulty, as the L2 terms had straightforward equivalents in Spanish¹¹.

The VLT presented an easy and quick scoring system. The score obtained for each subject was translated into an estimation number by means of a rule of three. The number of correct answers was multiplied by 1000 and divided by the thirty target words in the test. The result of this mathematical operation represented the number of words children knew among the 1000 most frequent ones in English (a sample of the VLT both in its Spanish and English versions can be found in Appendix 9).

4.3.6.5. Teacher identification

a) TEACHER IDENTIFICATION FILE

The teacher identification file was completed on 4 December 2008. Given that only one teacher participated in the study, the identification file was developed as a personal interview. The teacher was met at school. She was asked different questions, all of which appeared in the identification file. The interview was carried out in Spanish.

The data code was similar to that used for the student identification file. Answers to dichotomous questions were identified by 1 or 2. Other questions invited a wider variety of answers. These answers were classified into different categories – each category being attributed one number.

b) TEACHER QUESTIONNAIRE

The teacher questionnaire was administered on the same day as the identification file, that is, on 4 December 2008. Similar to the identification file, the teacher questionnaire was developed as an individual interview, which made it possible to clarify any answers when necessary. The interview took around fifteen minutes and was carried out in Spanish.

¹¹ Paul Nation's webpage offers a wide range of vocabulary resources both for students and researchers of English as a Second/Foreign Language (<http://www.victoria.ac.nz/lals/staff/paul-nation.aspx>)

The teacher's answers were codified in the same way as the students' answers to their questionnaire. Replies to closed-ended questions scored from 1 to 5. As for open-ended questions, these answers were classified into different categories ad hoc.

4.3.6.6. Classroom control

a) OBSERVATION CHART

Six observation sessions – two per didactic unit and month of instruction (January, February and March) – were planned to take place in the classroom. However, only three of them were possible: one in January, another one in February and the last one in March. The main reason behind this reduction was the teacher's reluctance to be observed. She also thought that the children would possibly feel uneasy and anxious about having someone 'odd' in the classroom. It was expected that the children would notice someone new in the classroom. Nonetheless, interference was kept to a minimum, as the researcher's role was limited to mere observation.

b) TEACHER WORKSHEET

The worksheets were collected by the researcher at the end of each week, rather than at the end of the school term. The reason for this was twofold. First, it would allow for a closer control of the group. Second, and most importantly, the worksheets were expected to be a good and reliable way to control the development of the lessons.

c) RESEARCHER'S DIARY

The diary was used as a resource of information about all the different sessions that were held during the study. Not only was the diary used in vocabulary assessment sessions, but it was also used with the students' and teacher's identification file and questionnaire. Its length could not be predicted as it did not have a predetermined structure. This very much depended on how the sessions developed and what was considered noteworthy in each of them. Normally, notes were taken at the same time as the situation being described. However, in the case of the teacher's interview, the comments were written straight afterwards. A sample of the diary can be found in Appendix 15.

4.3.6.7. *Vocabulary acquisition assessment*

This section describes the procedure that was followed during the vocabulary assessment sessions. It is organized into two parts. The first part deals with the pre-test and the global post-test. The second one is concerned with the sessions to be carried out during the second school term.

a) PRE-TEST AND GLOBAL POST-TEST SESSIONS

The students took the pre-test on 9 December 2008. The pre-test was held quite some time before the acquisition tests so as not to affect the results of the latter with a possible practice effect. The children were seated in the same way as when taking an exam. The teacher handed out the pre-tests to all the students. They were asked not to start until they all had the test on the table, and until the teacher had given the instructions. The teacher was previously informed about what the children were expected to do. The students' L1 was used to explain to them what they had to do in the test. One hour was considered enough for the completion of the test. Notes were taken during the session about possible incidents and noteworthy details.

A dual system (0/1) was used for the pre-test scoring. Accordingly, items scored 0 when no answer or a wrong L1 equivalent was provided. Items scored one point if the correct L1 equivalent was provided. Possible spelling errors in the L1 answers (b/v confusion, absence of h, j/g confusion) were not taken into consideration, as the aim was to find out whether the students knew the meaning of the L2 form; their L1 orthography is irrelevant here.

The post-test session was held on 18 June 2009. The adopted *modus operandi* was exactly the same as that of the pre-test. The score system was a dual one, and notes about test performance were reflected in the diary.

b) SECOND-TERM SESSIONS

Six sessions were held between 22 January 2009 and 2 April 2009. All of them presented the same administration and scoring process. Each session lasted sixty minutes. They each consisted of three different test formats: a L1-L2 translation test, a L2-L1 translation test and a multiple-choice test. They were arranged in terms of the cognitive effort that each test implied, so the students were unable to glean hints from one test to another. In this sense, the first test completed by the children was the L1-L2

test, followed by the L2-L1 test, and finally the multiple-choice test. The teacher was in charge of administering the tests and giving the pertinent instructions. She used the children's L1 to explain what had to be done.

The participants were engaged in a short distraction activity between tests. In their L1, they were orally asked about their hobbies and their favourite television programmes. This activity pursued a double aim. On the one hand, it was an attempt to mitigate a possible practice effect, as the three tests contained the same target words. The activity was expected to distract the children from the test they had just done. On the other hand, concentration spans at that age are very short. Hence, this mini-activity was like a form of escape for the children, helping them to focus their attention on the following test. This little discussion was developed in Spanish and lasted around five minutes (See figure [21] about the development of one second-term session). While all this was happening, we were at the back of the classroom taking notes.

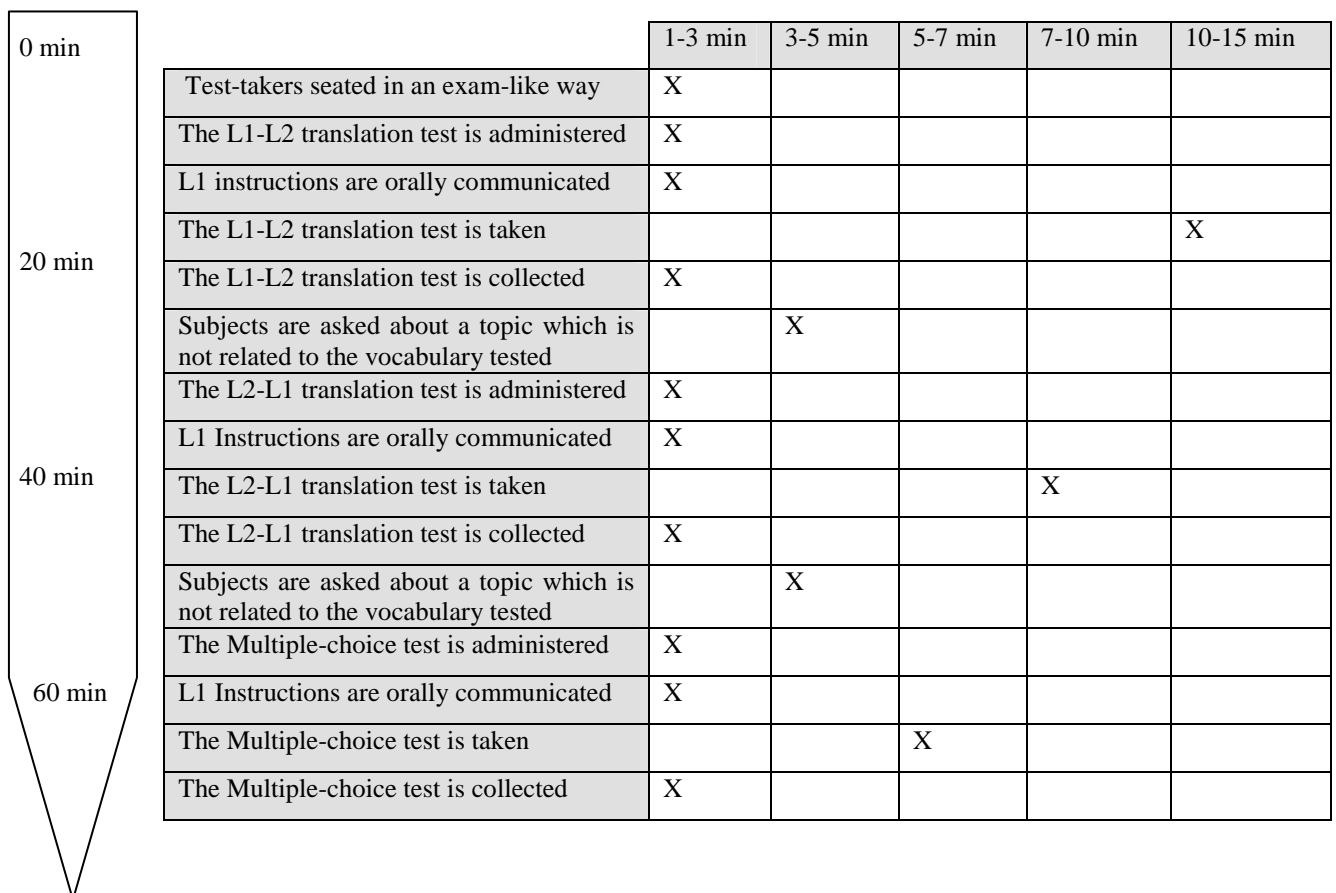


Fig [21] Chronogram of one second-term session of vocabulary assessment

The students were normally expected to spend more time on the L1-L2 translation test, followed by the L2-L1 translation test. The multiple-choice test was normally expected to be the quickest test of the three. Time spent on the L1-L2 translation test was estimated to take between fifteen and twenty minutes. The L2-L1 translation test was normally expected to take between ten and fifteen minutes, and the multiple-choice test was expected to take no more than ten minutes. Accordingly, a sixty-minute session was considered adequate for completing the three tests.

The three instruments differed in the way they were scored given the nature of their answers. The L1-L2 translation test required answers in the foreign language. Due to their low level of English, the students were expected to make spelling errors when providing the L2 equivalents in the test. However, misspelled answers might reflect partial word knowledge. This is why it was decided to give them a certain value. Accordingly, the same L1-L2 test was scored in two different ways: the *absolute* way and the *partial* way. Both scoring systems were dual (0/1), although they relied on different criteria. The *absolute* way consisted of awarding one point to those L2 words which were spelled correctly. All other answers were scored zero.

By contrast, in the *partial* way, spelling errors were considered correct as long as: 1) they did not distort the meaning of the word, and 2) the word form itself was understandable. The first condition can be illustrated by the following example: *grass* instead of *glass* for the L1 word *vaso*. The two words exist in English, but the spelling error of adding 'r' instead of 'l' transforms the word into a totally different term with a totally different meaning. By contrast, the word *chicken* written as **chiken* – even if the second 'c' is missing – can be understood and interpreted as *chicken*. According to the partial marking of the L1-L2 test, **chiken* should be scored one point, whereas *grass* should be scored zero¹². Therefore, two different scales are derived from the L1-L2 test, that is, the *absolute* one and the *partial* one.

The L2-L1 translation test and the multiple-choice test also adopted a dual scoring system. Accordingly, in the L2-L1 translation test, zero points were given to wrong answers or those left blank, whereas correct L1 equivalents scored 1 point. Possible spelling errors in the L2-L1 translation test (b/v confusion, absence of h, j/g confusion) were not taken into consideration, as the aim was to find out whether the students knew the meaning of the L2 forms. In the case of the multiple-choice test,

¹² The examples provided for illustrating the L1-L2 scoring system are real data from the present study.

correct matching was given one point, while wrong, blank or *I don't know* answers were scored zero.

4.3.6.8. Vocabulary acquisition: Test validation

Validity is defined as the degree to which a test actually measures what it is intended to measure. There is no objective and single way of validating a test (Read 2000), but there are some aspects of the test itself which can help to accept it as valid. This is the case of the test content and the construct behind it. In other words, a test is valid if it has content validity, that is, if it involves the test-taker in a sample of behaviour that is being measured. The three vocabulary acquisition tests (L1-L2 translation test, L2-L1 translation test and multiple-choice test) seem to have fulfilled this requirement. Their content corresponded to the vocabulary that the children were exposed to. In this sense, the three types of vocabulary acquisition tests enjoyed a high degree of content validity.

Closely related to content validity is the so-called face validity. A test has face validity if it *looks* as if it really measures what it is supposed to measure. Face validity is important in terms of the test takers' acceptability. In other words, if the test content is not the expected one, it might not be accepted by the learners. If this is so, then the results might be worse than what is estimated, simply because the respondents do not give any face validity to the test they have to do. By contrast, if the actual content of the test reflects what the learners are expected to find, there is face validity, and consequently the results will be closer to reality. Face validity was found in the three types of vocabulary acquisition test, as they measured the knowledge of what the respondents were exposed to.

Another way to validate a test is by means of the construct behind it. The L1-L2 translation test is meant to measure productive vocabulary knowledge. This construct offers several definitions (a whole discussion about this construct can be found in chapter 2, section 2.3.2.). In the present study productive knowledge was defined as the ability to recall a L2 form by means of an equivalent L1 stimulus. Accordingly, the L1-L2 translation format tapped into the definition of the productive construct.

As for the L2-L1 translation test and the multiple-choice test, they were designed to assess receptive vocabulary knowledge. For the sake of the present study, receptive knowledge was defined as the ability to recognize the meaning of a L2 word. Recognition could be reflected in two ways. The L2-L1 translation test did this by

means of providing the L1 equivalent of a L2 form. As for the multiple-choice test, recognition consisted of selecting the correct L1 equivalent of a L2 form from several options provided.

Reliability is another aspect to be considered when proving the test's credibility. A test is reliable when it is consistent and dependable. Put another way, the results should not change if the same test is administered to the same group of students on two different occasions – as long as their knowledge has not changed. The scoring criteria for the tests in this study were drawn up in order to reinforce reliability and avoid subjectivity. In this case, L1-L2 and L2-L1 translation tests were subjected to inter-rater reliability. This technique shows the consistency in scoring by two or more scorers in the same test. The L1-L2 and the L2-L1 translation tests were scored by two different raters. One of them was the researcher herself whereas the other one was an English teacher who was a native speaker of Spanish. A correlational analysis was carried out between the scores provided by the two raters. The analysis showed a high correlation between the two raters which meant that the tests were reliable (see Appendix 38).

The case of the multiple-choice test was slightly different. Read states that multiple-choice tests are “highly reliable and distinguish learners effectively according to their level of vocabulary knowledge” (Read 2000: 2). As stated above, the multiple-choice format belongs to the category of objective testing. Reliability constitutes one of the great advantages of these kind of tests. Thus, subjecting a multiple-choice test to inter-rater reliability seems somewhat pointless. In fact, the multiple-choice format is one of the best examples of reliability, as its answers do not leave room for ambiguity, at least in this context.

4.4. Statistical Techniques

Data analyses were carried out by means of both descriptive and inferential techniques. Descriptive techniques provide an account of the most important features of the group of participants. The descriptive techniques which were used in the analyses can be divided into two groups: measures of central tendency and measures of variability.

The measures of central tendency provide typical values of a set of data. In other words, they offer an overall view of the sample as a group. Frequencies and percentages are considered to belong to this category, but the two most common measures of central tendency are the mean and the median. However, the mean accounts for the sum of all

the scores divided by the number of scores. Given that the mean can be misleading for skewed distributions, the median should also be used in these cases. It indicates the midpoint of distribution: half the scores are above the median and half are below the median. It is less sensitive to extreme scores than the mean, which makes it a necessary and complementary measure to the mean for highly skewed distributions.

Measures of variability describe how much variation and diversity can be found in distribution. They are used alongside measures of central tendency in order to identify the dissimilarities of the sample, which are just as important as the commonalities. The most popular measures of variability are the variance and the standard deviation (SD). These are closely related measures of variation that increase or decrease according to how closely the scores cluster around the mean. The variance is the average of the squared deviations from the centre (mean) of the distribution, whereas the standard deviation is the square root of the variance. Both measure variability in interval-ratio variables.

As for the inferential techniques, they aim to reach conclusions that go beyond the immediate data alone. The inferential statistics used in this study account for correlational analyses, analyses of variance (ANOVA) and univariate regressions. The correlational analyses evaluate the strength of the relations between two variables. The ANOVA calculates whether there are significant differences between more than two variables. Finally, the univariate regression technique measures the effect of a single independent variable on a dependent variable.

The whole of the statistical analysis is carried out by means of the SPSS program (version 15.0). Table [29] summarizes the techniques that were used for the different variables analysed.

DATA	STATISTICAL ANALYSIS	OPERATIONS
Teacher identification file	Qualitative description	-----
Teacher questionnaire	Qualitative description	-----
Student identification file	Descriptive statistics	Frequency, percentage, mean, SD, min/max, variance, skewness, kurtosis
Student questionnaire	Descriptive statistics	Frequency, percentage, mean, SD, min/max, variance, skewness, kurtosis
VLT	Descriptive and inferential statistics	Frequency, percentage, mean, SD, min/max, variance, skewness, kurtosis and Correlational analysis
Pre-test	Descriptive statistics	Frequency, percentage, mean, SD, min/max, variance, skewness, kurtosis
Post-tests	Descriptive and inferential statistics	Frequency, percentage, mean, SD, min/max, variance, skewness, kurtosis and Correlational analysis, one-way analysis of variance (ANOVA), univariate regression

Table [29] Statistical techniques used in the data analysis

4.5. Final Remarks

The present chapter addresses three main areas. The first two correspond to the hypothesis and the research questions which have been raised. Most of the chapter focuses on the method which is followed in order to carry out the study. The type of research on which the study is based responds to a combination of quasi-experimental and descriptive design.

The dependent and independent variables have been identified as the vocabulary knowledge and the vocabulary input in the coursebook, respectively. The former has been subdivided into several sub-variables which are measured by a series of instruments. The latter, on the other hand, has been described in detail both in general terms and, more specifically, in terms of vocabulary input. The last part of the chapter centres on the process of context selection, the independent variable analysis, the selection and validation of the instruments, and the statistical techniques used in the

data analysis. The next chapter focuses on the data analysis, where the results will be described and discussed.

Chapter 5

Data Analysis and Discussion

5.1. Introduction

Nowadays, a serious study which is based on empirical data is not conceived without certain statistical operations. The present chapter deals with the analysis of the results yielded by the several instruments that have been used in the study.

5.2. Results

5.2.1. *Teacher identification file*

The teacher identification file contains personal and academic information about the teacher in charge of the students who participate in the study. She is a 28-year-old woman with five years' experience as an English teacher at Elementary level. She spent nine months in Bristol, England, working as a Spanish teacher. She decided to go to England to further improve her English, especially her pronunciation. She cannot speak any other foreign languages.

5.2.2. *Teacher questionnaire*

The teacher shows quite a positive attitude towards English. In response to the question *Why do you think that learning English is given so much importance nowadays?*, she answers that English is the international language of communication. She also adds that learning English opens the doors to better job opportunities. Secondly, the teacher is asked to think of three adjectives which best define the role of the textbook in the teaching of English. She defines the textbook as *useful, necessary* and *essential*. As for

the qualities that, in her opinion, a good textbook must have, she states that it should be motivating and easy to handle for the teacher. According to the teacher, it should also contain a considerable amount of grammar and vocabulary exercises. She is also asked to give three ways in which to motivate children. She comments that she likes using songs, games and quizzes. She holds that they give very good results for learning.

In addition, she is specifically asked about vocabulary. As to the question *How important is vocabulary when learning a foreign language?*, she chooses the option *very important*. She believes that the best way to teach English is to combine both implicit and explicit approaches.

5.2.3. Student identification file

The identification file contains personal and academic information about the participants, which represents the different independent variables of the study. All variables in the identification file can be classified as categorical.

5.2.3.1. Age

The participants' age ranges from eight to nine years. Since all the participants are around the same age, this is not considered a variable which can be potentially comparable in the present study.

5.2.3.2. Gender

The sample is made up of 44 students, 18 (40.9%) of whom are male and 26 (59.1%) are female (see table [30] and figure [22]). These figures indicate that the group is reasonably balanced in terms of gender, given that the difference between the number of boys and girls does not reach 20%, presenting 18.2 points in favour of the females. The fact that there are more girls than boys in the sample is by no means atypical. Normally, the number of female students in Spanish Elementary schools is higher than the number of boys. Therefore, our sample reflects the general trend in Spanish Elementary Education in terms of gender distribution.

	Frequency	Percentage
Male	18	40.9
Female	26	59.1
Total	44	100

Table [30] Frequency and percentage of participants' gender

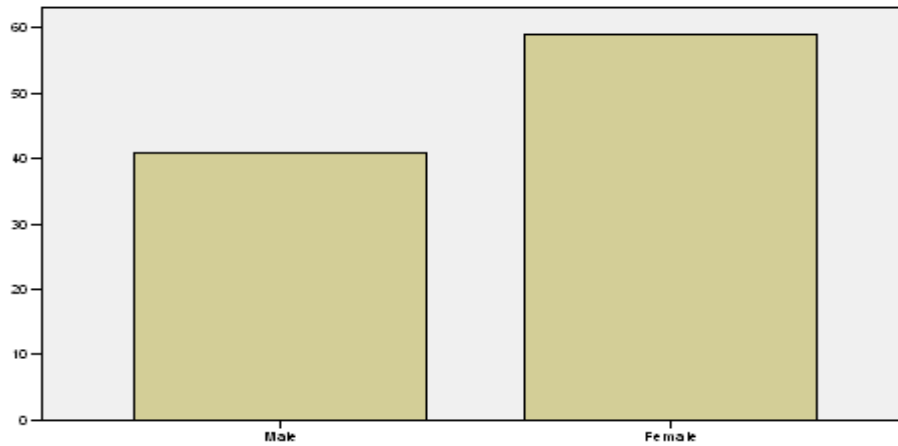


Fig. [22] Gender distribution of participants

5.2.3.3. Town

All participants come from the same area, that is, a medium-sized town in the centre of the Region of Murcia. Similar to the case of age, the fact that all children belong to the same school, and to the same place, favours the homogeneity of the group. As a result, this variable does not lend itself to comparison in this study.

5.2.3.4. Origin

Almost all participants belong to families of Spanish nationality. The immigrant population of the sample is noticeably small. Only 3 participants (6.8%) have immigrant parents. Their parents come from South America, two of them from Ecuador and the other from Peru. It is important, though, to mention that these three children were born in Spain and are Spanish.

5.2.3.5. Socioeconomic status

Given that the participants are underage, their socioeconomic status directly depends on their parents' status. As we cannot have access to information regarding family income, the children are asked about their parents' occupations. Their answers are quite varied so we have grouped them into five different categories: 1) agriculture and fishing, 2) industry, 3) self-employed, 4) public sector and 5) unemployed. We have only taken into consideration those activities for which people are paid. Some participants informed us that their mothers were housewives, yet no category is created for this group as they do not receive remuneration for this activity. Therefore, housewives are included in the 'unemployed' category.

This categorization is applied to both the fathers' and mothers' occupations. The results show a predominance of the 'self-employed' category both among fathers (61.4%) and mothers (45.5%). The 'industry' and 'public sector' categories occupy second place among fathers with almost 16% (15.9%) of representativeness each. Only two fathers work in the agriculture and fishing sector (4.5%), whereas one was unemployed at the time of the study. As for the mothers, the 'public sector' category follows the 'self-employed' category with 25% of the total. Another 25% of the participants' mothers are unemployed, whereas only around 2% work in the agriculture and fishing sector, or for industry (see figures [23] and [24]).

In light of these results, we can deduce that, in general, the socioeconomic status of the participants is intermediate. In 32 out of the 44 cases (72%), both parents are in employment, with most of them being self-employed or public sector employees, which, for these families, permits a certain degree of economic stability.

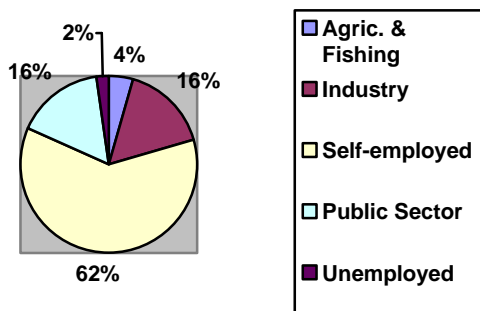


Fig. [23] Fathers' occupations

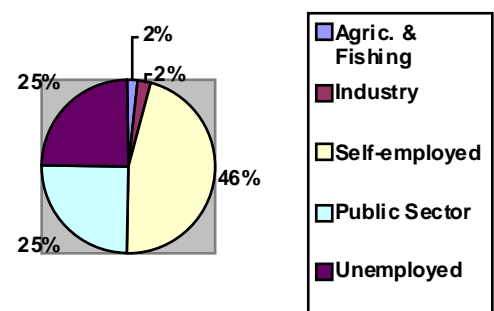


Fig. [24] Mothers' occupations

5.2.3.6. *Extra lessons*

Three students from the initial group of participants (50) receive extra English lessons. The lessons consist of one extra hour of tutoring a week, where the content of the regular lessons is revised. Two students share the same instructor who is a native speaker of English with no formal training as a teacher. The instructor of the other student is a Spanish woman who has been trained as an English teacher. Extra lessons imply validity problems, and for this reason the three participants are eliminated from the study. None of the participants from the final sample, which is made up of 44 students, receives extra lessons.

5.2.3.7. *Non-instructed contact with English outside the classroom*

This variable gathers different situations which can promote the participants' contact with the foreign language outside the classroom. These situations include stays in English-speaking countries and the reasons for these stays, as well as leisure activities such as reading, listening to music, playing video games and watching movies – all in English.

Only one student has been to an English-speaking country. The student in question (male) spent three days in the United Kingdom with his parents. It is highly unlikely that this visit could have had a significant effect on the participant's English knowledge or his vocabulary level. None of the participants have read books in English, listened to music in English or watched a film in English. Only one of them plays video games where some English words might appear from time to time. Consequently, we can confirm that contact with English outside the classroom is virtually non-existent, or at least has no significant effect on the participants' level of English.

5.2.3.8. *Re-sitters*

There are no re-sitters in the group. All participants are taking their third year of Elementary Education for the first time.

5.2.3.9. *Other languages spoken besides Spanish*

The only language that participants use at home and speak regularly is Spanish. They were not studying any other foreign languages at the time of the study, neither had they studied other foreign languages before this period. Therefore, we can say that they are

virtually monolingual¹³, as they can only speak Spanish and have very basic knowledge of English.

5.2.3.10. Previous year's English mark

The English marks that the participants obtained the year before are classified according to an ordinal scale. Marks are normally classified into five different ordinal categories: 0) *suspenso* (D); 1) *suficiente* (C); 2) *bien* (B); 3) *notable* (A); 4) *sobresaliente* (A+). The number of points and the mark awarded are calculated as follows: category 0 = 0 to 4.9 points; category 1 = 5 to 5.9 points; category 2 = 6 to 6.9 points; category 3 = 7 to 8.9 points; and category 4 = 9 to 10 points.

The range of marks covers the whole spectrum from 0 (*suspenso*) to 4 (*sobresaliente*). Some participants scored 0 while others obtained the highest mark, that is, 4. This is reflected in table [31] and figure [25] where we can see the frequencies and percentages for each category. Over 43% of students obtained *notable*, followed by those who were awarded *sobresaliente* (25%). Only three participants did not pass the subject the year before.

		Frequency	Percentage
Suspenso (D)	0-4.9	3	6.8
Aprobado (C)	5-5.9	3	6.8
Bien (B)	6-6.9	8	18.2
Notable (A)	7-8.9	19	43.2
Sobres. (A+)	9-10	11	25.0
	Total	44	100

Table [31] Frequencies and percentages of 'Previous year's English marks'

¹³ The students are not considered bilingual, as we understand the concept of bilingual as the ability to speak two languages fluently.

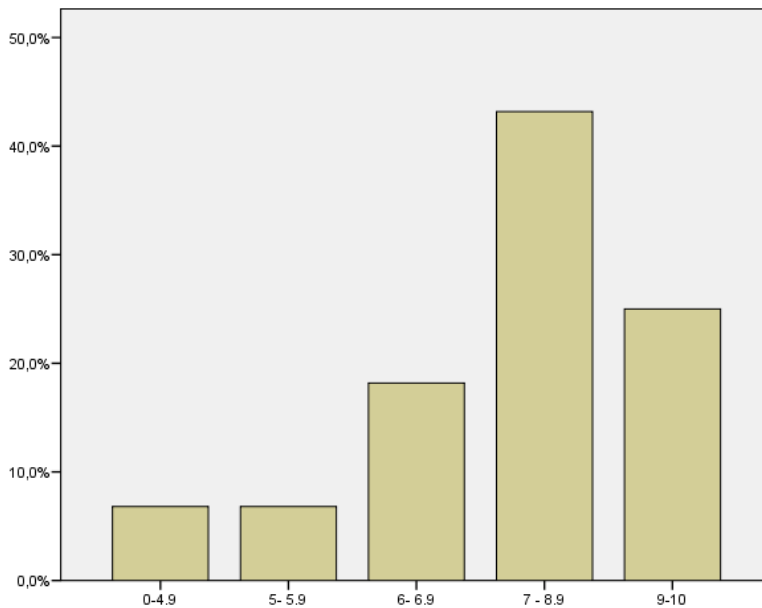


Fig. [25] Previous year's English marks

5.2.4. Student questionnaire

The student questionnaire provides information about the participants' attitude towards the English language in general and vocabulary in particular. The 'attitude towards English' independent variable is presented in the form of four closed-ended questions, where different options are provided. According to this format, what we find is a scale variable.

The first three questions address the extent to which the participants like English, the importance they attribute to the language, and the role they think vocabulary plays in learning a foreign language like English. The options provided rank from 1 to 5. The higher the number, the greater the importance, the more positive the attitude, and the greater degree of protagonism attributed to vocabulary when learning English.

The fourth question is also a closed-ended one, but this time there are nine options instead of five. The selection of one or another option is not a question of degree. Each option corresponds to a different topic that the participants normally encounter in textbooks. They are asked to select their favourite one.

5.2.4.1. Do you like English?

Students have to answer whether they like English or not and to what extent. As we can see in table [32], the participants' attitude towards English is remarkably positive. All participants answer that they like English. What is more, 29 out of the 44 participants marked 5, the highest option, stating that they like English *very much* (see table [32] and figure [26]).

	Frequency	Percentage	
1	0	0	1. No, I don't like it. In fact, I hate it
2	0	0	2. No, I don't like it
3	0	0	3. Not very much, but it's OK
4	15	34.1	4. Yes, I do
5	29	65.9	5. Yes, I like it very much
Total	44		

Table [32] Frequencies and percentages of 'Liking English'

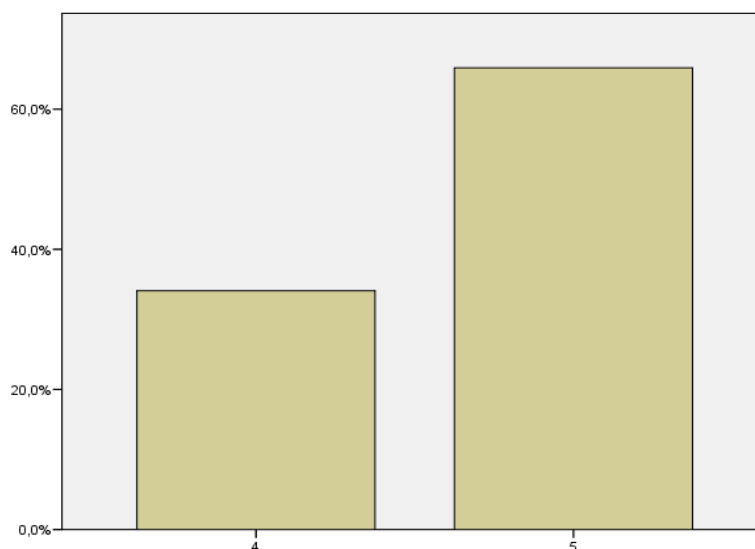


Fig. [26] Liking English

5.2.4.2. How important is English?

With regard to the second question, there are no cases of 1, that is, no participants consider the English language unimportant at all. In fact, over 70% think that English is one of the most important school subjects, and two participants consider it the most

important one. Yet, it should also be noted that 25% see English as just one subject among the whole set of subjects they have to study. They do not state that English is not important, but they do not comment on the importance of this subject either (see table [33] and figure [27]).

	Frequency	Percentage	
1	0	0	1. Not important at all. It should be eliminated
2	0	0	2. Not important
3	11	25.0	3. No more or less important than others
4	31	70.5	4. Important
5	2	4.5	5. The most important
Total	44		

Table [33] Frequencies and percentages of ‘The importance of English’

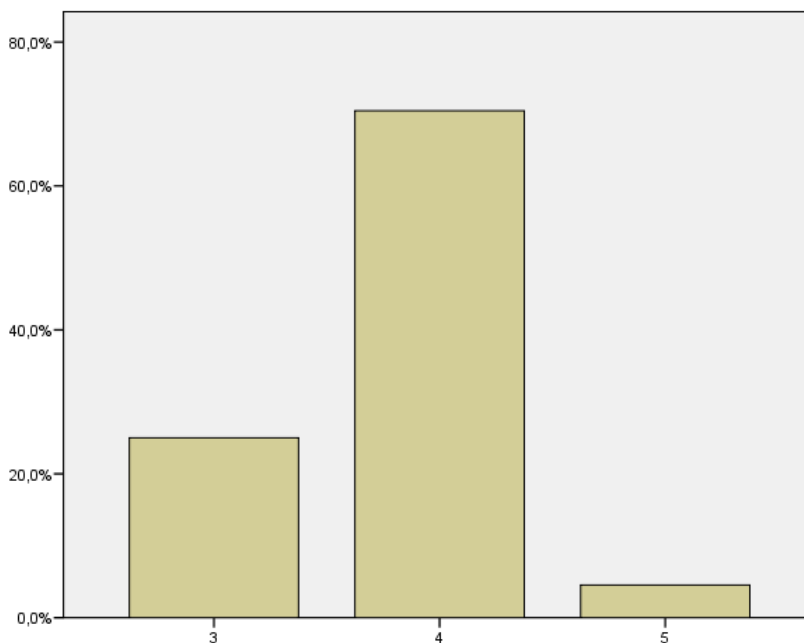


Fig. [27] The importance of English

5.2.4.3. How important is vocabulary when learning English?

The third question focuses specifically on vocabulary and its role in learning English as a foreign language. Almost 98% associate learning vocabulary with a remarkable or a

very remarkable improvement in one's level of English. Only one participant thinks there is a weak relationship between learning new words and being good at English. No one believes that English can be learnt without the acquisition of any new vocabulary at all (see table [34] and figure [28]).

	Frequency	Percentage	
1	0	0	1. Not important at all. It should be eliminated
2	0	0	2. Not important
3	1	2.3	3. No more or less important than other things
4	21	47.7	4. Important
5	22	50.0	5. The most important
Total	44	100	

Table [34] Frequencies and percentages of 'The importance of vocabulary'

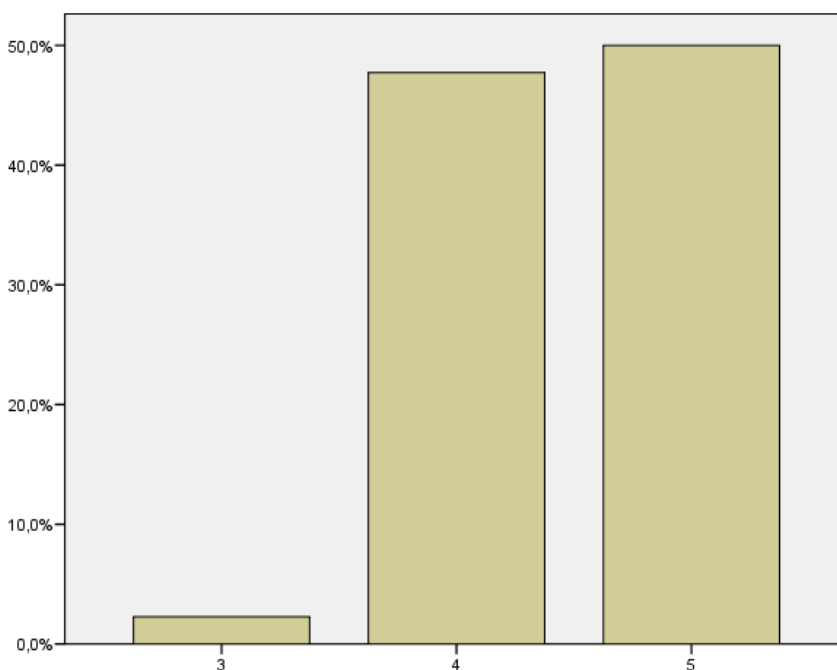


Fig. [28] The importance of vocabulary

5.2.4.4. What is your favourite topic when learning English vocabulary?

The last question concerns the semantic fields that students prefer when studying English vocabulary. The most popular topics among participants are animals and sports

with 25% each. This is followed by food and holidays, each option favoured by just over 20% of those participating. Only four students prefer clothes. Finally, the topics of family, the house, routines and school are not selected by anyone as their favourite (see table [35] and figure [29]).

	Frequency	Percentage	
1	11	25.0	1. Animals
2	4	9.1	2. Clothes
4	9	20.5	3. Family
5	9	20.5	4. Food
9	11	25.0	5. Holidays
Total	44	100	6. The house
			7. Routines
			8. School
			9. Sports

Table [35] Frequencies and percentages of 'Favourite topics'

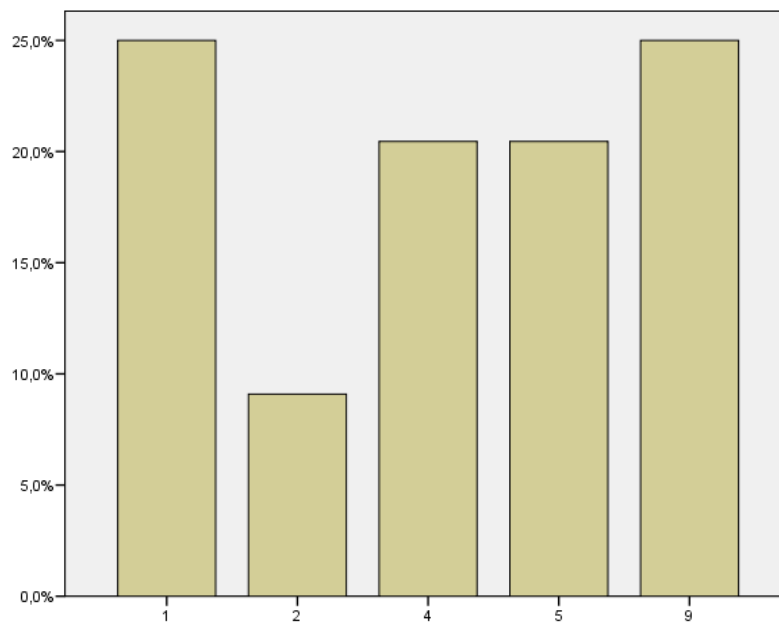


Fig. [29] Favourite topics

It is also interesting to calculate the preferences in terms of gender. Regarding animals, 6 out of the 11 participants who choose this topic are girls. The 4 participants who prefer clothes over any other topic are also girls. The girls also show a preference for food (8 out of 9 students) and holidays, with two thirds of the female students going for

this option. However, for the boys, it is the sports topic which dominates. None of the girls choose sports as their favourite vocabulary field (see figure [30]).

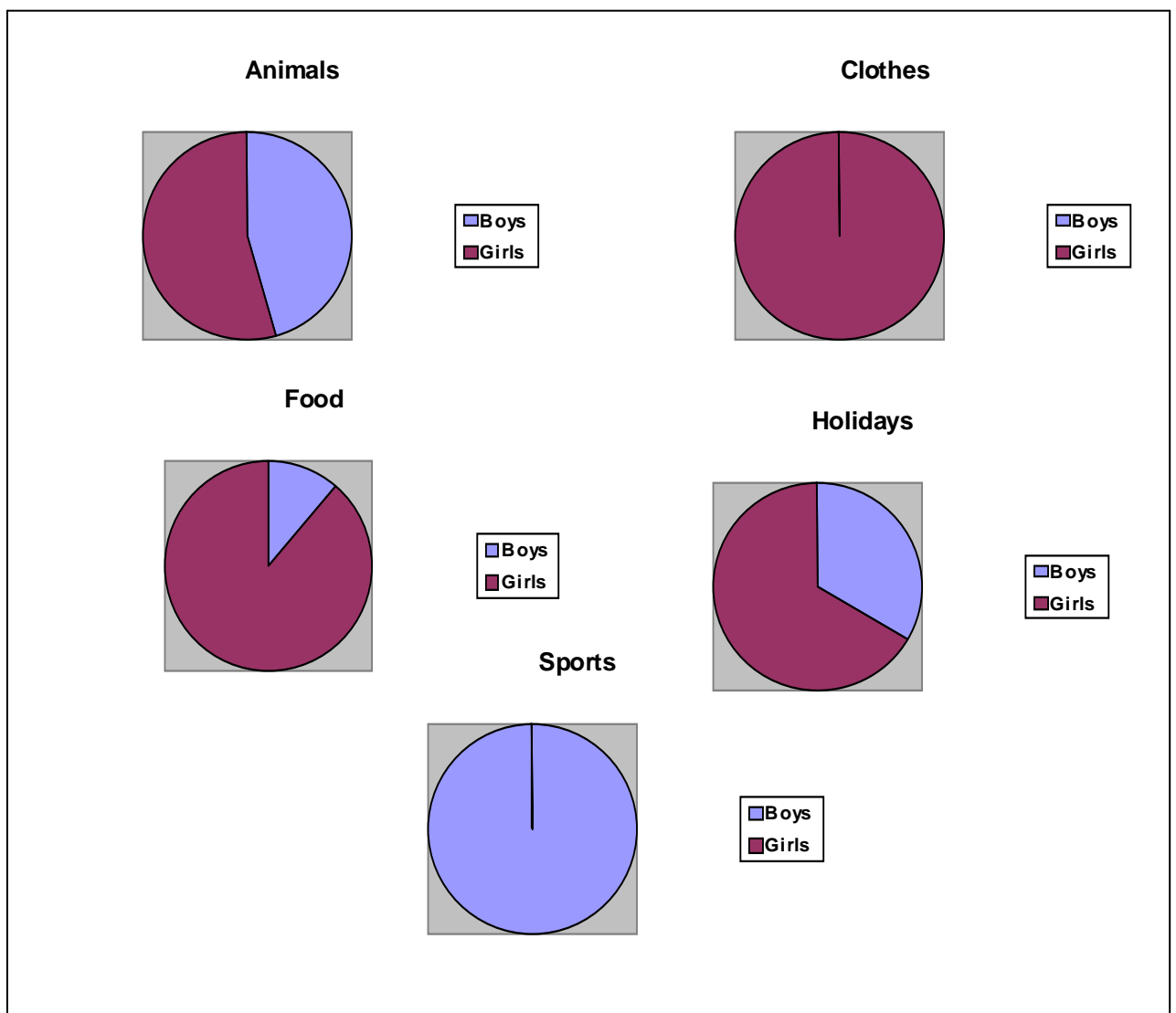


Fig. [30] Favourite topics per gender

5.2.5. Vocabulary size: the Vocabulary Levels Test

5.2.5.1. Participants' vocabulary size

The Vocabulary Levels Test (VLT) presents a quantitative variable which estimates the total vocabulary size of students. VLT results are analysed by using central tendency measures.

The descriptive analyses show that the mean score for the VLT is 339.8, which attributes a total vocabulary size of around 340 word families to the group of participants. The sample distribution is not completely normal; it is slightly right-skewed, displaying a negatively skewed curve. This is confirmed by the standard deviation, which almost reaches 153 points. The Kurtosis analysis (< 0) shows a platykurtic distribution of the data, indicating a high degree of dispersion (see table [36] and figure [31]).

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Statistic	Variance Statistic	Skewness Statistic	Std. Error	Kurtosis Statistic	Std. Error
VLT score	44	0	600	339.80	152.542	23269.097	-.449	.357	-.620	.702

Table [36] Descriptive statistics of VLT score

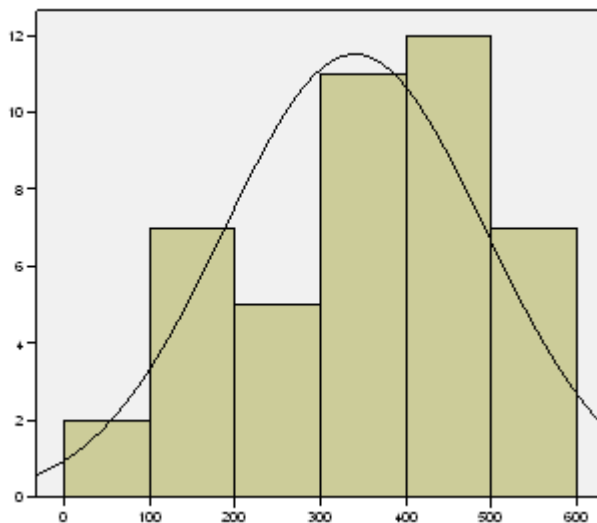


Fig. [31] VLT scores

In terms of gender, the female participants have a higher vocabulary size than the male participants (see table [37]). The former surpass the latter with almost 100 extra word families. In other words, the mean vocabulary size for the girls is over 376 words (sd 137.15), whereas the boys do not reach 290 (sd 161.69).

	N	Mean	Sd
Girls	26	376.53	137.15
Boys	18	286.72	161.69
Total	44		

Table [37] VLT mean scores per gender

5.2.5.2. *The VLT and the previous year's English mark*

The correlational analysis shows that the independent variables of the VLT and the Previous year's English mark correlate (see table [38]). They present a strong degree of correlation which is significant at the 0.01 level (0.006). The significant correlation between these two variables indicates that those who are good at English in general normally know more words than those who are not so good at this language.

		VLT	Previous year's English mark
VLT	Pearson Correlation	1	.411(**)
	Sig. (bilateral)		.006
	N	44	44
Previous year's English mark	Pearson Correlation	.411(**)	1
	Sig. (bilateral)	.006	
	N	44	44

Table [38] Correlation between VLT and Previous year's English mark

5.2.6. *Pre-test*

The Pre-test is applied to the initial sample of 50 students. The aim of this pre-test is to check whether they know any of the target words which are going to be assessed afterwards. Three of the students show partial knowledge of some words. For the purpose of this study, we need participants with no knowledge of any of the words to be tested. Accordingly, these three potential participants are excluded from the study.

5.2.7. *Post-tests: Second-term and final global tests*

5.2.7.1. *Vocabulary acquisition and the VLT*

The analysis shows significant correlations between the VLT and the four types of scores in the final tests (see table [39]). Significance is found at the .000 level in all

cases. The strongest correlation is established between the VLT and the multiple-choice test (Pearson .832) closely followed by the L2-L1 translation test (Pearson .804). The two productive scores show a slightly weaker degree of correlation – L1-L2A (Pearson .589) and L1-L2P (Pearson .698) – but still highly significant.

	Pearson Correlation	Sig. (bilateral)
Final L1-L2A	.589	.000
Final L1-L2P	.698	.000
Final L2-L1	.804	.000
Final Mch	.832	.000

Table [39] Correlations between VLT and final global tests

5.2.7.2. *Quantity of acquisition*

The post-tests are taken throughout the second school term and also at the end of the academic year. Six sessions take place during the second term. They are carried out every fifteen days. These sessions consist of three different test types. The same formats are used in the final session.

	S1		S2		S3		S4		S5		S6	
	Word mean	%	Word mean	%	Word mean	%	Word mean	%	Word mean	%	Word mean	%
L1- L2A	7.29	33.16	4.97	23.7	7.45	32.41	3.47	12.87	4.20	18.28	3.09	23.77
L1- L2P	8.34	37.91	6.25	29.76	9.27	40.31	5.63	20.87	5.47	23.81	3.83	29.72
L2- L1	13	59.09	11.11	52.92	14.65	63.77	13.36	49.49	10.65	46.34	5.84	44.93
Mch	15.4	70.04	15.13	72.07	17.81	77.47	18.24	67.76	16.09	69.96	8	61.53

Table [40] Means and percentages of the words acquired in each second-term session

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Statistic	Variance Statistic	Skewness		Kurtosis	
							Statistic	Std. Error	Statistic	Std. Error
Final L1- L2A	44	3	63	22.86 (17.72%)	12.149	147.609	1.062	.357	1.950	.702
Final L1- L2P	44	7	71	30.73 (23.81%)	14.069	197.924	.771	.357	.681	.702
Final L2-L1	44	21	118	60.20 (46.67%)	23.149	535.887	.487	.357	-.141	.702
Final Mch	44	38	127	96.93 (75.13%)	22.156	490.902	-.682	.357	.129	.702

Table [41] Acquisition in the final session

The students as a group did not manage to acquire 100% of the input received (see table [40]). The highest scores were achieved in the multiple-choice tests, whereas the lowest scores were found in the L1-L2 absolute tests. On average, the group learned around 91 words in terms of sight vocabulary knowledge (multiple-choice test), which amounts to 70% of the input. According to the L2-L1 scores, the students learned about 53%, which works out at around 68 words of the 129 tested.

Productive acquisition is considerably lower than receptive acquisition. If we consider all the words learned in the six second-term sessions, only around a quarter of the whole set has been acquired. Put another way, only 30% of the target vocabulary has been translated into English, 23% being correctly spelled. Scores in the final session are much the same, but slightly higher (see table [41]).

A correlational analysis shows important links between the four types of scores in the final tests (see table [42]). Significant correlations are found at the .000 level in all cases. The strongest correlation is established between the L1-L2A and the L1-L2P (Pearson .967), closely followed by the L1-L2P and the L2-L1 translation test (Pearson .925). The lowest correlation score is found between the L1-L2A and the multiple-choice test (Pearson .722).

		Final L1-L2A	Final L1-L2P	Final L2-L1	Final Mch
Final L1-L2A	Pearson correlation	1	.967	.869	.722
	Sig. (bilateral)		.000	.000	.000
Final L1-L2P	Pearson correlation	.967	1	.925	.793
	Sig. (bilateral)	.000		.000	.000
Final L2-L1	Pearson correlation	.869	.925	1	.877
	Sig. (bilateral)	.000	.000		.000
Final Mch	Pearson correlation	.722	.793	.877	1
	Sig. (bilateral)	.000	.000	.000	

Table [42] Correlation of test scores in the final session

A one-way between-groups analysis of variance is conducted for each second-term session and for the final session. There is a statistically significant difference at the $p < .05$ level in scores for the four tests in all sessions, including the final global one: S1 [F56.884, $p = .000$]; S2 [F71.869, $p = .000$]; S3 [F84.900, $p = .000$]; S4 [F414.058, $p = .000$]; S5 [F92.004, $p = .000$]; S6 [F41.490, $p = .000$]; global final session [F143.279, $p = .000$] (see table [43]).

Nonetheless, post-hoc comparisons using the Tukey HSD test indicate that not all scores in each session are significantly different from the rest (see table [44]). In fact, no significant difference is found between the L1-L2A and L1-L2P tests in any session except for session 4, where the scores in L1-L2A and L1-L2P are statistically different. As for the final global session, significant differences are recorded among all tests, except for scores in L1-L2A and L1-L2P, where the p value reaches .204.

Session	F	Sig.
1	56.884	.000
2	71.869	.000
3	84.900	.000
4	414.058	.000
5	92.004	.000
6	41.490	.000
Final	143.279	.000

Table [43] ANOVA of the four test types in the second-term sessions

	L1-L2A-L1-L2P	L1-L2A-L2-L1	L1-L2A-Mch	L1-L2P-L2-L1	L1-L2P-Mch	L2-L1-Mch
S1		*	*	*	*	*
S2		*	*	*	*	*
S3		*	*	*	*	*
S4	*	*	*	*	*	*
S5		*	*	*	*	*
S6		*	*	*	*	*
Final		*	*	*	*	*

Table [44] HDS Tukey: final session

5.2.7.3. Rate of acquisition

Table [45] shows the cumulative percentage of acquisition for each second-term session.

	S1	S1-S2	S1-S3	S1-S4	S1-S5	S1-S6
L1-L2A	5.65	9.51	15.29	17.98	21.24	23.64
L1-L2P	6.46	11.31	18.49	22.86	27.11	30.11
L2-L1	10.07	18.69	30.05	40.41	48.67	53.20
Mch	11.94	23.67	37.49	51.67	64.14	70.34

Table [45] Cumulative percentage of acquisition from S1 to S6

Figure [32] reveals the rate at which each type of vocabulary knowledge grows across the six second-term sessions.

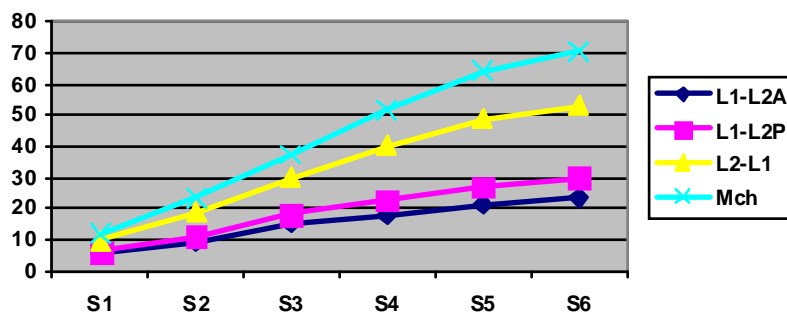


Fig. [32] Rate of vocabulary acquisition

The highest rate of acquisition is observed in the multiple-choice test, whereas the absolute L1-L2 translation test registers the most moderate rate. Nonetheless, the rate at which acquisition grows does not vary very much from session to session. In the absolute L1-L2 and the partial L1-L2 translation test, the growth ranges from 3.26 to 5.78 points and from 3 to 7.18, respectively. As for the L2-L1 translation test and the multiple-choice test, the indices of growth from one session to the next range from 4.53 to 11.36 in the first case and from 6.2 to 14.18 in the second case.

The differences found between the lowest and highest indices of the tests seem to be considerable, but the lowest indices, in all cases, correspond to the differences between sessions 5 and 6. Leaving aside session 6, the differences are considerably reduced. The differences between sessions in the L1-L2 absolute test range from 2.69 to 5.78. In the partial L1-L2 tests, these differences are from 4.25 to 7.18. The reduction of the differences is more marked in the case of the L2-L1 translation and the multiple-choice test. The former range from 8.26 to 11.36, whereas in the latter case, the differences in the growth are only around 3 points, from 14.18 to 11.73.

Table [46] shows the cumulative percentages of acquisition for each session. These percentages were calculated on the total number of target words introduced, that is to say 129. These estimations allow us to identify the rate at which each type of vocabulary knowledge grows.

	S1		S2		S3		S4		S5		S6	
	%	<i>growth</i>	%	<i>growth</i>	%	<i>growth</i>	%	<i>growth</i>	%	<i>growth</i>	%	<i>growth</i>
L1-L2A	5.65	5.65	9.51	3.86	15.29	5.78	17.98	2.69	21.24	3.26	23.64	2.4
L1-L2P	6.46	6.46	11.31	4.85	18.49	7.18	22.86	4.37	27.11	4.25	30.11	3
L2-L1	10.07	10.07	18.69	8.62	30.05	11.36	40.41	10.36	48.67	8.26	53.20	4.53
Mch	11.94	11.94	23.67	11.73	37.49	13.82	51.67	14.18	64.14	12.47	70.34	6.2

Table [46] Cumulative percentage of acquisition from S1 to S6

A one-way between-groups analysis of variance is conducted for each test type across the six sessions. The aim is to find out whether there is a significant growth in the rate of acquisition across the six sessions. In general, the ANOVA shows significant differences between the same tests in different sessions ($p=.000$) (see table [47]).

Test type	F	Sig.
L1-L2A	48.973	.000
L1-L2P	67.454	.000
L2-L1	164.694	.000
Mch	382.102	.000

Table [47] ANOVA of test types in the second-term sessions

However, post-hoc comparisons using the Tukey HSD test indicate that these significant differences do not occur between all sessions (see tables [48] to [51]). This is especially so in the productive tests. No significant differences are found between contiguous sessions, that is, sessions 1 and 2, sessions 3 and 4, and sessions 5 and 6. In the case of receptive tests, the only sessions which do not register significant differences are sessions 5 and 6 in the L2-L1 translation test.

	S1	S2	S3	S4	S5	S6
S1			*	*	*	*
S2			*	*	*	*
S3	*	*			*	*
S4	*	*				*
S5	*	*	*			
S6	*	*	*	*		

Table [48] Significant differences in L1-L2A tests

	S1	S2	S3	S4	S5	S6
S1			*	*	*	*
S2	*		*	*	*	*
S3	*	*			*	*
S4	*	*				*
S5	*	*	*			
S6	*	*	*	*		

Table [49] Significant differences in L1-L2P tests

	S1	S2	S3	S4	S5	S6
S1		*	*	*	*	*
S2	*		*	*	*	*
S3	*	*		*	*	*
S4	*	*	*		*	*
S5	*	*	*	*		
S6	*	*	*	*		

Table [50] Significant differences in L2-L1 tests

	S1	S2	S3	S4	S5	S6
S1		*	*	*	*	*
S2	*		*	*	*	*
S3	*	*		*	*	*
S4	*	*	*		*	*
S5	*	*	*	*		*
S6	*	*	*	*	*	

Table [51] Significant differences in Mch tests

Furthermore, a linear univariate regression analysis for each type of vocabulary knowledge is carried out (see table [52]). The dependent variable refers to the different scores while the independent variable corresponds to the number of sessions which the students undertake. Our aim is to identify the amount of vocabulary knowledge that the group is able to obtain coupled with the number of sessions that are necessary in order to reach half of this knowledge.

Vocabulary knowledge	F	Sig.	R ²
L1-L2A	54.409	0.000	0.167
L1-L2P	44.734	0.000	0.146
L2-L1	53.694	0.000	0.170
Mch	38.631	0.000	0.128

Table [52] Univariate linear regressions of the final session

The coefficients show the values for the constant and the independent variable, in this case the sessions. The value of the constant is divided by 1, which yields the maximum vocabulary knowledge that can be acquired. The number of sessions which are necessary for reaching half of that maximum is the result of multiplying that maximum by the value of the session in the regression. As there are four types of scores (L1-L2A, L1-L2P, L2-L1 and Multiple-choice), we carried out four different regressions, one for each type (see table [53]).

Type of knowledge	Unstandardized coefficients	1/Constant	(1/Constant) x value of the sessions in the regression
L1-L2A	Constant .013	1/0.013	76.9 x 0.165
	Sessions .165		
L1-L2P	Constant .005	1 / 0.005	200 x 0.155
	Sessions .155		
L2-L1	Constant -.001	1 / 0.001	1000 x 0.092
	Sessions .092		
Mch	Constant -.002	1 / 0.002	500 x 0.073
	Sessions .073		

Table [53] Results for A and B in the equation

According to the results, the students as a group would be able to acquire 77 words correctly spelled (L1-L2A) as a maximum throughout their learning process. In order to reach half of this knowledge, they would need around 13 sessions. Regarding partial productive knowledge (L1-L2P), the group would be able to learn 200 words, of which 100 would be acquired across 31 sessions. The receptive knowledge measured by the L2-L1 test would amount to 1,000 acquired words. The group would need 92 sessions to acquire 50% of this quantity. Finally, vocabulary knowledge assessed by the multiple-choice test would reach a maximum of 500 words, of which 50% would be learned across approximately 36 sessions (see table [54]).

Type of knowledge	Maximum vocabulary knowledge	Sessions needed for half of the maximum
L1-L2A	76.9	12.6
L1-L2P	200	31
L2-L1	1000	92
Mch	500	36.5

Table [54] Results of the model of vocabulary acquisition

5.2.7.4. Which words are acquired according to their frequency and distribution in the coursebook?

In order to find out whether the word DP (dispersion measure) has an effect on vocabulary acquisition, the final global test scores are used. Four different univariate regressions are carried out, one for each type of tested knowledge. The independent variable in these regressions corresponds to the number of acquisitions registered for each word, whereas the dependent variable indicates its index (see table [55]).

Vocabulary knowledge	F	Sig.
L1-L2A	17.341	Constant .000 Acq .000
L1-L2P	14.459	Constant .000 Acq .000
L2-L1	6.390	Constant .001 Acq .013
Mch	3.787	Constant .000 Acq .054

Table [55] Regression DP and acquisition

The regression analysis shows that the effect of the word DP on acquisition is not the expected one. Contrary to expectations, the DP does not seem to be determinant for acquisition. What is more, the words with high DPs – that is, those with a more irregular distribution – register higher indices of acquisition for three of the four types of vocabulary knowledge involved. In Table [54], the relationship between the DP and acquisition is significant in L1-L2A [F 17.341; p value = .000]; L1-L2P [F 14.459; p value = .000]; L2-L1 [F 6.390; p value = .013]; but this is not the case of the multiple-choice test [F 3.787; p value = .054].

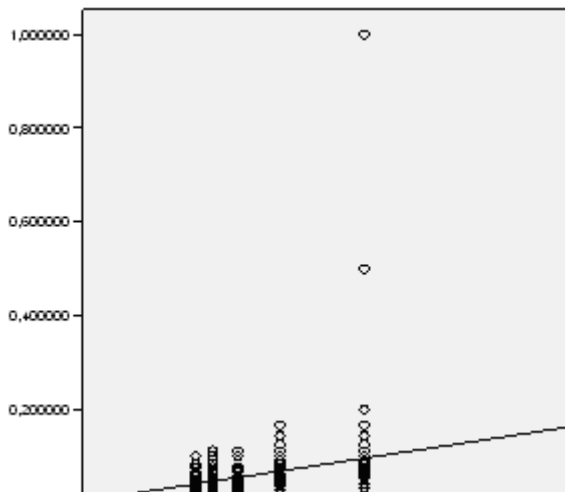


Fig. [33] DP index and L1-L2A acquisition

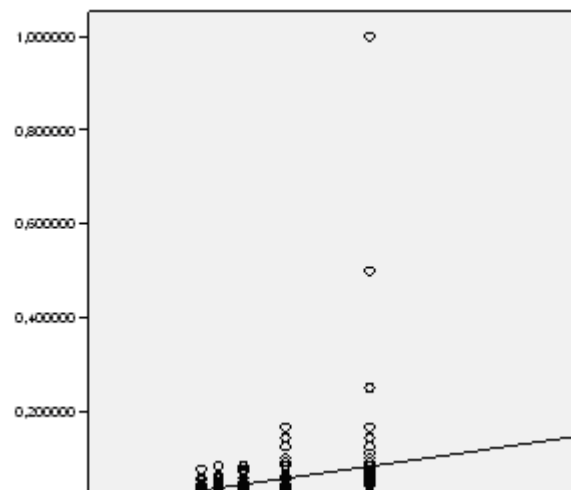


Fig. [34] DP index and L1-L2P acquisition

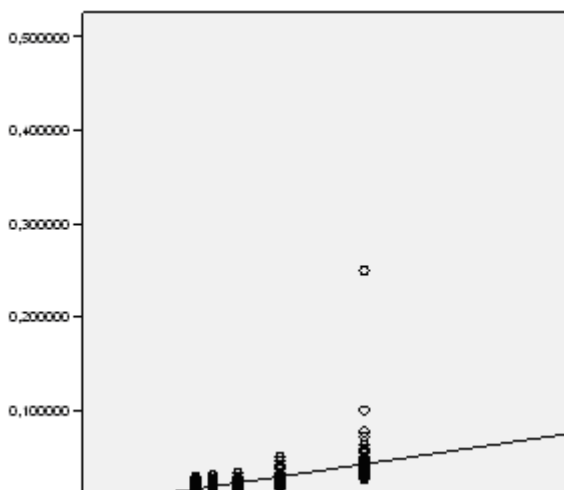


Fig. [35] DP index and L2-L1 acquisition

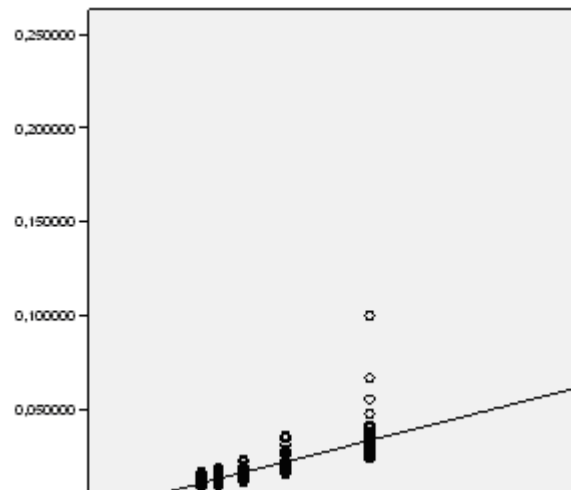


Fig. [36] DP index and Mch acquisition

Figures [33] to [36] represent the degree of word acquisition according to their DP. The ascending line indicates that the relationship between the index of dispersion (DP) and acquisition is positive. Put another way, the higher the word DP – and consequently the higher its irregular dispersion – the higher its degree of acquisition.

5.3. Summary of Results

The key findings of this study are summarized below:

1. The information provided by the teacher identification file and the teacher questionnaire reveal a professional individual from the field of teaching who fits the typical profile of an English teacher in Spain: a native speaker of Spanish with a positive attitude towards the English language and vocabulary. She considers the coursebook a very important tool in the classroom and follows it very closely.

2. Descriptive statistical analyses present a student sample which is fairly representative of a typical group of English learners at an Elementary level in Spain. Their socioeconomic status together with the type of contact they have with their foreign language paint a picture of a typical group of English students at an Elementary school in Spain. They have a vocabulary size which does not surpass 340 words on average and they have no contact with any other languages beyond Spanish and English. In general, they present a positive attitude towards the English language, recognizing the importance of learning vocabulary in order to improve their foreign language level.

3. The correlational analysis between the VLT and the post-test results suggests that the VLT is a good predictor of a student's vocabulary size.

4. Descriptive statistics indicate that the group is not capable of scoring 100% in any of the vocabulary testing sessions for any of the types of vocabulary knowledge.

5. Correlational analyses between the final four test scores reveal that good scorers in one test type are normally good scorers in the other test types, and that bad scorers in one test type are also bad scorers in the other test types.

6. A one-way analysis of variance and post-hoc Tukey analyses prove that receptive knowledge grows significantly faster than productive knowledge.

7. A univariate regression reveals that the participants' vocabulary acquisition process can be modelled to a certain degree, suggesting the rate at which vocabulary can be learned.

8. A univariate regression analysis proves that, in this case, the words' index of dispersion is not able to predict the acquisition of those words.

4.4. Discussion of Results

The initial hypothesis of this thesis suggests that the non-systematic introduction of input might be related to vocabulary learning. The findings reported in chapter 5 seem to confirm this hypothesis. Despite the irregular introduction of new vocabulary, word

acquisition has been recorded. The key issue, though, is to find out to what extent the learning process has been affected by non-systematization. Put another way, we need to know how many words have been acquired, at what rate they have been acquired, and finally, which specific words have been acquired, according to their frequency and distribution.

5.4.1. How many words have been acquired?

The post-test results reveal that by no means has all the input been learned by the students. In fact, the participants have been able to produce less than 24% of the new vocabulary they have been exposed to, and only around 18% has been spelled correctly. They have only been able to translate around 46.6% of the new vocabulary tested and recognize 75%. Hence, the degree of acquisition is considerably far from the desired 100%.

The causes of these low figures are not very clear. Two possible explanations for this situation are proposed. The first one lies in the context of non-systematicity, which might prevent students from acquiring all the input which has been introduced. The second one could be attributed to the number of items introduced per session. That is to say, the amount of new vocabulary presented could surpass the amount that the participants are capable of acquiring.

Moreover, it is important to consider the divergences in acquisition regarding different types of vocabulary knowledge. Correlations between the four final test scores show that high scorers in one test type are also high scorers in the other test types. Statistical differences between the four test scores indicate important divergences among the four types of vocabulary knowledge which have been measured. Receptive knowledge is significantly higher than productive knowledge in all testing sessions.

This fact runs counter to previous studies such as that of Takala (1984). The participants in Takala's study were also Elementary school students of English as a foreign language. Takala's results showed that there was no significant difference between receptive and productive vocabulary knowledge. In other words, around 95% of the vocabulary learned receptively also proved to be learned productively. The author attributed these results to the participants' low level of English.

By contrast, our results are in line with most vocabulary studies, where the differences between receptive and productive knowledge are considerably high in the

lexicon of L2 students, regardless of their level. What is more, not only are differences established between receptive and productive knowledge in general, but statistical differences are also registered between the two types of receptive tests. The six second-term testing sessions show that results in the multiple-choice test considerably surpass those in the L2-L1 translation test. However, we cannot say the same about the two types of productive knowledge. Differences between the L1-L2 absolute and L1-L2 partial tests are only significant in session 4. Put another way, in this session more words have been acquired productively in comparison with the amount of words which have been correctly spelled.

Divergences may be related to intralexical factors. Differences between the two productive tests can be explained, at least partially, by the difficulty in the orthographic representation of some words. In the case of session 4, we can find up to five cognates – which may have made the acquisition of the meaning-form link easier, but not the correct spelling, as scores in the L1-L2 absolute test are significantly lower than those in the other type of productive knowledge.

Therefore, we could draw the conclusion that an important part of the input introduced in a non-systematic context has not been learned, although the causes for this are not clear. Furthermore, our results also indicate that the differences between receptive and productive knowledge can be fine-tuned to at least three types of knowledge, and in some cases four, depending on the nature of the words: recognition of the L2 form with the help of L1 options; recognition of the L2 form without the help of L1 options; understandable production of a L2 form; and correct production of a L2 form.

5.4.2. At what rate have they been acquired?

It seems that the coursebook points to a certain acquisition of vocabulary, as if the introduction of input depended on this particular material, at least in the context of this study. Yet, the coursebook's influence on acquisition is only partial. In other words, despite the differences in the amount of vocabulary introduced each time, the rate of acquisition seems to be fairly constant across the second-term sessions in general, with the exception of session 6. In this session, acquisition suffers a considerable decrease with respect to the previous ones. This is especially noticed in the two receptive tests where the rate of decrease comes to around 50%. The reason for this fall in the rate of

acquisition is not clear. Session 6 introduces the smallest amount of new input with only 13 new forms. We could attribute the decrease in the rate of acquisition to the decrease in the rate of introduction. However, to our knowledge, there are no serious studies which have explored this issue, and this suggestion cannot be confirmed.

Other possible explanations for this decrease in acquisition can be also linked to intralexical and extralexical factors. Among the 13 new items introduced in session 6, there are 6 compounds and two adverbs. From an intralexical standpoint, the compound nature of the words introduced could have made their acquisition more difficult. What is more, the fact that most words are not concrete but abstract, together with the fact that two of them are adverbs, could have prevented students from learning them easily. From an extralexical point of view, session number 6 is the last of the second-term sessions. Experience tells us that towards the end of the term, the students' level of concentration decreases considerably. Lack of concentration and tiredness could have been possible causes for the diminishing rate of acquisition. In fact, the researcher's diary documents evidence of the tiredness and lack of concentration in this last session. The students became more restless and some of them seemed quite absent while taking the tests.

Differences in the rate of acquisition have also been noticed in terms of the types of knowledge assessed. The rate at which input is learned varies according to the test type. As was expected, the highest rate of acquisition is observed in the multiple-choice test scores, followed by the L2-L1 test, the L1-L2 partial test, and finally the L1-L2 absolute test which presents the lowest growth. Whereas acquisition in both types of receptive test grows significantly during the six sessions, a significant increase in productive knowledge can only be seen between sessions 1 and 3, and 3 and 5. This indicates that the rate at which productive vocabulary knowledge increases is considerably slower than the rate of receptive knowledge. The results show that, at least in the context of the present study, extralexical and intralexical factors would seem to exert an important influence on the rate at which vocabulary is learned. Therefore, even though the rate of introduction is expected to play a role in the rate of acquisition, this sentence should be fine-tuned in some situations.

A second aspect regarding rate points towards the possibility of modelling the process of vocabulary acquisition. A linear univariate regression for each type of vocabulary test indicates that, at least in this group of participants, their rate of

acquisition could be somehow predicted throughout the vocabulary learning process. This being so, the mathematical formula used in the data analysis could, in principle, predict the rate at which the vocabulary is going to be acquired by a group of students.

However, the B values obtained in the regression are very low, even negative in some cases. This means that the students are still far from reaching the point of saturation in vocabulary acquisition. This fact is not unusual, given that our group of participants is at an initial stage of learning, and they still have a long way to go to reach saturation. It is therefore not possible to predict the maximum amount of vocabulary to be learned by participants during their process of acquisition. Should the participants have a higher level of English and know more vocabulary, only then could prediction possibly be more accurate.

Nonetheless, the formula does allow an approximation as to the prediction of the rate at which vocabulary can be acquired. It seems that students are able to learn around 500 words receptively in about 92 hours. It is expected that students will be exposed to the foreign language for about 100 hours during an academic year. If this exposure time is multiplied by the years of instruction, we would find that a typical Spanish student of English would presumably be exposed to the foreign language for about 1,200 hours.

This situation leads us to wonder how it is possible that a considerable part of the Spanish student community is not able to learn 1,000 words receptively. We are still far from finding the answer to this question. What these results seem to indicate, though, is that the learner's ability of L2 acquisition is not being optimized to the full.

5.4.3. Which words have been acquired in terms of frequency and distribution?

According to Gries (2008), the closer the index is to zero, the more normal the distribution of the word. Most vocabulary experts hold that a regular distribution favours acquisition. A linear regression analysis shows that this is not the case in this study. High concentrations of cases at some points of the regression line confirm that frequency and distribution are not related to the acquisition of the vocabulary presented in the coursebook. What is more, surprisingly enough, our results show just the opposite. The index of dispersion seems to be related to acquisition, but in a way which is not expected, that is, words with a more irregular distribution present a higher degree of acquisition than those with a more regular distribution.

Two ideas can be discerned from these results. The first one points to the effect of intralexical and extralexical factors in acquisition. Many of the target words with high indices – that is, those with quite an irregular dispersion – are the protagonists of the didactic units that the students worked on throughout the second term. This implies that these words are handled more explicitly and in greater detail than those with a more systematic dispersion. A clear example of this is the verb *can*. This word presents the highest index of dispersion (35.81), indicating its irregularity throughout the coursebook.

However, this word presents one of the highest degrees of acquisition of all the final test types. The reason may be that the verb *can* constitutes the centre of one of the main grammatical points in this course: the ability to do something. *Can* is by no means an isolated case. There are a number of words with a high index of dispersion, which at the same time present a high degree of acquisition. For example, words such as *breakfast* (7.27), *chips* (8.18), *fish* (9.9), *get up* (6.36), *ice cream* (7.27), *o'clock* (16.36), *play* (11.09) and *school* (6.36) present indices of between 6.36 and 16.36. Yet, the proportion of students who learned those words on average amounts to almost 96% in the multiple-choice test, around 87% in the L2-L1 translation test, 75% in the partial L1-L2 test and almost 60% in the absolute L1-L2 translation test. These figures clearly surpass the general means of acquisition of the group, especially with regard to productive knowledge.

Another possible factor which might explain this situation is that of cognateness. Spanish cognates in this study present a high degree of acquisition, and at the same time have quite an irregular distribution. For instance, this is the case of *football* (8.18), *goal* (9) and *macaroni* (6.38), where high levels of acquisition in different types of vocabulary knowledge are found despite their uneven distribution.

It seems clear that the intersection of factors which may have influenced our results regarding dispersion should make us reflect on the intricacies of vocabulary acquisition. Not only do our data deviate from the theory of systematic introduction, but they also run counter to it. However, this does not mean that systematicity should be questioned, nor should our data. This fact only reveals the complexity of vocabulary acquisition and the compendium of factors which play a role in this process.

The second idea involves two vocabulary acquisition problems which are directly related to the introduction of input. On the one hand, the frequency indices of

vocabulary point to a mismatch between real language and language use in the coursebook. This fact runs counter to the theoretical tenets which constitute the bases of contemporary didactic materials. These bases rely on the Communicative Method and authenticity. A large proportion of the vocabulary that appears in the coursebook corresponds to low levels of frequency, that is, above the 1,000 or 2,000 most frequent words.

Nonetheless, this fact can be partly justified by the need for functionality. We cannot ignore the role of functionality. Put another way, there are words which are highly functional for students, but at the same time are not among the most frequent ones (see chapter 3, section about functionality). Textbook designers sometimes have to choose between what is supposed to be used according to the frequency lists, and what is actually useful for learners. Therefore, the mismatch could mirror a deficiency in present-day corpora, where the resources for the learners should be reviewed as well as the criteria for their compilation, together with their use in specific areas such as Second/Foreign Language Teaching.

On the other hand, words appear to gush out – in other words, they are treated intensively for a short period of time to be forgotten afterwards. In this sense, knowledge is not constructed in an organized and gradual way; rather, it is introduced at different moments. These two facts are reflected by the deficiencies in the vocabulary acquisition on the part of the students.

5.4.4. Further comments on other variables

In addition to the comments on the key results, there are other outcomes which also merit discussion. Some of the identification variables prove to be non-distinctive among participants. This is the case of age, town, origin and other variables which refer to contact with English or other languages besides Spanish. Information on the socioeconomic status of the students is only used in terms of description. An analysis of the possible relationship between acquisition and socioeconomic status is beyond the aims of this study.

As for the students' opinions about English and vocabulary learning, the group appears to be highly homogeneous. All the students show a positive or very positive attitude towards the English language, acknowledging its importance to their academic learning. The participants' opinions about vocabulary learning and its role in their level

of English are also positive or very positive. Given that there are no significant differences among the group members, the opinion variables are not distinctive for the study; they are merely informative.

It is worth mentioning the correlations of the VLT with the independent variable of the students' English marks from the previous year and the dependent variable of the final post-tests. In the first case, the fact that the VLT and the English marks from the previous year correlate may lead to confusing results or erroneous conclusions in other statistical analyses where both are present. That is why one of them was to be omitted. Once it was verified that the English mark from the year before correlated with the VLT, it was omitted from future analyses. For this reason, the independent variable of the English mark was omitted.

There are two reasons why the VLT is favoured over the English mark. First, the VLT provides the vocabulary size of each participant which is judged to be a more important piece of information than the marks they obtained the previous year. Second, the VLT has been widely used in other studies on L2 vocabulary acquisition yielding good results, proving its validity and reliability. In fact, the VLT is both an objective and specific tool for vocabulary measuring, whereas the students' English marks from the year before are rather subjective and involve more types of knowledge than vocabulary, such as grammar and communicative skills.

In the second case, the VLT correlates with the four types of vocabulary knowledge. In other words, those who obtained high scores in the VLT also obtained high scores in the four test types. This fact suggests two ideas. First, the VLT is a good predictor of vocabulary acquisition. Second, the VLT is already a recognized vocabulary tool. Given the international impact of this test, the post-tests used in the present study are validated as their results correlate with the VLT scores. It is normally used with higher level students and/or with older students. For this reason it is important to remark that even in the case of young and elementary learners of English, the VLT is still useful.

As a conclusion to the present discussion, this thesis suggests that in a formal context, the quantity and quality of the vocabulary learned by the students is conditioned by the textbook. However, we cannot confirm that the indices of dispersion of the vocabulary affect acquisition, at least in the way they were expected to. What does seem clear is that non-systematicity – which characterises the input introduction in

the textbook – promotes irregular learning, contrary to the experts' recommendations. Non-systematic introduction contrasts with the students' acquisition, which seems to be quite regular and model-like. This mismatch could mean that we are not making full use of the textbook in the foreign language classroom.

Chapter 6

Pedagogical Implications and Recommendations

As a general rule, textbooks constitute the core of formal English instruction in Spain. Yet, following the EFL textbook very closely does not seem to lead to students learning all that is expected of them. Nonetheless, the results register input acquisition, even under the unsystematic context reflected by the textbook. In other words, the students learn despite the teaching system, but the picture which is obtained is far from the expected and the desirable.

The lexical content of the textbook points to important deficiencies which are reflected in the students' vocabulary acquisition. The basis of these deficiencies may lie in the lack of rationale behind the vocabulary content of the EFL textbooks, which prevents the optimization of instruction in the Spanish EFL classroom.

The set of recommendations and implications mentioned in this PhD thesis refer to a group of students with a certain level of EFL in a specific context, where the introduction of input is far from systematized. Therefore, this student sample should not be generalized to the entire learning community.

The recommendations and implications which are proposed here target the different sectors of the teaching community.

Material designers. One of the possible solutions to the lack of rationale regarding EFL textbooks may point to the systematized introduction of input. In this respect, two aspects need to be considered (see figure [37]). First, systematization

should be built upon the underpinnings of a rehearsal programme which should be both intensive and extensive. Intensive rehearsal refers to the number of times a word occurs in one didactic unit. The programme should promote the treatment of all target words with the same intensity. This means that the degree of attention and protagonism in the textbook should be the same for all target vocabulary. Extensive rehearsal involves periodical recycling. Not only should target vocabulary be worked intensively for a short period of time, but it should also be revisited at certain points of the learning process.

Second, systematization should also rely on an ordered, cumulative and associative construction of lexical knowledge¹⁴. This suggestion implies an organization of vocabulary introduction where V – that is, the new vocabulary which has been introduced and acquired – is followed by V+1, then by (V+1)+1, ((V+1)+1)+1, and so on. Vocabulary introduction should be developed upon a continuous line. Not only should vocabulary introduction be continuous and cumulative, but it should look that way too. Students should feel that they have the opportunity to use what they have learned and keep on learning. This feeling can be fostered by a programme such as the one suggested here.

Hence, the combinations of Vs and 1s should not be understood as separate entities but as part of a cogent whole which is gradually established and reflected in the vocabulary knowledge. An organized presentation might contribute towards an organized knowledge, which is considered to be better for learning, retaining and accessing.

In order to carry out this vocabulary programme, it is necessary to determine which specific vocabulary should be dealt with in the course or even during a whole school year, namely the second or third cycle of Elementary education. Only in this way can the programme be successful. The use of frequency lists and corpora could be a way of selecting this vocabulary. However, a revision of the use of corpora for pedagogical purposes is recommended (see below for further explanation).

¹⁴ Comparisons with Krashen's theory of Second Language Acquisition are expected. However, we should not identify this second aspect with this theory. First, Krashen's ideas are related to grammatical knowledge, not vocabulary. Second, the author of this thesis does not assume a natural order of vocabulary acquisition.

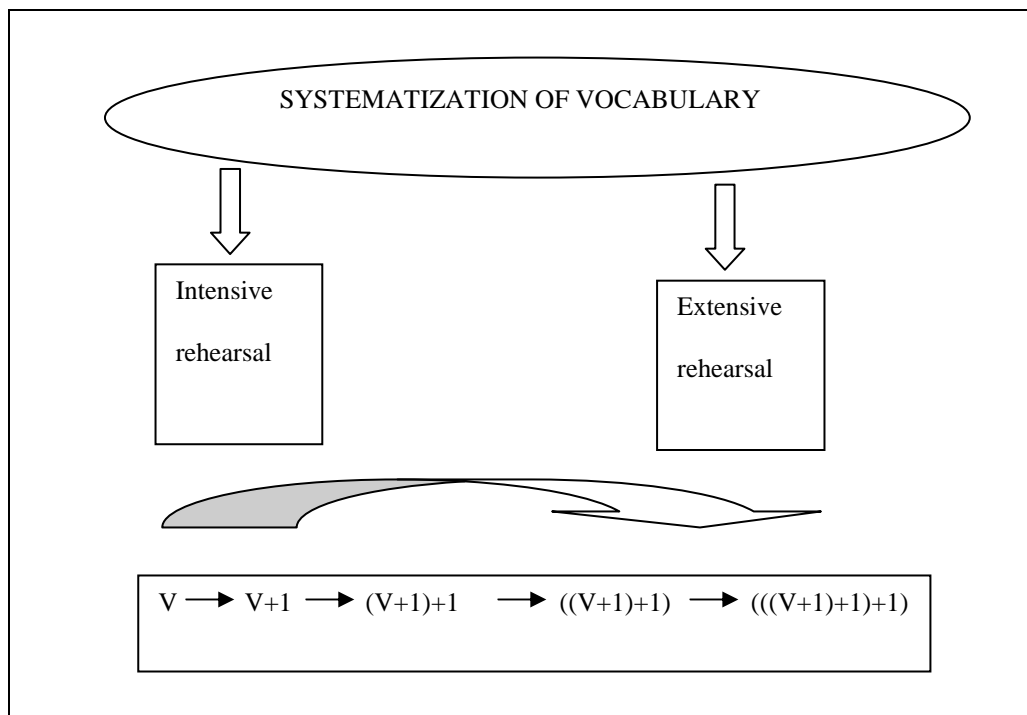


Fig. [37] Systematization of vocabulary introduction

Teacher trainers. The role of the teacher trainer is essential in order to encourage teachers to adopt a critical view towards class materials. Trainers should instruct teachers about the identification and improvement of lessons, didactic units and textbooks which are considered lexically poor. Thus, trainers should join efforts and promote courses specifically devoted to the selection and adaptation of didactic materials. In this sense, they could help teachers overcome possible insecurities when forming their opinions about a textbook. In these courses, teachers should learn how to analyse the quality of a textbook from the perspective of vocabulary as well as how to improve its lexical content.

EFL Teachers. They are the most direct link between the vocabulary input found in the textbook and the student. What is more, they are usually responsible for selecting the EFL textbook which is to be used in class. For this reason, they should take a critical approach towards the overwhelming offer of didactic materials. Moreover, they should communicate the importance of vocabulary learning to their students. In fact, promotion and monitorization of a systematic approach to vocabulary learning is a possible way of doing this.

Researchers. The recommendations made to the scientific community point towards a further exploration of some lines of investigation which have been opened up in this PhD thesis. First, an effort should be made to link science with the current reality. The research community should take the initiative in establishing links with teachers, resource designers and the rest of the teaching community. Studies like the one presented in this PhD thesis suggest that Linguistics and Pedagogy can and should work hand in hand towards the optimization of EFL teaching.

The research community of teaching and learning a Second/Foreign Language should promote studies with a direct application to the classroom. These types of studies can help to detect pedagogical deficiencies, which should be the first step towards their solution. It is true to say that, in some parts of Spain, interest in SL vocabulary acquisition has recently grown. Yet, we cannot say that there is a solid Spanish research tradition in the field of SLVA. Studies like the one presented here can contribute towards the beginning of this lack of tradition in Spain.

Secondly, the rate of vocabulary acquisition has always been neglected in the field of SLVA. Studies have normally focused on the learner's total vocabulary size, but they rarely discuss how this size has been forged. New studies on the rate of vocabulary acquisition in different contexts and with different perspectives are desirable.

Thirdly, it is recommended to pursue further analyses on the effect of the so-called interlexical factors on L2 vocabulary acquisition. Gries' index of dispersion should be used in other learning contexts with learners of different profiles. What is more, there are other indices of dispersion which should be explored. Not only should more studies on interlexical factors be carried out, but also studies about the effect of intralexical and extralexical factors on SLVA need to be explored.

As we have previously mentioned, further research on the pedagogical use of corpora is needed. Corpora compilation and application to L2 vocabulary teaching should go beyond the traditional criteria of frequency of occurrence and the degree of representativeness of their sources. The pedagogical use of corpora should be reviewed and adapted to the aims and levels of the target learners. Indeed, Corpus Linguistics research should focus on the specialization of specific corpora. That is to say, researchers should explore the possibility of designing specific corpora tailored to the students' learning context, for instance, EFL at Elementary level or English for Specific Purposes.

Finally, the author of the present PhD thesis considers that advances in understanding Second/Foreign Language acquisition of vocabulary rely, at least in part, on the interdisciplinary aspect. Pedagogy is one of the fields which should forge a solid link with Applied Linguistics. Both areas can feed off one another. Applied Linguistics tries to identify and offer solutions to language-related real-life problems. Pedagogy can be a good tool for Applied Linguistics to reach its goals, as the former refers to instruction and teaching methodology. Other scientific disciplines such as Neurology, Sociology and even Politics can afford new perspectives on the learning of vocabulary in a Second/Foreign Language.

To conclude, it seems that we are still far from optimizing Foreign Language learning in the English classroom. Additional pedagogical steps have been recommended in order to reach this goal. These steps target material designers, teacher trainers, EFL teachers and researchers, since they all play a vital role in the students' EFL learning process.

Final Conclusions and Limitations of the Study

The present study has arisen from the need to explore EFL vocabulary acquisition in a typical Spanish context of formal instruction. The study has opened up new lines of investigation, taking a step further in the field of SLVA.

This PhD thesis appears as a *biopsy* of the Spanish scenario where vocabulary learning is mainly developed in a formal EFL context. In other words, a piece of reality has been analysed, where a typical group of students at an Elementary level are exposed to EFL and are meant to learn vocabulary.

The textbook has been a main protagonist in the learning process. It has accounted for the main source of EFL input. This being so, the hypothesis was that the textbook would have an effect on the students' vocabulary acquisition. Thus, the study centred around verifying or refuting this hypothesis, and if confirmed, on which terms.

Results showed that vocabulary acquisition was, to a degree, affected by the textbook. The non-systematic introduction of input – which was promoted by the textbook – revealed a panorama which was far from an optimum learning context. Given this situation, a series of suggestions have been made which involve different sectors of the educational community.

However, a larger student sample would have been desirable. Similarly, a more comprehensive study with data collection spanning a longer period of time would have added more support and reliability to the suggestions and conclusions derived from it. Unfortunately, it is considerably difficult to gain access to Elementary schools in Spain. Those centres which agree to collaborate establish a series of conditions which must be respected. Time restrictions are one of the factors which limit this type of research the most.

Moreover, given the wide variety of textbooks that are currently available on the market, it would be interesting to extend this type of study to other textbooks as well as to students with different levels, not only in the context of Elementary Education but also in Secondary Education.

By no means is there the intention here to have the last word about SLVA in terms of quantity, rate or didactic materials. Rather, the present PhD thesis should be judged on its heuristic value – as a framework and a trigger for steering new research which might generate data that go beyond the theoretical.

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APPENDICES

Block 1. IDENTIFICATION FILES

Appendix 1

Ficha de identificación del alumno	
Nombre y Apellidos	
Edad	
¿Chico o chica?	
¿En qué pueblo vives?	
¿En qué trabaja tu padre?	
¿En qué trabaja tu madre?	
¿Qué nota sacaste en ingles el año pasado?	
¿Eres repetidor?	
¿Has dado o das ahora clases particulares de inglés?	
¿Has estado alguna vez en un país donde se hable inglés?	
¿Sueles leer libros en inglés?	
¿Sueles escuchar música en inglés?	
¿Sueles ver películas en inglés?	
¿Sueles jugar a videojuegos que estén en inglés?	
¿Dónde nació tu padre?	
¿Dónde nació tu madre?	
¿Se habla otra lengua además del castellano en tu casa?	
¿Has estudiado o estudias ahora alguna otra lengua extranjera además del inglés?	
Si es así, ¿qué lengua es?	

Block 1. IDENTIFICATION FILES

Appendix 2

Student identification file	
Full Name	
Age	
¿Boy or Girl?	
Where do you live?	
What does your father do?	
What does your mother do?	
What was your English mark last year?	
Are you a resitter?	
Do you attend or have you ever attended English extra-lessons?	
Have you ever been to an English-speaking country?	
Do you usually read English books?	
Do you usually listen to English music?	
Do you usually watch movies in English?	
Do you usually play English videogames?	
Where was your father born?	
Where was your mother born?	
Is any language other than Spanish spoken at home?	
Have you studied or are you studying any other L2 besides English at the moment?	
If this is the case, which ones?	

Block 1. IDENTIFICATION FILES

Appendix 3

Ficha de identificación del profesor	
Nombre y Apellidos	
Edad	
Sexo	
Estudios Universitarios	
Años de experiencia	
Estancia en países de habla inglesa	
Duración de la estancia	
Razones de la estancia	
Otras L2 además del inglés	

Block 1. IDENTIFICATION FILES

Appendix 4

Teacher identification file	
Full Name	
Age	
Gender	
Degree	
Years of Experience	
Stay in English speaking countries	
Length of stay	
Reasons for stay	
Other L2 besides English	

Appendix 5

Questionario del alumno

¿Te gusta el inglés?

- | | | | | |
|-----------------------|-------|------------|-------|-------------------------|
| a) Sí, me gusta mucho | b) Sí | c) Regular | d) No | e) No. De hecho lo odio |
|-----------------------|-------|------------|-------|-------------------------|

Creo que el inglés es ...

- | | | | | |
|---------------------------------|---|---|-------------------------------------|--|
| a) La asignatura más importante | b) Una de las asignaturas más importantes | c) Una asignatura más, ni más ni menos importante que las demás | d) Una asignatura no muy importante | e) Una asignatura nada importante. De hecho, deberían eliminarla |
|---------------------------------|---|---|-------------------------------------|--|

Para aprender inglés, aprender nuevas palabras es ...

- | | | | | |
|----------------------|-------------------------------------|--|----------------------|--|
| a) Lo más importante | b) Una de las cosas más importantes | c) Una de las cosas que se hacen para aprender inglés, pero ni más ni menos importante que otras | d) No muy importante | e) Nada importante en absoluto, de hecho no pasa nada si no se aprenden palabras |
|----------------------|-------------------------------------|--|----------------------|--|

¿Cuál es tu tema favorito a la hora de aprender vocabulario?

- | | | | | |
|-------------|------------|------------|------------|---------------|
| a) animales | b) ropa | c) familia | d) comida | e) vacaciones |
| f) la casa | g) rutinas | h) escuela | i) deporte | |

Appendix 6

Student Questionnaire

Do you like English?

- | | | | | |
|-----------------------------|-------------------|--------------------------------|----------------|------------------------------------|
| a) Yes, I like it very much | b) Yes, I like it | c) Not, very much, but it's ok | d) No, I don't | e) No, I don't. In fact, I hate it |
|-----------------------------|-------------------|--------------------------------|----------------|------------------------------------|

I think English is...

- | | | | | |
|-------------------------------|---------------------------------------|--|---------------------------|---|
| a) The most important subject | b) One of the most important subjects | c) No more or less important than others | d) An unimportant subject | e) A subject which is not important at all. In fact, they should eliminate it |
|-------------------------------|---------------------------------------|--|---------------------------|---|

In order to learn English, learning new words is

- | | | | | |
|-----------------------------|-------------------------------------|--|------------------|---|
| a) The most important thing | b) One of the most important things | c) One of the things that are done to learn English, but no more or less important than others | d) Not important | e) Not important at all. In fact, there is no problem is no words are learned |
|-----------------------------|-------------------------------------|--|------------------|---|

Which is your favourite topic when you have to study vocabulary? (Choose only one)

- | | | | | |
|------------|-------------|-----------|-----------|------------|
| a) animals | b) clothes | c) family | d) food | e) holiday |
| f) house | g) routines | h) school | i) sports | |

Block 2. QUESTIONNAIRES

Appendix 7

Cuestionario del profesor				
¿Por qué cree usted que se le da tanta importancia a aprender inglés hoy en día?				
Diga, por favor, tres adjetivos que mejor definan el papel del libro de texto en la enseñanza del inglés				
¿Qué tres características cree usted que son esenciales para un buen libro de texto de enseñanza del inglés como lengua extranjera?				
Puede decirme tres maneras de motivar a los niños para que aprendan vocabulario?				
¿Cómo de importante cree que es el vocabulario para aprender una lengua extranjera? (Escoja una de entre estas cinco opciones)				
a) Lo más importante	b) Muy importante	c) Ni más ni menos importante que otras áreas	d) No muy importante	e) Nada importante
A su juicio, ¿cuál cree que es la mejor manera para enseñar vocabulario en inglés como lengua extranjera? (Escoja una de entre estas tres opciones)				
a) Sólo implícitamente	b) Sólo explícitamente	c) Una combinación de enfoque implícito y explícito		

Block 2. QUESTIONNAIRES

Appendix 8

Teacher Questionnaire				
Why do you think that learning English is given so much importance in the present days?				
Please, could you think of three adjectives which can define the role of the textbook in the teaching of English?				
Which three characteristics do you think a good EFL textbook should have?				
Please, could you tell me three ways of motivating children to learn vocabulary?				
How important is vocabulary in learning a Foreign language? (Choose one among these five options)				
a) The most important thing	b) Very important	c) No more or less important than other areas	d) Not very important	e) Not important at all
In your judgement, which is the best way to teach EFL vocabulary? Choose one among these three options)				
a) Only implicitly	b) Only explicitly	c) A combination of implicit and explicit approach		

Block 3. VOCABULARY LEVELS TEST

Appendix 9

Esto es un test de vocabulario. Debes escoger la opción correcta para cada una de las palabras en castellano que aparecen. Escribe el número de la palabra en inglés al lado de su equivalente en castellano. Mira el ejemplo.

1	business		
2	clock	_____	pared
3	horse	_____	caballo
4	pencil	_____	lápiz
5	shoe		
6	wall		

Tienes que responder de la siguiente manera.

1	business		
2	clock	<u>6</u>	pared
3	horse	<u>3</u>	caballo
4	pencil	<u>4</u>	lápiz
5	shoe		
6	wall		

¿PREPARAD@?

This is a vocabulary test. You must choose the English word to go with its Spanish equivalent. Write the number of the English word next to its Spanish equivalent. Here is an example.

1	<i>business</i>		
2	<i>clock</i>	_____	<i>pared</i>
3	<i>horse</i>	_____	<i>caballo</i>
4	<i>pencil</i>	_____	<i>lápiz</i>
5	<i>shoe</i>		
6	<i>wall</i>		

You answer it in the following way:

1	<i>business</i>		
2	<i>clock</i>	<u>6</u>	<i>pared</i>
3	<i>horse</i>	<u>3</u>	<i>caballo</i>
4	<i>pencil</i>	<u>4</u>	<i>lápiz</i>
5	<i>shoe</i>		
6	<i>wall</i>		

READY?

Block 3. VOCABULARY LEVELS TEST

- 1 could
- 2 during _____ podría (verbo poder)
- 3 this _____ durante
- 4 piece _____ para (como en "para comer")
- 5 of
- 6 in order to

- 1 indeed
- 2 what _____ mi (posesión como en "mi casa")
- 3 along _____ de verdad
- 4 my _____ alguno
- 5 some
- 6 away

- 1 church
- 2 scene _____ coche
- 3 hour _____ problema
- 4 trouble _____ hecho (algo que ocurre)
- 5 fact
- 6 car

- 1 meet
- 2 leave _____ poner
- 3 put _____ dar
- 4 give _____ usar
- 5 use
- 6 begin

- 1 wind
- 2 room _____ hombre
- 3 line _____ línea
- 4 enemy _____ noche
- 5 night
- 6 man

- 1 kill
- 2 reply _____ avanzar
- 3 advance _____ responder
- 4 appoint _____ matar
- 5 divide
- 6 receive

- 1 moment
- 2 separate _____ momento
- 3 worse _____ separado
- 4 free _____ amarillo
- 5 heavy
- 6 yellow

- 1 spring
- 2 danger _____ hermana
- 3 stone _____ peligro

Block 3. VOCABULARY LEVELS TEST

4 product _____ piedra
5 sister
6 subject
1 example
2 breadth _____ respiración
3 fear _____ miedo
4 desert _____ edificio grande
5 bit
6 hall

1 surround
2 shoot _____ encajar, quedar bien en un sitio
3 paint _____ cálido (no frío)
4 fit _____ disparar
5 command
6 warn

Ahora, responde a estas dos preguntas

¿Has entendido lo que tenías que hacer en la prueba?

¿Te ha parecido difícil?

Now answer these two questions:

Did you understand what you had to do in the test?

Did you find it difficult?

Appendix 10

HOJA DE PERMISO PARA PARTICIPACIÓN EN ESTUDIO CIENTÍFICO

Yo, D./Dña , tutor/a de
..... , alumno/a del colegio Miguel Medina,
autorizo al mismo para participar en el estudio científico llevado a cabo por Doña Gema
Alcaraz Mármol, miembro del Departamento de Filología Inglesa de la Universidad de
Murcia.

Para que conste, firmo el presente documento.

Archena, a dede 2008

Fdo:

PERMISSION FOR PARTICIPATING IN THE STUDY

*I M./Ms. hereby authorise
..... , student at Miguel Medina school to participate
into the study carried out by Gema Alcaraz Mármol, member of the Department of
English Studies at the University of Murcia.*

Archena 2008

Signature:

Appendix 11. Cuadro de observación

Fecha	Nº actividades
Uso de la L.E.	
<ul style="list-style-type: none">• Explicación del profesor: S/N• Interacción profesor-alumno: S/N• Interacción alumno-alumno: S/N	
Otros comentarios	
.....	
.....	
.....	
.....	
Uso del vocabulario	
Tratamiento de nuevas formas por parte del docente	
<ul style="list-style-type: none">• Traducción de L2 a L1• Uso de gestos o imágenes• Uso de la L2 para la explicación del concepto• Sin clarificación	
Tratamiento de nuevas formas por parte del grupo de alumnos	
<ul style="list-style-type: none">• Se hace algo con la nueva forma• No se hace nada con la nueva forma	

Appendix 12. Observation chart

Date

N° of activities.....

Use of the F.L.

- Teacher's explanation: Y/N
- Teacher-student interaction: Y/N
- Student-student interaction: Y/N

Other comments

.....
.....
.....
.....

Vocabulary use

Teacher's treatment of new forms

- L2-L1 translation
- Use of gestures or pictures
- Use of the L2 for the explanation of the concept
- No clarification

Students' treatment of new forms

- Something is done with the new form
- Nothing is done with the new form

Appendix 13. Hoja del profesor

Fecha

Duración

Nº de actividades

Páginas

Comportamiento de los alumnos hoy

.....
.....
.....
.....

Ambiente de la clase hoy

.....
.....
.....
.....

Otros comentarios

.....
.....
.....
.....

Appendix 14. Teacher Worksheet

Date

Duration

N° of activities

Pages

Students' behaviour today

.....
.....
.....
.....

Classroom environment today

.....
.....
.....
.....

Other comments

.....
.....
.....
.....

Appendix 16

Pre-test

Fecha:

Nombre y Apellidos

Traduce al español las siguientes palabras.

Por ejemplo: **House** casa

Pre-test

Date:

Full name

Translate the following words into Spanish.

*Example: **House** casa*

Ache

Clean

Animal

Come

Bad

Competition

Ball

Day

Basketball

Delicious

Bed

Dinner

Bedtime

Dinnertime

Bike

Dirty

Bread

Early

Breakfast

Eat

Brush

Egg

Butterfly

End

Can

Famous

Canteen

Fantastic

Cereal

Fifty

Cheese

Finger

Chicken

Fish

Children

Fly

Chips

Food

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Football	.....	Macaroni	.....
Fork	.....	Metres	.....
Forty	.....	Minutes	.....
Fruit	.....	(One)	.....
Game	.....	Morning	.....
Garden	.....	Munch	.....
Get	.....	Now	.....
dressed	.....	O'clock	.....
Get up	.....	Orange	.....
Giant	.....	Party	.....
Glass	.....	Pass	.....
Go	.....	Plant	.....
Go away	.....	Plate	.....
Goal	.....	Play	.....
Good	.....	Point	.....
Grains	.....	Quick	.....
Great	.....	Rice	.....
Half past	.....	Ride	.....
Help	.....	Rollerblade	.....
Here	.....	Run	.....
Hundred	.....	Salad	.....
Hungry	.....	Sausage	.....
Ice cream	.....	School	.....
Incredible	.....	Score	.....
Juice	.....	Seconds	.....
Kilometres	.....	See	.....
Knife	.....	Shampoo	.....
Late	.....	Shoot	.....
Like	.....	Shower	.....
Listen	.....	Sit down	.....
Love	.....	Sixty	.....
Luck	.....	Skate	.....
Lunch	.....	Skateboard	.....
Lunchtime	.....	Smell	.....

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Soap

Spin

Splash

Spoon

Star

Stretch

Sure

Swim

Teeth

Tennis

Thirty

Thousand

Throw

Time

Today

Tonight

Tummy

Turn

Twenty

Vegetables

Want

Whistle

Win

Winner

Zip

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 17

S1
L1-L2

Fecha:

Nombre y Apellidos

Traduce al inglés las siguientes palabras.

Por ejemplo: **Casa** house

S1
L1-L2

Date:

Full name

Translate the following words into English.

Example: **Casa** house

Aquí	.....	Macarrones	.....
Arroz	.....	Naranja	.....
Comedor	.....	Pan	.....
Comer	.....	Patatas fritas	.....
Delicioso	.....	Pescado	.....
Encantar	.....	Querer	.....
Ensalada	.....	Salchicha	.....
Gustar	.....	Sentarse	.....
Hambriento	.....	Tiempo	.....
Helado	.....	Ver	.....
Hoy	.....	Zumo	.....

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 18

S2
L1-L2

Fecha:

Nombre y Apellidos

Traduce al inglés las siguientes palabras.

Por ejemplo: **Casa** house

S2
L1-L2

Date:

Full name

Translate the following words into English.

Example: **Casa** house

Ahora	.....	Huevo	.....
Alimento	.....	Planta	.....
Animal	.....	Plato	.....
Barriga	.....	Pollo	.....
Bueno	.....	Queso	.....
Cereal	.....	Tenedor	.....
Cuchara	.....	Vaso	.....
Cuchillo	.....	Venir	.....
Dolor	.....	Verduras	.....
Fruta	.....	Volar	.....
Granos	.....	

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 19

S3
L1-L2

Fecha:

Nombre y Apellidos

Traduce al inglés las siguientes palabras.

Por ejemplo: **Casa** house

S3
L1-L2

Date:

Full name

Translate the following words into English.

Example: **Casa** house

Baloncesto	.....	Montar (en bici, a	.....
Bicicleta	.....	caballo)	
Competición	.....	
Esta noche	.....	Montar en	.....
Estrella	.....	monopatín	
Famoso	.....	Patinar (en línea)	.....
Fantástico	.....	Poder	.....
Fin	.....	Seguro	.....
Fútbol	.....	Suerte	.....
Gol	.....	Tenis	.....
Increíble	.....	Treinta	.....
Jugar	.....	Turno	.....
Malo	.....	
Marcar	.....	

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 20

S4
L1-L2

Fecha:

Nombre y Apellidos

Traduce al inglés las siguientes palabras.

Por ejemplo: **Casa** house

S4
L1-L2

Date:

Full name

Translate the following words into English.

Example: **Casa** house

Cien	.....	Mil	.....
Cincuenta	.....	Minutos	.....
Correr	.....	Nadar	.....
Cuarenta	.....	Pasar	.....
Dedo	.....	Patinar (sobre	.....
Disparar	.....	hielo)	.....
Escuchar	.....	Pelota	.....
Ganador	.....	Punto	.....
Ganar	.....	Rápido	.....
Girar	.....	Segundos	.....
Juego	.....	Sesenta	.....
Kilómetros	.....	Silbato	.....
Lanzar	.....	Veinte	.....
Mariposa	.....	
Metros	.....	

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 21

S5
L1-L2

Fecha:

Nombre y Apellidos

Traduce al inglés las siguientes palabras.

Por ejemplo: **Casa** house

S5
L1-L2

Date:

Full name

Translate the following words into English.

Example: **Casa** house

Cama	Gigante
Cena	Ir
Cepillar (por ejemplo los dientes)	Jabón
Champú	Levantarse
Colegio	Limpio
Comida al medio día	Mañana
Crema	Masticar
Desayuno	Niños
Dientes	Olor
Ducha	Salpicar
Estirar	Sucio
	Vestirse

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 22

S6
L1-L2

Fecha:

Nombre y Apellidos

Traduce al inglés las siguientes palabras.

Por ejemplo: **Casa** house

S6
L1-L2

Date:

Full name

Translate the following words into English.

Example: **Casa** house

Ayuda	.....	Largarse	.....
Día	.....	Maravilloso	.....
En punto	.....	Tarde (como en	.....
Fiesta	.....	"es tarde")	.....
Hora de acostarse	.....	Temprano	.....
Hora de cenar	.....	Y media	.....
Hora de comer	.....	
Jardín	.....	

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 23

S1
L2-L1

Fecha:

Nombre y Apellidos

Traduce al español las siguientes palabras.

Por ejemplo: **House** *casa*

S1
L2-L1

Date:

Full name

Translate the following words into Spanish.

Example: **House** *casa*

Bread	Love
Canteen	Macaroni
Chips	Orange
Delicious	Rice
Eat	Salad
Fish	Sausage
Here	See
Hungry	Sit down
Ice cream	Time
Juice	Today
Like	Want

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 24

S2
L2-L1

Fecha:

Nombre y Apellidos

Traduce al español las siguientes palabras.

Por ejemplo: **House** casa

S2
L2-L1

Date:

Full name

Translate the following words into Spanish.

Example: **House** casa

Ache

Animal

Cereal

Cheese

Chicken

Come

Egg

Fly

Food

Fork

Fruit

Glass

Good

Grains

Knife

Now

Plant

Plate

Spoon

Tummy

Vegetables

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 25

S3
L2-L1

Fecha:

Nombre y Apellidos

Traduce al español las siguientes palabras.

Por ejemplo: **House** casa

S3
L2-L1

Date:

Full name

Translate the following words into Spanish.

Example: **House** casa

- | | |
|--------------------------|--------------------------|
| Bad | Play |
| Basketball | Ride |
| Bike | Rollerblade |
| Can | Score |
| Competition | Skateboard |
| End | Star |
| Famous | Sure |
| Fantastic | Tennis |
| Football | Thirty |
| Goal | Tonight |
| Incredible | Turn |
| Luck | |

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 26

S4
L2-L1

Fecha:

Nombre y Apellidos

Traduce al español las siguientes palabras.

Por ejemplo: **House** casa

S4
L2-L1

Date:

Full name

Translate the following words into Spanish.

Example: **House** casa

Ball	.....	Run	.....
Butterfly	.....	Seconds	.....
Fifty	.....	Shoot	.....
Finger	.....	Sixty	.....
Forty	.....	Skate	.....
Game	.....	Spin	.....
Hundred	.....	Swim	.....
Kilometres	.....	Thousand	.....
Listen	.....	Throw	.....
Metres	.....	Twenty	.....
Minutes	.....	Whistle	.....
Pass	.....	Win	.....
Point	.....	Winner	.....
Quick	.....	

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 27

S5
L2-L1

Fecha:

Nombre y Apellidos

Traduce al español las siguientes palabras.

Por ejemplo: **House** casa

S5
L2-L1

Date:

Full name

Translate the following words into Spanish.

Example: **House** casa

Bed	(One)
Breakfast	Morning
Brush	Munch
Children	School
Clean	Shampoo
Dinner	Shower
Dirty	Smell
Get	Soap
dressed	Splash
Get up	Stretch
Giant	Teeth
Go	Zip
Lunch	

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 28

S6
L2-L1

Fecha:

Nombre y Apellidos

Traduce al español las siguientes palabras.

Por ejemplo: **House** casa

S6
L2-L1

Date:

Full name

Translate the following words into Spanish.

Example: **House** casa

Bedtime

Half past

Day

Help

Dinnertime

Late

Early

Lunchtime

Garden

O'clock

Go away

Party

Great

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 29

S1

Respuesta múltiple

Fecha:

Nombre y Apellidos:

.....

Rodea con un círculo la palabra en inglés que corresponda a cada una de las palabras en castellano que encontrarás a continuación. Si no estás seguro de alguna de ellas, no lo hagas "al tuntún". Rodea la opción d) *No lo sé*

Ejemplo:

House

a) Amigo

b) Casa

c) Frigorífico

d) No lo sé

S1 Multiple-choice test

Date:

Full name:

.....

Circle the English word which corresponds to each of the following Spanish words. If you are not sure of the answer, please do not choose one at random.

Circle option d) I don't know

Example:

House

a) Amigo

b) Casa

c) Frigorífico

d) No lo sé

Bread

a) Aire

b) Dedo

c) Pan

d) No lo sé

Canteen

a) Cinturón

b) Comedor

c) Hueso

d) No lo sé

Chips

a) Trenes

b) Palabras

c) Patatas fritas

d) No lo sé

Delicious

a) Delicioso

b) Privado

c) Separado

d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Eat

- a) Comer b) Encontrar c) Recibir d) No lo sé

Fish

- a) Pescado b) Tren c) Viento d) No lo sé

Here

- a) Al lado b) Aquí c) Allí d) No lo sé

Hungry

- a) Generoso b) Hambriento c) Malvado d) No lo sé

Ice cream

- a) Chimenea b) Helado c) Pájaro d) No lo sé

Juice

- a) Falda b) Sombra c) Zumo d) No lo sé

Like

- a) Aprender b) Gustar c) Ordenar d) No lo sé

Love

- a) Encantar b) Reír c) Interrumpir d) No lo sé

Macaroni

- a) Gatos b) Macarrones c) Puerta d) No lo sé

Orange

- a) Botella b) Naranja c) Paraguas d) No lo sé

Rice

- a) Arroz b) Bolsillo c) Tiza d) No lo sé

Salad

- a) Cuerda b) Goma c) Ensalada d) No lo sé

Sausage

- a) Condición b) Oreja c) Salchicha d) No lo sé

See

- a) Extender b) Hablar c) Ver d) No lo sé

Sit down

- a) Hacer b) Pintar c) Sentarse d) No lo sé

Time

- a) Espina b) Teatro c) Tiempo d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Today

- a) Hoy b) Pasado mañana c) Pronto d) No lo sé

Want

- a) Almacenar b) Mostrar c) Querer d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 30

S2

Respuesta múltiple

Fecha:

Nombre y Apellidos:

.....

Rodea con un círculo la palabra en inglés que corresponda a cada una de las palabras en castellano que encontrarás a continuación. Si no estás seguro de alguna de ellas, no lo hagas "al tuntún". Rodea la opción d) *No lo sé*

Ejemplo:

House

a) Amigo

b) Casa

c) Frigorífico

d) No lo sé

S2 Multiple-choice test

Date:

Full name:

.....

Circle the English word which corresponds to each of the following Spanish words. If you are not sure of the answer, please do not choose one at random.

Circle option d) I don't know

Example:

House

a) Amigo

b) Casa

c) Frigorífico

d) No lo sé

Ache

a) Dolor

b) Leche

c) Serpiente

d) No lo sé

Animal

a) Animal

b) Pupitre

c) Viaje

d) No lo sé

Cereal

a) Cereal

b) Razón

c) Sombra

d) No lo sé

Cheese

a) Lápiz

b) Nieve

c) Queso

d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Chicken

- a) Arena b) Bolsa c) Pollo d) No lo sé

Come

- a) Responder b) Silbar c) Venir d) No lo sé

Egg

- a) Gorra b) Huevo c) Tarjeta d) No lo sé

Fly

- a) Caminar b) Rellenar c) Volar d) No lo sé

Food

- a) Comida b) Hombro c) Mundo d) No lo sé

Fork

- a) Mesa b) Piedra c) Tenedor d) No lo sé

Fruit

- a) Cielo b) Fruta c) Hierro d) No lo sé

Glass

- a) Juguete b) Lengua c) Vaso d) No lo sé

Good

- a) Bueno b) Pobre c) Tranquilo d) No lo sé

Grains

- a) Cereales b) Diamantes c) Herramientas d) No lo sé

Knife

- a) Cuchillo b) Sonido c) Unión d) No lo sé

Now

- a) Ahora b) Luego c) Siempre d) No lo sé

Plant

- a) Fiesta b) Hija c) Planta d) No lo sé

Plate

- a) Cera b) Plato c) Tirita d) No lo sé

Spoon

- a) Bandera b) Cuchara c) Fiebre d) No lo sé

Tummy

- a) Barriga b) Dirección c) Oso d) No lo sé

Vegetables

- a) Bancos b) Iglesias c) Verduras d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 31

S3
Respuesta múltiple

Fecha:

Nombre y Apellidos:

.....

Rodea con un círculo la palabra en inglés que corresponda a cada una de las palabras en castellano que encontrarás a continuación. Si no estás seguro de alguna de ellas, no lo hagas "al tuntún". Rodea la opción d) *No lo sé*

Ejemplo:

House

- a) Amigo b) Casa c) Frigorífico d) No lo sé

S3 Multiple-choice test

Date:

Full name:

.....

Circle the English word which corresponds to each of the following Spanish words. If you are not sure of the answer, please do not choose one at random.

Circle option d) *I don't know*

Example:

House

- a) Amigo b) Casa c) Frigorífico d) No lo sé

Bad

- a) Largo b) Malo c) Necesario d) No lo sé

Basketball

- a) Avión b) Baloncesto c) Chincheta d) No lo sé

Bike

- a) Bandeja b) Bicicleta c) Carbón d) No lo sé

Can

- a) Bailar b) Poder c) Secar d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Competition

a) Competición b) Habitación c) Plata d) No lo sé

End

a) Año b) Fin c) Tejado d) No lo sé

Famous

a) Débil b) Famoso c) Serio d) No lo sé

Fantastic

a) Especial b) Fantástico c) Tranquilo d) No lo sé

Football

a) Fútbol b) Problema c) Tinta d) No lo sé

Goal

a) Fábrica b) Gol c) Nido d) No lo sé

Incredible

a) Corto b) Increíble c) Oscuro d) No lo sé

Luck

a) Lado b) Río c) Suerte d) No lo sé

Play

a) Jugar b) Mentir c) Tumbarse d) No lo sé

Ride

a) Doblar b) Enterrar c) Montar (en bici, a caballo) d) No lo sé

Rollerblade

a) Anunciar b) Culpar c) Patinar d) No lo sé

Score

a) Cortar b) Marcar c) Obedecer d) No lo sé

Skateboard

a) Casarse b) Montar en monopatín c) Pagar d) No lo sé

Star

a) Estrella b) Té c) Velo d) No lo sé

Sure

a) Fino b) Precioso c) Seguro d) No lo sé

Tennis

a) Página b) Suelo c) Tenis d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Thirty

- a) Espíritu b) Persona c) Treinta d) No lo sé

Tonight

- a) Esta noche b) Hoy c) Mañana d) No lo sé

Turn

- a) Ley b) Mundo c) Turno d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 32

S4

Respuesta múltiple

Fecha:

Nombre y Apellidos:

.....

Rodea con un círculo la palabra en inglés que corresponda a cada una de las palabras en castellano que encontrarás a continuación. Si no estás seguro de alguna de ellas, no lo hagas "al tuntún". Rodea la opción d) *No lo sé*

Ejemplo:

House

- a) Amigo b) Casa c) Frigorífico d) No lo sé

S4 Multiple-choice test

Date:

Full name:

.....

Circle the English word which corresponds to each of the following Spanish words. If you are not sure of the answer, please do not choose one at random.

Circle option d) I don't know

Example:

House

- a) Amigo b) Casa c) Frigorífico d) No lo sé

Ball

- a) Parque b) Pelota c) Ventana d) No lo sé

Butterfly

- a) Árbol b) Mariposa c) Universidad d) No lo sé

Fifty

- a) Cincuenta b) Espacio c) Voz d) No lo sé

Finger

- a) Dedo b) Relación c) Señor d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Forty

- a) Cuarenta b) Crema c) Nube d) No lo sé

Game

- a) Idioma b) Juego c) Trigo d) No lo sé

Hundred

- a) Cien b) Fondo c) Tita d) No lo sé

Kilometres

- a) Flores b) Kilómetros c) Precios d) No lo sé

Listen

- a) Abrir b) Escuchar c) Guardar d) No lo sé

Metres

- a) Hachas b) Metros c) Vacas d) No lo sé

Minutes

- a) Colas b) Minutos c) Rayos d) No lo sé

Pass

- a) Esperar b) Pasar c) Soñar d) No lo sé

Point

- a) Discusión b) Nuez c) Punto d) No lo sé

Quick

- a) Bonito b) Rápido c) Reciente d) No lo sé

Run

- a) Correr b) Sonar c) Terminar d) No lo sé

Seconds

- a) Libros b) Paredes c) Segundos d) No lo sé

Shoot

- a) Aliviar b) Disparar c) Reparar d) No lo sé

Sixty

- a) Invierno b) Madera c) Sesenta d) No lo sé

Skate

- a) Fingir b) Ofender c) Patinar d) No lo sé

Spin

- a) Cavar b) Disculparse c) Girar d) No lo sé

Swim

- a) Despertarse b) Nadar c) Preferir d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Thousand

- a) Carretera b) Mil c) Tormenta d) No lo sé

Throw

- a) Lanzar b) Preguntar c) Respirar d) No lo sé

Twenty

- a) Broma b) Nudo c) Veinte d) No lo sé

Whistle

- a) Barco b) Marido c) Silbato d) No lo sé

Win

- a) Explicar b) Ganar c) Soplar d) No lo sé

Winner

- a) Compañero b) Hijo c) Ganador d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 33

S5

Respuesta múltiple

Fecha:

Nombre y Apellidos:

.....

Rodea con un círculo la palabra en inglés que corresponda a cada una de las palabras en castellano que encontrarás a continuación. Si no estás seguro de alguna de ellas, no lo hagas "al tuntún". Rodea la opción d) *No lo sé*

Ejemplo:

House

- a) Amigo b) Casa c) Frigorífico d) No lo sé

S5 Multiple-choice test

Date:

Full name:

.....

Circle the English word which corresponds to each of the following Spanish words. If you are not sure of the answer, please do not choose one at random.

Circle option d) *I don't know*

Example:

House

- a) Amigo b) Casa c) Frigorífico d) No lo sé

Bed

- a) Cama b) Pueblo c) Semana d) No lo sé

Breakfast

- a) Ciervo b) Desayuno c) Polvo d) No lo sé

Brush

- a) Cepillar b) Explotar c) Traducir d) No lo sé

Chips

- a) Trenes b) Palabras c) Patatas fritas d) No lo sé

Clean

- a) Limpio b) Malvado c) Soltero d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Dinner

- a) Cena b) Naturaleza c) Vecino d) No lo sé

Dirty

- a) Fuerte b) Normal c) Sucio d) No lo sé

Get dressed

- a) Morder b) Prestar c) Vestirse d) No lo sé

Get up

- a) Levantarse b) Romper c) Saborear d) No lo sé

Giant

- a) Gigante b) Lana c) Vocal d) No lo sé

Go

- a) Descubrir b) Ir c) Rodear d) No lo sé

Lunch

- a) Comida b) Escalera c) Red d) No lo sé

(One) Morning

- a) (Un) conejo b) (Una) mañana c) (Una) reina d) No lo sé

Munch

- a) Masticar b) Robar c) Viajar d) No lo sé

School

- a) Colegio b) Océano c) Pala d) No lo sé

Shampoo

- a) Bolígrafo b) Champú c) Esquina d) No lo sé

Shower

- a) Cerebro b) Ducha c) Señal d) No lo sé

Smell

- a) Cara b) Olor c) Ventaja d) No lo sé

Soap

- a) Castillo b) Jabón c) Sartén d) No lo sé

Splash

- a) Atar b) Llamar c) Salpicar d) No lo sé

Stretch

- a) Destruir b) Estirar c) Trabajar d) No lo sé

Teeth

- a) Dientes b) Impuestos c) Victorias d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Zip

a) Bosque

b) Cremallera

c) Maletero

d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 34

S6

Respuesta múltiple

Fecha:

Nombre y Apellidos:

.....

Rodea con un círculo la palabra en inglés que corresponda a cada una de las palabras en castellano que encontrarás a continuación. Si no estás seguro de alguna de ellas, no lo hagas "al tuntún". Rodea la opción d) *No lo sé*

Ejemplo:

House

a) Amigo

b) Casa

c) Frigorífico

d) No lo sé

S6 Multiple-choice test

Date:

Full name:

.....

Circle the English word which corresponds to each of the following Spanish words. If you are not sure of the answer, please do not choose one at random.

Circle option d) *I don't know*

Example:

House

a) Amigo

b) Casa

c) Frigorífico

d) No lo sé

Bedtime

a) Hora de acostarse

b) Hora de ducharse

c) Hora de irse

d) No lo sé

Day

a) Día

b) Mercado

c) Oficina

d) No lo sé

Dinnertime

a) Hora de cenar

b) Hora de hablar

c) Hora de ir de compras

d) No lo sé

Early

a) Ayer

b) Temprano

c) Todavía

d) No lo sé

Garden

a) Jardín

b) Tesoro

c) Toalla

d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Go away

- a) Envolverse b) Largarse c) Traducirse d) No lo sé

Great

- a) Maravilloso b) Moderno c) Pesado d) No lo sé

Half past

- a) En punto b) Y cuarto c) Y media d) No lo sé

Help

- a) Ayuda b) Rueda c) Torre d) No lo sé

Late

- a) Duro b) Perfecto c) Tarde (como "es tarde") d) No lo sé

Lunchtime

- a) Hora de comer b) Hora de jugar c) Hora de levantarse d) No lo sé

O'clock

- a) En punto b) Y cuarto c) Y media d) No lo sé

Party

- a) Alfombra b) Fiesta c) Propiedad d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 35

Final
L1-L2

Fecha:

Traduce al inglés las siguientes palabras.

Por ejemplo: **Casa** house

Final
L1-L2

Date:

Full name

Translate the following words into English.

For instance: **Casa** house

Ahora	.....	Comedor	.....
Alimento	.....	Comer	.....
Animal	.....	Comida al medio	.....
Aquí	.....	día	.....
Arroz	.....	Competición	.....
Ayuda	.....	Correr	.....
Baloncesto	.....	Cremallera	.....
Barriga	.....	Cuarenta	.....
Bicicleta	.....	Cuchara	.....
Bueno	.....	Cuchillo	.....
Cama	.....	Dedo	.....
Cena	.....	Delicioso	.....
Cepillar (por	.....	Desayuno	.....
ejemplo los	.....	Día	.....
dientes)	.....	Dientes	.....
Cereal	.....	Disparar	.....
Champú	.....	Dolor	.....
Cien	.....	Ducha	.....
Cincuenta	.....	En punto	.....
Colegio	.....	Encantar	.....

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Ensalada	.....	Levantarse	.....
Escuchar	.....	Limpio	.....
Esta noche	.....	Macarrones	.....
Estirar	.....	Malo	.....
Estrella	.....	Mañana	.....
Famoso	.....	Maravilloso	.....
Fantástico	.....	Marcar	.....
Fiesta	.....	Mariposa	.....
Fin	.....	Masticar	.....
Fruta	.....	Metros	.....
Fútbol	.....	Mil	.....
Ganador	.....	Minutos	.....
Ganar	.....	Montar (en bici o	.....
Gigante	.....	a caballo)	.....
Girar	.....	
Gol	.....	Montar en	.....
Granos	.....	monopatín	.....
Gustar	.....	Nadar	.....
Hambriento	.....	Naranja	.....
Helado	.....	Niños	.....
Hora de acostarse	.....	Olor	.....
Hora de cenar	.....	Pan	.....
Hora de comer	.....	Pasar	.....
Hoy	.....	Patatas fritas	.....
Huevo	.....	Patinar (en línea)	.....
Increíble	.....	Patinar (sobre	.....
Ir	.....	hielo)	.....
Jabón	.....	Pelota	.....
Jardín	.....	Pescado	.....
Juego	.....	Planta	.....
Jugar	.....	Plato	.....
Kilómetros	.....	Poder	.....
Lanzar	.....	Pollo	.....
Largarse	.....	Punto	.....

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Querer	.....	Tenedor	.....
Queso	.....	Tenis	.....
Rápido	.....	Tiempo	.....
Salchicha	.....	Treinta	.....
Salpicar	.....	Turno	.....
Segundos	.....	Vaso	.....
Seguro	.....	Veinte	.....
Sentarse	.....	Venir	.....
Sesenta	.....	Ver	.....
Silbato	.....	Verduras	.....
Sucio	.....	Vestirse	.....
Suerte	.....	Volar	.....
Tarde (como en	.....	Y media	.....
"es tarde)		Zumo	.....
Temprano	.....	

Appendix 36

Final
L2-L1

Fecha:

Nombre y Apellidos

Traduce al español las siguientes palabras.

Por ejemplo: **House** casa

Final
L2-L1

Date:

Full name

Translate the following words into Spanish.

Example: **House** casa

- | | |
|-------------------------|--------------------------|
| Ache | Chicken |
| Animal | Children |
| Bad | Chips |
| Ball | Clean |
| Basketball | Come |
| Bed | Competition |
| Bedtime | Day |
| Bike | Delicious |
| Bread | Dinner |
| Breakfast | Dinnertime |
| Brush | Dirty |
| Butterfly | Early |
| Can | Eat |
| Canteen | Egg |
| Cereal | End |
| Cheese | Famous |

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Fantastic	.....	Late	.....
Fifty	.....	Like	.....
Finger	.....	Listen	.....
Fish	.....	Love	.....
Fly	.....	Luck	.....
Food	.....	Lunch	.....
Football	.....	Lunchtime	.....
Fork	.....	Macaroni	.....
Forty	.....	Metres	.....
Fruit	.....	Minutes	.....
Game	.....	(One)	.....
Garden	.....	Morning	.....
Get	.....	Munch	.....
dressed	.....	Now	.....
Get up	.....	O'clock	.....
Giant	.....	Orange	.....
Glass	.....	Party	.....
Go	.....	Pass	.....
Go away	.....	Plant	.....
Goal	.....	Plate	.....
Good	.....	Play	.....
Grains	.....	Point	.....
Great	.....	Quick	.....
Half past	.....	Rice	.....
Help	.....	Ride	.....
Here	.....	Rollerblade	.....
Hundred	.....	Run	.....
Hungry	.....	Salad	.....
Ice cream	.....	Sausage	.....
Incredible	.....	School	.....
Juice	.....	Score	.....
Kilometres	.....	Seconds	.....
Knife	.....	See	.....

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Shampoo

Shoot

Shower

Sit down

Sixty

Skate

Skateboard

Smell

Soap

Spin

Splash

Spoon

Star

Stretch

Sure

Swim

Teeth

Tennis

Thirty

Thousand

Throw

Time

Today

Tonight

Tummy

Turn

Twenty

Vegetables

Want

Whistle

Win

Winner

Zip

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Appendix 37

Final
Respuesta múltiple

Fecha:

Nombre y Apellidos:

.....

Rodea con un círculo la palabra en inglés que corresponda a cada una de las palabras en castellano que encontrarás a continuación. Si no estás seguro de alguna de ellas, no lo hagas "al tuntún". Rodea la opción d) *No lo sé*

Ejemplo:

House

- a) Amigo **b) Casa** c) Frigorífico d) No lo sé

*Final
Multiple-choice test*

Date:

Full name:

.....

Circle the English word which corresponds to each of the following Spanish words. If you are not sure of the answer, please do not choose one at random.

Circle option d) I don't know

Example:

House

- a) *Amigo* **b) Casa** c) *Frigorífico* d) *No lo sé*

Ache

- a) Dolor b) Leche c) Serpiente d) No lo sé

Animal

- a) Animal b) Pupitre c) Viaje d) No lo sé

Bad

- a) Largo b) Malo c) Necesario d) No lo sé

Ball

- a) Parque b) Pelota c) Ventana d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Basketball

- a) Avión b) Baloncesto c) Chincheta d) No lo sé

Bed

- a) Cama b) Pueblo c) Semana d) No lo sé

Bedtime

- a) Hora de acostarse b) Hora de ducharse c) Hora de irse d) No lo sé

Bike

- a) Bandeja b) Bicicleta c) Carbón d) No lo sé

Bread

- a) Aire b) Enfermera c) Pan d) No lo sé

Breakfast

- a) Ciervo b) Desayuno c) Polvo d) No lo sé

Brush

- a) Cepillar (por ejemplo los
dientes) b) Explotar c) Traducir d) No lo sé

Butterfly

- a) Árbol b) Mariposa c) Universidad d) No lo sé

Can

- a) Bailar b) Poder c) Secar d) No lo sé

Canteen

- a) Cinturón b) Comedor c) Hueso d) No lo sé

Cereal

- a) Cereal b) Razón c) Sombra d) No lo sé

Cheese

- a) Lápiz b) Nieve c) Queso d) No lo sé

Chicken

- a) Arena b) Bolsa c) Pollo d) No lo sé

Children

- a) Mujeres b) Niños c) Zapatos d) No lo sé

Chips

- a) Trenes b) Palabras c) Patatas fritas d) No lo sé

Clean

- a) Limpio b) Malvado c) Soltero d) No lo sé

Come

- a) Hundir b) Responder c) Venir d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Competition

a) Competición b) Habitación c) Plata d) No lo sé

Day

a) Día b) Mercado c) Oficina d) No lo sé

Delicious

a) Delicioso b) Privado c) Separado d) No lo sé

Dinner

a) Cena b) Naturaleza c) Vecino d) No lo sé

Dinnertime

a) Hora de cenar b) Hora de hablar c) Hora de ir de compras d) No lo sé

Dirty

a) Fuerte b) Normal c) Sucio d) No lo sé

Early

a) Ayer b) Temprano c) Todavía d) No lo sé

Eat

a) Comer b) Encontrar c) Recibir d) No lo sé

Egg

a) Gorra b) Huevo c) Tarjeta d) No lo sé

End

a) Año b) Fin c) Tejado d) No lo sé

Famous

a) Débil b) Famoso c) Serio d) No lo sé

Fantastic

a) Especial b) Fantástico c) Tranquilo d) No lo sé

Fifty

a) Cincuenta b) Espacio c) Voz d) No lo sé

Finger

a) Dedo b) Relación c) Señor d) No lo sé

Fish

a) Ladrón b) Pescado c) Viento d) No lo sé

Fly

a) Caminar b) Rellenar c) Volar d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Food

a) Alimento b) Hombro c) Mundo d) No lo sé

Football

a) Fútbol b) Problema c) Tinta d) No lo sé

Fork

a) Mesa b) Piedra c) Tenedor d) No lo sé

Forty

a) Cuarenta b) Crema c) Nube d) No lo sé

Fruit

a) Cielo b) Fruta c) Hierro d) No lo sé

Game

a) Idioma b) Juego c) Trigo d) No lo sé

Garden

a) Jardín b) Tesoro c) Toalla d) No lo sé

Get dressed

a) Morder b) Prestar c) Vestirse d) No lo sé

Get up

a) Levantarse b) Romper c) Saborear d) No lo sé

Giant

a) Gigante b) Lana c) Vocal d) No lo sé

Glass

a) Juguete b) Lengua c) Vaso d) No lo sé

Go

a) Descubrir b) Ir c) Rodear d) No lo sé

Go away

a) Envolverse b) Largarse c) Resguardarse d) No lo sé

Goal

a) Fábrica b) Gol c) Nido d) No lo sé

Good

a) Bueno b) Pobre c) Responsable d) No lo sé

Grains

a) Diamantes b) Granos c) Herramientas d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Lunchtime

a) Hora de comer b) Hora de jugar c) Hora de levantarse d) No lo sé

Macaroni

a) Gatos b) Macarrones c) Puerta d) No lo sé

Metres

a) Hachas b) Metros c) Vacas d) No lo sé

Minutes

a) Colas b) Minutos c) Rayos d) No lo sé

(One) Morning

a) (Un) conejo b) (Una) mañana c) (Una) reina d) No lo sé

Munch

a) Masticar b) Robar c) Viajar d) No lo sé

Now

a) Ahora b) Luego c) Siempre d) No lo sé

O'clock

a) En punto b) Y cuarto c) Y media d) No lo sé

Orange

a) Botella b) Naranja c) Paraguas d) No lo sé

Party

a) Alfombra b) Fiesta c) Propiedad d) No lo sé

Pass

a) Esperar b) Pasar c) Soñar d) No lo sé

Plant

a) Herida b) Hija c) Planta d) No lo sé

Plate

a) Cera b) Plato c) Tirita d) No lo sé

Play

a) Jugar b) Mentir c) Tumbarse d) No lo sé

Point

a) Discusión b) Nuez c) Punto d) No lo sé

Quick

a) Bonito b) Rápido c) Reciente d) No lo sé

Rice

a) Arroz b) Bolsillo c) Tiza d) No lo sé

Block 5. PRE-TEST, POST-TEST AND VOCABULARY ACQUISITION TESTS

Turn

- a) Duda b) Ley c) Turno d) No lo sé

Twenty

- a) Broma b) Nudo c) Veinte d) No lo sé

Vegetables

- a) Bancos b) Iglesias c) Verduras d) No lo sé

Want

- a) Almacenar b) Mostrar c) Querer d) No lo sé

Whistle

- a) Barco b) Marido c) Silbato d) No lo sé

Win

- a) Explicar b) Ganar c) Soplar d) No lo sé

Winner

- a) Compañero b) Hijo c) Ganador d) No lo sé

Zip

- a) Bosque b) Cremallera c) Maletero d) No lo sé

Block 6. INTER-RATER RELIABILITY: CORRELATIONAL ANALYSIS

Appendix 38

	Pearson Correlation	Sig.
S1 L1-L2P	.649	.000
S1 L2-L1	.990	.000
S2 L1-L2P	.996	.000
S2 L2-L1	.993	.000
S3 L1-L2P	.997	.000
S3 L2-L1	.990	.000
S4 L1-L2P	.998	.000
S4 L2-L1	.993	.000
S5 L1-L2P	.999	.000
S5 L2-L1	.997	.000
S6 L1-L2P	.990	.000
S6 L2-L1	.993	.000
Final L1-L2P	.880	.000
Final L2-L1	.990	.000

SUMMARY OF THE THESIS IN SPANISH

RESUMEN

INTRODUCCIÓN

A la vista del gran volumen de material publicado sobre la adquisición de vocabulario en segundas lenguas, es difícil mantener la afirmación de que el vocabulario es la Cenicienta de la adquisición de segundas lenguas. El vocabulario es uno de los aspectos que ha suscitado mayor interés lingüístico en las últimas tres décadas.

Sin embargo, todavía quedan muchos aspectos dentro de la adquisición léxica que no han recibido suficiente atención. Entre dichos aspectos encontramos la introducción y distribución de vocabulario y cómo éstas pueden afectar a la cantidad y ritmo de adquisición del léxico en una segunda lengua. Parece no existir correspondencia entre los pocos postulados teóricos que han aparecido al respecto y la realidad del aula.

A pesar de las recomendaciones científicas sobre una introducción sistemática del input, los materiales didácticos muestran una presentación no sistemática del mismo. Lo que es más, son muchos los materiales didácticos que ofrecen, si acaso, escasa información sobre la selección del vocabulario que aparece tanto en términos de calidad, cantidad y ritmo.

Esta falta de correspondencia entre la realidad y la teoría es lo que ha suscitado el presente trabajo de investigación. La presente tesis pretende ser una introducción al análisis de la situación descrita, donde la cantidad y ritmo de adquisición léxica en una lengua extranjera podría estar condicionada por la manera en la que el léxico se distribuye.

OBJETIVOS

El principal objetivo del estudio es averiguar hasta qué punto la introducción no sistemática del vocabulario está relacionada con su aprendizaje. Con este fin, se plantean tres preguntas de investigación:

- ¿Cuántas palabras se adquieren?
- ¿A qué ritmo se adquieren?
- ¿Qué palabras se adquieren teniendo en cuenta su frecuencia de aparición y su distribución?

SUMMARY OF THE THESIS IN SPANISH

METODOLOGÍA

Diseño y Variables

El estudio constituye una combinación de diseño descriptivo y cuasi-experimental. Se considera descriptivo en tanto que pretende ofrecer información sobre la cantidad y el ritmo al que se adquiere el vocabulario en una segunda lengua en el contexto del aula. Por su parte, también se puede clasificar en parte como estudio cuasi-experimental. Es cierto que un estudio cuasi-experimental suele contar con dos grupos (experimental y de control). Nuestro estudio solo cuenta con un grupo de participantes, aunque éste se comporta como dos. Esto es, son testados antes y después de cierto tratamiento (en este caso la introducción no sistemática de un grupo de palabras).

Cuenta con una variable dependiente y otra independiente. La primera corresponde al conocimiento de las palabras, el cual se mide en términos de la habilidad para reconocer una forma y saber su correspondiente en L1 o en L2. Por su parte, la variable independiente corresponde al libro de texto que siguen los participantes de este estudio.

El libro de texto utilizado se titula *Bugs 3* (2004) y pertenece a la editorial MacMillan. El estudio se centró en las unidades 4, 5 y 6. Se evaluó el conocimiento de 129 palabras clave. Por palabra clave se entiende sustantivos, verbos, adjetivos y adverbios que se han sido introducidos por el libro de texto durante el periodo de desarrollo del estudio. El número de palabras nuevas introducidas por sesión oscila entre 13 y 27, reflejando así el contexto no sistemático donde tiene lugar el aprendizaje de dicho léxico. La figura [1] muestra el número de palabras introducidas en cada sesión.

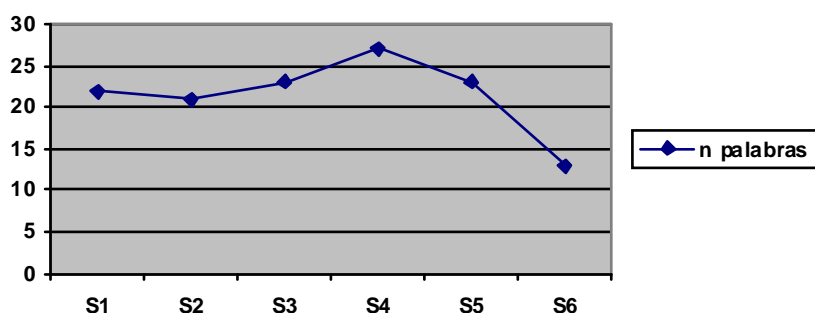


Fig [1] Número de palabras introducidas durante las sesiones de control de adquisición

La mayoría de las palabras clave en este estudio se encuentran entre las más frecuentes en la lengua inglesa, de acuerdo con el BNC (British National Corpus) y la

SUMMARY OF THE THESIS IN SPANISH

GSL (General Service List). Sin embargo, para el fin de nuestro estudio, se considera mucho más interesante la frecuencia específica de dichas palabras, definida como el número de veces que dichas palabras aparecen en un texto determinado. Dicho de otro modo, la frecuencia específica apunta a la frecuencia de exposición a dichas palabras por parte del estudiante.

Sin embargo, la frecuencia de aparición puede ocasionar problemas en cuanto a la dispersión de las palabras. Es por ello que, en lugar de tener en cuenta solamente la frecuencia específica de aparición, adoptamos un índice de dispersión. El índice de dispersión elegido fue propuesto por Gries (2008). Responde a una combinación de frecuencia específica y distribución. La tabla [1] presenta todas las palabras clave junto a su índice de dispersión.

Participantes

Un total de 44 estudiantes formaron parte del estudio. Tienen entre 8 y 9 años y cursan el tercer año de Educación Primaria. En el momento en participaron en el estudio, habían recibido alrededor de 186 horas de instrucción en lengua inglesa. Todos ellos nacieron en España y tienen el español como lengua materna. Son alumnos de un colegio público de Archena, una localidad situada en la Región de Murcia. El inglés se impartía como asignatura obligatoria, con 2 horas y 45 de instrucción semanales. El castellano se utilizaba como lengua vehicular en clase, quedando el inglés relegado al introducido por el libro de texto y a fórmulas como *thank you*, *goodbye* o *please*.

Instrumentos y Procedimiento

Los instrumentos utilizados en el estudio se clasifican de acuerdo a su función: 1) análisis del libro de texto y cálculo del índice de dispersión de Gries; 2) identificación de los estudiantes; 3) identificación de la docente; 4) control del aula; 5) evaluación de la adquisición léxica.

El análisis del libro de texto se llevó a cabo a través del programa informático RANGE, el cual permite identificar y agrupar vocablos ingleses de un texto según su frecuencia general en el discurso en lengua inglesa. En cuanto al índice de dispersión, se calcula en tres pasos: 1) determinar el tamaño del corpus; 2) determinar la frecuencia de aparición en el corpus estudiado; 3) computar todas las diferencias absolutas observadas y los porcentajes esperados, sumarlos y dividir el resultado entre 2. Los valores más

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cercanos a 0 indican una aparición y distribución más regular, mientras que los más alejados de 0 indican un alto grado de irregularidad.

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Palabra	DP	Palabra	DP	Palabra	DP	Palabra	DP	Palabra	DP	Palabra	DP	Palabra	DP
Ache	0.90	Clean	0.90	Football	8.18	Hundred	1.63	Now	4.45	See	3.63	Thirty	4.36
Animal	1.63	Come	5.09	Fork	2.27	Hungry	7	O'clock	16.36	Shampoo	1.63	Thousand	0.90
Bad	0.90	Competition	0.90	Forty	1.81	Ice cream	7.27	Orange	2.54	Shoot	0.90	Throw	4.54
Ball	6.54	Day	7.45	Fruit	1.63	Incredible	0.90	Party	1.81	Shower	6.54	Time	9.63
Basketball	1.81	Delicious	2.45	Game	2.18	Juice	2.45	Pass	2.27	Sit down	3.27	Today	1.63
Bed	2.27	Dinner	2.45	Garden	0.90	Kilometres	0.90	Plant	2.18	Sixty	0.90	Tonight	0.90
Bedtime	0.90	Dinnertime	0.90	Get dressed	2.27	Knife	3.63	Plate	1.63	Skate	1.81	Tummy	0.90
Bike	1.81	Dirty	0.90	Get up	6.36	Late	1.63	Play	11.09	Skateboard	2.27	Turn	2.45
Bread	0.90	Early	0.90	Giant	2.27	Like	10.09	Point	3.63	Smell	0.90	Twenty	3.27
Breakfast	7.27	Eat	5.09	Glass	0.90	Listen	0.90	Quick	3.27	Soap	0.90	Vegetables	0.90
Brush	7.36	Egg	3.27	Go	13	Love	4.36	Rice	3.63	Spin	1.63	Want	3.81
Butterfly	0.90	End	1.63	Go away	0.90	Luck	0.90	Ride	1.81	Splash	2.27	Whistle	0.90
Can	35.81	Famous	2.27	Goal	9	Lunch	4.09	Rollerblade	1.81	Spoon	0.90	Win	0.90
Canteen	0.90	Fantastic	1.81	Good	1.63	Lunchtime	0.90	Run	4.36	Star	3.27	Winner	0.90
Cereal	0.90	Fifty	2.27	Grains	0.90	Macaroni	6.36	Salad	2.45	Stretch	3.63	Zip	2.27
Cheese	0.90	Finger	0.90	Great	4.09	Metres	3.27	Sausages	4.54	Sure	1.81		
Chicken	3.27	Fish	9.90	Half past	10.90	Minutes	2.27	Score	5.45	Swim	5.27		
Children	2.27	Fly	1.63	Help	8.72	Morning	9.09	School	6.36	Teeth	8.18		
Chips	8.18	Food	0.90	Here	11.72	Munch	2.27	Seconds	3.63	Tennis	3.63		

Tabla [1] Palabras clave e índices de dispersión

SUMMARY OF THE THESIS IN SPANISH

Para la identificación de los estudiantes se utilizaron tres instrumentos distintos: la llamada ficha de identificación, donde el estudiante responde a cuestiones de índole personal y académica; en segundo lugar, los participantes rellenaron un cuestionario de actitud hacia la lengua inglesa en general y el vocabulario en particular; por último, el tercer instrumento utilizado para la identificación de los participantes fue el Vocabulary Levels Test (VLT) (Nation 1990; 2001). Con ello se pretendía calificar a los estudiantes de acuerdo a la cantidad de vocabulario que conocían en la lengua extranjera.

El tercer grupo de instrumentos están destinados a la docente. Ésta responderá a una ficha de identificación y un cuestionario donde se pretende recopilar información personal y académica.

Los instrumentos elegidos para el control de la clase son el cuadro de observación, las hojas de seguimiento de las sesiones y el diario del investigador. El primero se utilizó durante la observación directa de las sesiones docentes. El cuadro pretendía registrar las actividades y la dinámica de la clase de lengua inglesa. Las hojas de seguimiento tenían como objetivo tener información sobre las sesiones en las que la investigadora no estuvo presente. Finalmente, el diario del investigador consistía en una compilación de datos de manera informal sobre las sesiones observadas.

En cuanto a los instrumentos de medición de la adquisición léxica, se utilizaron tres formatos: test de traducción inversa, test de traducción directa y test de respuesta múltiple. El primero pretendía ofrecer información sobre el conocimiento productivo adquirido por los estudiantes. El test de traducción inversa presentaba dos versiones: la versión absoluta y la parcial. La primera contaba como correctas las respuestas en segunda lengua que estuvieran perfectamente deletreadas, mientras que la segunda versión también aceptaba como buenas las respuestas con algunos fallos ortográficos que no distorsionaran en exceso la forma de la palabra. El segundo y el tercer formato reflejaban conocimiento receptivo.

El estudio tuvo lugar del 4 de diciembre de 2008 al 18 de junio de 2009 y se puede dividir en tres fases. La primera fase comprende del 4 de diciembre de 2008 al 11 de ese mismo mes. En esos siete días tiene lugar la identificación de estudiantes y docente, la sesión de pre-test de las palabras que posteriormente van a ser evaluadas y la realización del Vocabulary Levels Test por parte de los estudiantes.

La segunda fase del estudio se extiende desde el 22 de enero de 2009 al 3 de abril de ese mismo año. Se puede calificar como la fase central del estudio, donde se evalúa periódicamente la adquisición léxica de los estudiantes. Así, los alumnos se

SUMMARY OF THE THESIS IN SPANISH

someten a pruebas léxicas cada quince días durante las diez semanas que dura esta segunda fase. Los tests consistían en palabras clave que habían sido tratadas los quince días anteriores a la prueba. Por último, la tercera fase consiste en una sola sesión donde los participantes realizan un test global con todas las palabras clave que se introdujeron y se fueron evaluando durante la segunda fase. La tabla [2] representa un cronograma del estudio.

	Fecha	Contenido
FASE I	4 Dic 2008	Ficha de identificación del estudiante + Ficha de identificación del docente + Cuestionario del estudiante + Cuestionario del docente
	9 Dic 2008	Pre-test
	11 Dic 2008	Vocabulary Levels Test
FASE II	22 En 2009	Tests de adquisición de vocabulario sesión 1
	5 Feb 2009	Tests de adquisición de vocabulario sesión 2
	19 Feb 2009	Tests de adquisición de vocabulario sesión 3
	5 Mar 2009	Tests de adquisición de vocabulario sesión 4
	18 Mar 2009	Tests de adquisición de vocabulario sesión 5
	2 Apr 2009	Tests de adquisición de vocabulario sesión 6
FASE III	18 Jun 2009	Sesión Global

Tabla [2] Cronograma del estudio

Técnicas estadísticas

Se aplicaron tanto técnicas descriptivas como inferenciales para el análisis de los datos recogidos. Entre las técnicas descriptivas utilizadas encontramos medidas de tendencia central como la frecuencia, el porcentaje, la media y las mediana, y medidas de variabilidad como la varianza y la desviación estándar. En cuanto a las técnicas inferenciales, se hizo uso del análisis correlacional, del análisis de la varianza (ANOVA) y de la regresión univariada.

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RESULTADOS

Fichas de identificación y cuestionarios

La ficha de identificación de la docente apunta que es una mujer de 28 años con cinco años de experiencia en la enseñanza del inglés a nivel de Educación Primaria. El cuestionario refleja que tiene una actitud altamente positiva hacia la lengua inglesa. Piensa que el inglés ayuda a conseguir mejores puestos de trabajo. Considera el libro de texto como una herramienta útil y necesaria.

La ficha de identificación y el cuestionario distribuido a los alumnos revelaron que ninguno de ellos tenía contacto con el inglés fuera del aula y que era la primera vez que cursaban el tercer año de Primaria. Respecto a su actitud hacia el inglés, la mayoría afirmó que les gustaba y consideraban el inglés importante para su formación.

Cantidad de vocabulario conocido previamente al estudio

El Vocabulary Levels Test estimó que, en términos generales, los estudiantes conocían alrededor de 340 familias de palabras en inglés, indicando un dominio léxico considerablemente bajo. En cuestiones de conocimiento por género, las niñas mostraron una mayor cantidad léxica conocida, superando a los niños en alrededor de 100 familias de palabras.

Adquisición de vocabulario

Pre-test

Los participantes del estudio demostraron en el pre-test que no conocían ninguna de las palabras clave que posteriormente aparecerían y cuya adquisición sería valorada.

¿Cuántas palabras se adquirieron?

Los tests realizados durante la sesión global final mostraron que los participantes no habían adquirido el 100% de las palabras clave introducidas. Los resultados de adquisición más altos se encontraron en el test de respuesta múltiple, mientras que los más bajos correspondieron al formato de traducción inversa absoluta. Según el test global de respuesta múltiple realizado durante la sesión final de junio, los estudiantes aprendieron alrededor de 97 palabras (75% del input recibido). El test de traducción directa reflejó una adquisición del 46%, mientras que el test de traducción inversa contó con los porcentajes de adquisición más bajos: 24% para la versión parcial y 18% para la

SUMMARY OF THE THESIS IN SPANISH

versión absoluta (ver tabla [3] sobre medias y porcentajes de adquisición de la sesión global de junio de 2009).

	Trad inv. A	Trad inv. P	Trad directa	Respuesta múltiple
Número de palabras	22.86	30.73	60.20	96.93
%	17,72%	23.81%	46.67%	75.13%

Tabla [3] Sesión global

Los resultados de los tests en la sesión global se sometieron a un análisis de la varianza (ANOVA), donde se detectaron diferencias estadísticamente significativas al nivel $p < .05$ entre los cuatro tipos de tests [F 143.279, $p = .000$] (ver tabla [4]). Sin embargo, los resultados del análisis post-hoc indican que esas diferencias significativas no se cumplen entre las dos versiones del test de traducción inversa (ver tabla 5).

Sesión	F	Sig.
1	56.884	.000
2	71.869	.000
3	84.900	.000
4	414.058	.000
5	92.004	.000
6	41.490	.000
Global	143.279	.000

Tabla [4] ANOVA sesiones de la segunda fase

	Trad inv A- Trad inv P	Trad inv A- Trad dir	Trad inv A- Resp múlt	Trad inv P- Trad dir	Trad inv P- Resp múlt	Trad dir- Resp múlt
S1		*	*	*	*	*
S2		*	*	*	*	*
S3		*	*	*	*	*
S4	*	*	*	*	*	*
S5		*	*	*	*	*
S6		*	*	*	*	*
Final		*	*	*	*	*

Tabla [5] Post- hoc de las sesiones de la segunda fase y la sesión global

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En cuanto a las sesiones realizadas durante la segunda fase del estudio (de enero a abril de 2009) la ANOVA también reflejó diferencias significativas entre los distintos tipos de test: S1 [F56.884, p=.000]; S2 [F71.869, p=.000]; S3 [F84.900, p=.000]; S4 [F414.058, p=.000]; S5 [F92.004, p=.000]; S6 [F41.490, p=.000] (ver tabla [4]). Sin embargo, al igual que ocurre con la sesión global, dichas diferencias no se dieron entre todos los tipos de test (ver tabla [5]).

¿A qué ritmo se adquirieron?

La tabla [6] muestra la media y porcentaje de adquisición para cada una de las sesiones llevadas a cabo durante la segunda fase del estudio. Los porcentajes se calcularon de acuerdo a la cantidad de palabras introducidas en cada sesión. En el caso de las pruebas de traducción inversa, la cantidad adquirida oscila entre el 13% y el 33% en la versión absoluta y entre el 20% y el 40% en la versión parcial. Los porcentajes de adquisición son considerablemente más altos cuando hablamos de la traducción directa y el test de respuesta múltiple, con cantidades del 45% al 63% en el primer caso, y del 62% al 77% en el segundo caso. Las figuras [2] y [3] muestran la cantidad y el porcentaje de adquisición a lo largo de toda la segunda fase del estudio.

	S1		S2		S3		S4		S5		S6	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
	Palab		Palab		Palab		Palab		Palab		Palab	
Trad inv A	7.29	33.16	4.97	23.7	7.45	32.41	3.47	12.87	4.20	18.28	3.09	23.77
Trad inv P	8.34	37.91	6.25	29.76	9.27	40.31	5.63	20.87	5.47	23.81	3.83	29.72
Trad dir	13	59.09	11.11	52.92	14.65	63.77	13.36	49.49	10.65	46.34	5.84	44.93
Resp múlt	15.4	70.04	15.13	72.07	17.81	77.47	18.24	67.76	16.09	69.96	8	61.53

Tabla [6] Medias y porcentajes de adquisición para sesiones en la segunda fase

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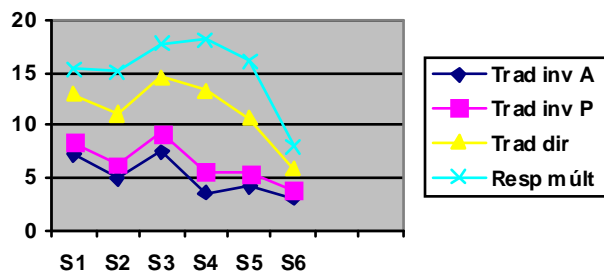


Fig [2] Número de palabras adquiridas por sesión

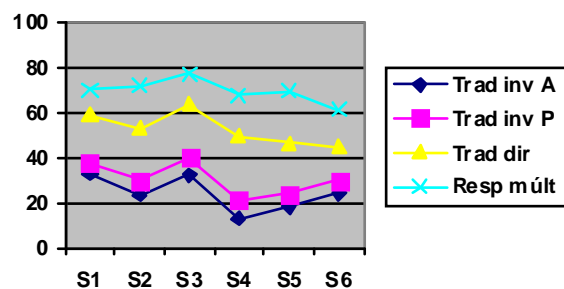


Fig [3] Porcentaje de adquisición por sesión

La tabla [7] muestra el porcentaje acumulativo de adquisición forjado durante la segunda fase. Estas estimaciones nos permiten identificar el ritmo al que el vocabulario va creciendo. Así, el conocimiento productivo – representado por los tests de traducción inversa y directa apuntan a un crecimiento alrededor del 4% al 5%. Por su parte, el conocimiento receptivo crece a una velocidad mayor sobre el 9% en la traducción directa y casi el 12% en el test de respuesta múltiple.

	S1		S2		S3		S4		S5		S6	
	%	<i>crec</i>	%	<i>crec</i>	%	<i>crec</i>	%	<i>crec</i>	%	<i>crec</i>	%	<i>crec</i>
Trad inv A	5.65	5.65	9.51	3.86	15.29	5.78	17.98	2.69	21.24	3.26	23.64	2.4
Trad inv P	6.46	6.46	11.31	4.85	18.49	7.18	22.86	4.37	27.11	4.25	30.11	3
Trad dir	10.07	10.07	18.69	8.62	30.05	11.36	40.41	10.36	48.67	8.26	53.20	4.53
Resp múlt	11.94	11.94	23.67	11.73	37.49	13.82	51.67	14.18	64.14	12.47	70.34	6.2

Tabla [7] Porcentaje acumulativo

Se llevó a cabo un análisis de la varianza entre grupos, el cual confirmó que existían diferencias significativas en el crecimiento de vocabulario entre sesiones dentro de la segunda fase (ver tabla [8]). Sin embargo, una prueba post-hoc demostró que estas diferencias no existían entre todas las sesiones, solamente entre las sesiones 1 y 2, 3 y 4, y 5 y 6.

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Test	F	Sig.
Trad inv A	48.973	.000
Trad inv P	67.454	.000
Trad dir	164.694	.000
Resp mútl	382.102	.000

Tabla [8] ANOVA de los tipos de test en la segunda fase

Era interesante, además, intentar predecir de alguna manera cuánto y en cuánto tiempo ese grupo de estudiantes era capaz de adquirir vocabulario a lo largo de su proceso de aprendizaje. Para ello se aplicó una regresión lineal univariada donde la variable dependiente correspondía a la cantidad adquirida y la independiente al número de sesiones necesarias para adquirir dicha cantidad.

Los coeficientes obtenidos mostraron los valores de la constante y de la variable independiente para cada tipo de conocimiento léxico evaluado. El valor de la constante se dividió entre 1, que correspondía a la cantidad de vocabulario máximo que podía adquirirse. El número de sesiones necesarias para adquirir la mitad de dicho conocimiento resulta de multiplicar la cantidad máxima de vocabulario por el valor de la sesión resultante de la regresión lineal (ver tablas [9], [10] y [11]).

Tipo de conocimiento léxico	F	Sig.	R ²
Trad inv A	54.409	0.000	0.167
Trad inv P	44.734	0.000	0.146
Trad dir	53.694	0.000	0.170
Resp múlt	38.631	0.000	0.128

Tabla [9] Regresión univariada de la sesión global

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Tipo de conocimiento léxico	Coeficientes No estandarizados		(1/Constante) x valor de las sesiones
Trad inv A	Constante .013	1/0.013	76.9 x 0.165
	Sesiones .165		
Trad inv P	Constante .005	1 / 0.005	200 x 0.155
	Sesiones .155		
Trad dir	Constante -.001	1 / 0.001	1000 x 0.092
	Sesiones .092		
Resp múlt	Constante -.002	1 / 0.002	500 x 0.073
	Sesiones .073		

Tabla [10] Resultados de A y B en la ecuación

Tipo de conocimiento léxico	Máxima cantidad de conocimiento	Sesiones necesarias para conseguir la mitad del máximo de conocimiento
Trad inv A	76.9	12.6
Trad inv P	200	31
Trad dir	1000	92
Resp múlt	500	36.5

Tabla [11] Modelo de adquisición de vocabulario

¿Qué palabras se adquirieron teniendo en cuenta su frecuencia de aparición y su distribución?

Para descubrir si la frecuencia de aparición y la distribución de las palabras clave habían incidido en su adquisición se aplicó una regresión lineal para cada uno de los tipos de conocimiento léxico evaluados. Al contrario de lo esperado, la frecuencia de aparición y la distribución de las palabras clave no parecen predecir su adquisición (ver tabla [12]).

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Conocimiento léxico	F	Sig.
Trad inv A	17.341	Constante .000 Adq .000
Trad inv P	14.459	Constante .000 Adq .000
Trad dir	6.390	Constante .001 Adq .013
Resp múlt	3.787	Constante .000 Adq .054

Tabla [12] Regresión del índice de dispersión y la adquisición

DISCUSIÓN

¿Cuántas palabras se adquirieron?

Los resultados han mostrado una adquisición lejos de la cantidad total esperada de palabras clave. Esto podría tener dos posibles explicaciones. En primer lugar, la propia introducción sistemática podría haber impedido la adquisición de todo el conjunto. En segundo lugar, puede que la cantidad de palabras clave introducidas por sesión pudieran ser demasiadas para la capacidad de adquisición de los estudiantes.

También es importante destacar las diferentes cantidades adquiridas en cada tipo de conocimiento léxico, donde las cifras en los tests de respuesta múltiple y traducción directa – representativos del conocimiento receptivo – son significativamente más altas que las de los tests de traducción inversa – representativos del conocimiento productivo.

Nuestros resultados son contrarios a los de estudios previos como Takala (1984). En su estudio con estudiantes de inglés en Educación Primaria, Takala observó que no había una diferencia significativa entre el conocimiento léxico receptivo y productivo de los estudiantes. El autor atribuyó este hecho al bajo nivel de los estudiantes.

Sin embargo, los resultados obtenidos en la presente tesis doctoral están en la línea de la mayoría de los estudios léxicos actuales, donde se han encontrado claras diferencias entre el conocimiento receptivo y productivo de vocabulario en todos los niveles de L2. Las diferencias encontradas podrían estar relacionadas, al menos en parte, con factores intraléxicos. Algunas de las palabras clave introducidas eran cognados, lo que facilitaría la adquisición sobre todo receptiva de las mismas.

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¿A qué ritmo se adquirieron?

A pesar de las distintas cantidades de vocabulario introducidas en cada sesión de la segunda fase, el ritmo de adquisición parece ser constante a lo largo de todo el proceso. Sin embargo, volvemos a encontrar diferencias entre los distintos tipos de conocimiento léxico evaluado. Como era de esperar, el mayor ritmo de adquisición se registró en el test de respuesta múltiple, seguido por el de traducción directa y las dos versiones de traducción inversa.

Al menos en el contexto del presente estudio, se podría sugerir que el ritmo podría haber estado influido, al menos en parte, por factores extraléxicos e intraléxicos. Esto debería tenerse en cuenta, ya que no solo el ritmo de introducción podría incidir en el ritmo de adquisición, sino que hay factores extraléxicos e intraléxicos que podrían jugar un importante papel en el aprendizaje léxico.

Un segundo aspecto a destacar sobre el ritmo de adquisición sugiere la posibilidad de modelar el proceso de aprendizaje léxico. Las regresiones univariadas han demostrado que el ritmo de adquisición léxica podría predecirse en un principio. No obstante, los valores B que se han obtenido de dichas regresiones son muy bajos, incluso en algunos casos negativos. Esto apunta a que los estudiantes que han participado en este estudio están lejos del punto de saturación del conocimiento. Este hecho es esperable, dado que dichos estudiantes se encuentran en el estadio inicial del proceso de adquisición léxica, quedándoles todavía un largo camino por recorrer. Por tanto, no es posible predecir la cantidad máxima de vocabulario que serán capaces de adquirir durante todo su proceso de aprendizaje léxico.

No obstante, la regresión sí permite aproximarnos a una predicción del ritmo de adquisición al que se desarrolla el aprendizaje. Según los resultados obtenidos, parece que los estudiantes son capaces de aprender receptivamente alrededor de 500 palabras en unas 92 horas. Teniendo en cuenta que los estudiantes españoles están expuestos a una media de 1.200 horas de instrucción inglesa, nos preguntamos cómo es posible que la mayoría de ellos no lleguen a tener un conocimiento léxico receptivo de 1000 palabras. Estamos lejos de encontrar la respuesta a dicha cuestión, pero lo que nuestros resultados indican es que la capacidad de adquisición léxica de los alumnos no está siendo optimizada.

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¿Qué palabras se adquirieron teniendo en cuenta su frecuencia de aparición y su distribución?

Los resultados confirmaron que la frecuencia y la distribución no estaban relacionadas con la adquisición de vocabulario introducido por el libro de texto. Más sorprendente incluso resulta el hecho de que las palabras clave con una distribución más irregular presenten un grado de adquisición mayor que aquéllas con una distribución más regular.

Una posible explicación para esto podría encontrarse en la incidencia de factores intraléxicos y extraléxicos. Esto es, muchas de las palabras con distribución y frecuencia irregulares son las protagonistas de las unidades didácticas con las que los participantes trabajaron. Esto implica que dichas palabras se manejen de manera explícita y se les preste más atención que a otras.

Un claro ejemplo lo encontramos en el verbo *can* con un índice de dispersión de 35.81, lo que indica su alta irregularidad a través del libro de texto. A pesar de su alto índice de irregularidad, es una de las palabras clave que ha mostrado mayor grado de adquisición. *Can* no es el único caso. Encontramos otras muchas palabras clave con altos grados de irregularidad y a la vez alto grado de adquisición: *fish* (9.9), *chips* (8.18), *breakfast* (7.27), *ice cream* (7.27), *get up* (6.36).

Otra posible explicación a este fenómeno podría estar en el hecho de que algunas palabras clave sean cognados. Este es el caso de *football*, *goal* o *macaroni*, que son mayoritariamente adquiridos a pesar de tener una distribución bastante irregular.

La intersección de distintos factores que pueden haber influido nuestros resultados en relación con la frecuencia y la distribución deberían hacernos reflexionar sobre la complejidad del proceso de adquisición léxica en una segunda lengua.

El segundo punto a tratar dentro de este apartado responde a los problemas directamente relacionados con la introducción del input. Por una parte, los índices de frecuencia de las palabras clave reflejan una falta de correspondencia entre la lengua en el discurso real y el uso de la lengua en el libro de texto. Este hecho contradice las bases teóricas sobre las que presumiblemente se asientan los materiales didácticos contemporáneos, puesto que una considerable cantidad de vocabulario que aparece en el libro de texto presenta bajos niveles de frecuencia.

No obstante, no podemos ignorar que el vocabulario con bajo nivel de frecuencia puede estar justificado por la funcionalidad de la que los materiales didácticos precisan. Esto es, hay palabras que son altamente funcionales para los estudiantes, como las

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referidas al material escolar, pero que no se encuentran entre las más utilizadas en el discurso general. Así, los diseñadores de materiales a veces se ven obligados a escoger entre lo que se supone que se debe usar de acuerdo a las listas de frecuencia y lo que realmente es útil para los estudiantes. Este conflicto de intereses refleja una posible deficiencia en los corpora actuales. Se deberían revisar las fuentes para el diseño de dichos corpora, además de los criterios para su compilación y su uso en áreas específicas como la enseñanza de segundas lenguas.

Finalmente, también es digna de mención la manera en la que se introduce el vocabulario en el libro de texto utilizado para este estudio. Parece que las palabras clave se introducen “a empujones”, trabajándolas intensamente durante un corto periodo de tiempo para después ser olvidadas. En este sentido, da la sensación de que el conocimiento no se construye de manera organizada y gradual. Estos dos últimos aspectos se reflejan claramente en las deficiencias de adquisición léxica de los estudiantes.

IMPLICACIONES PEDAGÓGICAS Y CONCLUSIONES

Como tónica general, los libros de texto constituyen la base de la instrucción formal de la lengua inglesa en España. Sin embargo, seguir el libro de texto fielmente parece no cumplir con las expectativas de adquisición que se tiene de los estudiantes.

El contenido léxico del libro de texto utilizado contiene importantes deficiencias que se reflejan en la adquisición léxica por parte de los estudiantes. La causa de dichas deficiencias podría encontrarse en la falta de fundamento que puede haber detrás de su contenido léxico, lo que en última instancia puede desembocar en una falta de optimización de la instrucción de inglés en el aula. Ante esta situación, se sugerimos algunas recomendaciones para intentar mejorar dicha situación. Tales sugerencias van destinadas a distintos sectores de la comunidad docente.

El primer sector concierne a los diseñadores de materiales. A pesar de que una distribución regular no ha sido determinante para la adquisición en este estudio, sí que se ha observado que el proceso de adquisición puede predecirse y, por lo tanto, modelarse. De ahí que encontramos fundamental que la manera en la que se introduce el input se adapte a la manera en que ese input se aprende.

Además, la sistematización de los materiales didácticos debería basarse en la revisión tanto intensiva como extensiva. La primera se refiere a la intensidad con la que se trabaja el vocabulario, mientras que la segunda está relacionada con la periodicidad.

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Esto es, no solo es importante que todas las palabras clave se trabajen con la misma intensidad, sino que también debe revisarse periódicamente a lo largo del proceso de aprendizaje.

El diseño de materiales debería tener como criterios principales la construcción de conocimiento léxico de manera ordenada, cumulativa y asociativa. Esta sugerencia implica una introducción del vocabulario donde V – esto es, el nuevo vocabulario que se introduce y presumiblemente se adquiere – vaya seguido por $V+1$, después por $(V+1)+1$, por $((V+1)+1)+1$ y así sucesivamente. Además, no es solo que el vocabulario se introduzca de esta manera, sino que también debe parecerlo. Los estudiantes deberían tener la sensación de que tienen la oportunidad de usar lo que han aprendido y de que siguen aprendiendo. Un programa de actuación como el sugerido sobre estas líneas podría promover esa sensación en los estudiantes.

El papel de los formadores de profesorado también es esencial. Deben animar a los docentes a adoptar una postura crítica frente a los materiales didácticos e intentar mejorar las unidades didácticas que se consideren léxicamente deficientes. Los formadores deberían promocionar cursos específicamente destinados a la selección y adaptación de los materiales didácticos, donde los docentes aprenderían cómo analizar la calidad de un libro de texto en lo que concierne al vocabulario.

Otro sector esencial es, sin duda, el de los docentes. Ellos son el vínculo más directo entre el contenido léxico del libro de texto y el estudiante. Es más, normalmente son los últimos responsables en la selección del libro de texto. Así, ellos deberían transmitir la importancia de léxico a sus alumnos, además de promocionar y monitorizar un enfoque sistemático de estudio del mismo.

Finalmente, no debemos olvidar la responsabilidad de la comunidad científica. La primera recomendación apunta a una exploración más detallada de las líneas de investigación que se han abierto en esta tesis doctoral. En primer lugar, se deben aunar esfuerzos para unir ciencia y realidad con el fin de mejorar la enseñanza de segundas lenguas. En segundo lugar, sería deseable que se llevaran a cabo más estudios sobre el ritmo de adquisición léxica en distintos contextos y desde distintas perspectivas. En tercer lugar, se recomienda un análisis profundo sobre el efecto en la adquisición léxica de los factores intraléxicos y extraléxicos.

Por último, consideramos que el futuro en los avances en el área de adquisición de vocabulario en segundas lenguas pasa, al menos en parte, por la interdisciplinariedad.

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La pedagogía, la neurología, la sociología e incluso la política pueden ayudar a abrir nuevos caminos a este respecto.

