Chapter 1

Factors Affecting Vocabulary Learning and Acquisition

Despite the abundance of research on vocabulary acquisition that has been conducted by linguists, psychologists and theorists of L2 acquisition, there is still no generally accepted theory of vocabulary acquisition (for further discussion, see Meara, 1997). This fact may be partially attributed to the lack of cooperation or agreement among experts. On the one hand, psycholinguists have a particular interest in vocabulary development and exploration of the formal models of vocabulary acquisition, and ignore the L2 vocabulary literature because it is model-free. Applied linguists, on the other hand, are mainly concerned with the descriptive aspects of vocabulary and do not draw on existing psycholinguistic models of bilingual lexicon even when this implies an immediate pedagogical significance. Differences in the research focus have caused the two fields to develop at different rates, which has led to an even larger gap between them. It is, therefore, extremely difficult to list all the significant factors and the ways in which they influence vocabulary acquisition. In this section, a selection of the factors most frequently discussed in the relevant literature is presented.

Linguistic Features of Lexical Items

When it comes to linguistic features of lexical items, several issues need to be taken into consideration. To begin with, there is the problem of defining a ‘word’. Intuitively, vocabulary could be defined as a ‘dictionary’ or a set of words. This general view is reflected in the lexicographical approach to the traditional way of listing words in a dictionary. However, it is obvious that for linguistics and L2 acquisition theory this interpretation is far too simplistic and limited. Linguists’ attempts to specify what speakers of a language traditionally regard as a ‘word’ have resulted in so many formally different definitions of this term that their number alone suggests the complexity of the problem.

Firstly, according to the orthographic definition, a ‘word’ is ‘… any sequence of letters (and a limited number of other characteristics such as hyphen and apostrophe) bounded on either side by a space or punctuation mark’ (Carter, 1992: 4). Its flaw is not only its limitation to the written language, but the fact that it is formalistic, inconsistent and incomplete because it neglects differences in meaning and the issues of polysemy, homonymy, grammar functions, etc.

Secondly, based on semantics, a word can be defined as the smallest meaningful unit of language (Carter, 1992). As there is still no satisfactory definition of what ‘meaning’ is, i.e. what is the relationship between the linguistic sign and what it denotes outside the language, this definition is not reliable enough. Namely, some units of meaning consist of several words (e.g. bus conductor), for some the meaning cannot be determined without looking into their function in structuring and organising information (e.g. if, but), and certain ‘integral’ parts of words cannot stand on their own even if we know their meaning (e.g. the prefix ‘re-’ in retell).

Thirdly, by the same token, the definition that restricts a word to a single stressed syllable allows for many exceptions: words like if and but do not have a stress, and bus conductor would be regarded as a single word in this view.

Next, Bloomfield’s definition, according to which a word is a minimal free form, i.e. the smallest form that has a meaning when standing on its own (Škiljan, 1994), encompasses most of the categories and, without excluding further reduction of forms, provides a word with a degree of stability. Again, the problem of marginal cases arises and undermines every attempt to define a word in a formalistic way: firstly, items like a and the appear only in contextual relations to other words and secondly, idiomatic expressions, which consist of several orthographic words and cannot be reduced without radically changing their meaning (Carter, 1992).

Furthermore, McCarthy (1994) claims that a word, as a free meaningful unit of language, must contain at least one potentially freestanding morpheme. From this view a conditional definition of a word may be derived: a word is a combination of morphemes that comprise a firm unit suitable for the formation of higher level units (Škiljan, 1994). In addition, in Carter’s view (1992), one of the greatest problems of defining a word, along with the above-mentioned constraints, is the fact that words have different forms that would not intuitively be regarded as different words. Moreover, words can have the same form with completely different and unconnected meanings.

Finally, by way of attempting to solve this problem, a neutral term lexeme or lexical unit has been introduced. It is an abstract unit that includes various orthographic, phonological, grammatical and semantic
features of a ‘word’. Thus, this term covers inflections, polysemy, as well as multi-word items with different degrees of fixedness, such as compounds, phrasal verbs, and idioms. The difference between holistic multi-word items and other kinds of strings (i.e. multi-word inflectional forms, such as verb phrases *are going* or *has been chosen*) may be determined by applying the following criteria: institutionalisation or lexicalisation (the degree to which a multi-word item is considered as being a unit by the language community), fixedness (the degree to which a multi-word item is frozen as a sequence of words) and non-compositionality (the degree to which a multi-word item cannot be interpreted on a word-by-word basis, but has a specialised unitary meaning) (cf. Moon, 1997: 44).

The second issue that needs to be discussed arises from the lack of an unambiguous and universally accepted definition of a word: vocabulary of any language consists of a wide range of lexical forms. Thus, many linguists and theorists of L2 acquisition agree that vocabulary is made up of a variety of forms, such as morphemes, both free and bound (e.g. *laugh*, or the prefix *un-*), their combinations, i.e. derivatives (e.g. *laughter*, *unbelievable*), compounds (e.g. *bus conductor*), idioms, i.e. units that cannot be reduced or changed, and whose meaning cannot be retrieved from individual meanings of their components (e.g. *to bite the dust*), and other fixed expressions, such as binomials and trinomials (e.g. *sick and tired*, *ready, willing and able*), catchphrases (e.g. *they don’t make them like that any more*), prefabricated routines or prefabs (e.g. *if I were you*), greetings (e.g. *How do you do?*) and proverbs (e.g. *It never rains but it pours*). This list of formal categories indicates a tremendous heterogeneity and a wide range of lexical items, but is by no means complete and absolute, nor are the categories strictly demarcated: their overlap is inevitable. It is this aspect that places vocabulary on the boundaries between morphology, syntax and semantics.

The third issue takes into consideration the fact that lexical items can hardly be viewed in isolation from each other, for they enter, semantically speaking, into various relations. These include hyponyms (lexical items within the same semantic field, i.e. at content level), synonyms (two or more lexical items that have the same or nearly the same meaning but different form), antonyms (lexical items of opposite meanings) and homophones (lexical items that have the same form but different meanings).

Meaning can be studied by means of the so-called componential analysis, which is based on the assumption that the meaning of a lexical item can be broken down into a set of meaning components or semantic features. The meaning of a lexeme is determined by a number of distinctive semantic features, namely their absence (marked by ‘− ’), presence (marked by ‘+ ’) or irrelevance for the definition of a lexeme’s meaning (marked by ‘± ’). This approach shows which features of lexical items from the same semantic field overlap or differ, and is therefore suitable for the exploration of synonymy. A disadvantage of componen
tial analysis is not only its failure to cover all meanings, but also the fact that it reduces the meaning components to binary oppositions that cannot always be precisely determined, and the fact that it may result in an indefinite list of a lexical item’s relevant features.

The above-mentioned cases exemplify a paradigmatic relationship. This is the relationship between a lexeme and other lexemes that could be substituted for it in a sentence. A different type of relationship which lexemes enter into – called a syntagmatic relationship – is characterised by linear sequencing of lexemes. Such combinations of lexemes, however, are restricted. These restrictions (or ‘collocations’) determine which lexical units may be selected to form semantically acceptable combinations of two or more syntactically combined lexical units. Some collocations are entirely predictable (e.g. *blond and hairy*; some lexical items have a wide range of collocations (e.g. *letter collocates with alphabet, box, post, write*, etc.), and some lexemes appear in so many different contexts that it is practically impossible to predict all of their collocations (e.g. verbs like *have* or *get*). To be noted is the fact that collocations differ from free associations of ideas: associations are highly individual, whereas collocations are lexical connections established in the same way by all speakers of a language. The study of collocations can be effective if it is conducted on large amounts of data, which is inevitably associated with corpus studies, because collocations are not merely random combinations of lexical items, but are part of their meaning in the broadest sense of the word (Moon, 1997).

Finally, other factors influence the learning of a lexical item and make the acquisition of vocabulary difficult. According to Laufer (1997), the factors that affect the learnability of lexical items include pronounce-
ability (phonological or suprasegmental features), orthography, length, morphology, including both inflectional and derivational complexity that increase the vocabulary learning load, similarity of lexical forms (e.g. *synforms*, homonyms), grammar, i.e. part of speech, and semantic features (e.g. abstractness, specificity and register restriction, idiomaticity and multiple meaning). Table 1.1 gives an overview of the intralexical factors and their effect on vocabulary learning (facilitating factors,
difficulty-inducing factors and factors with no clear effect) (Laufer, 1997: 154).

### The Influence of First and Other Languages

L2 vocabulary acquisition is different from L1 vocabulary acquisition because an L2 learner has already developed conceptual and semantic systems linked to the L1. This is why L2 acquisition, at least in its initial stages, often involves a mapping of the new lexical form onto an already existing conceptual meaning or translational equivalent in L1. The role of L1 in this process varies depending on the degree of equivalency between languages: although in some cases it may facilitate the acquisition or use of L2 lexical items, in others it will create an obstacle. This may occur in the process of acquisition, in recalling and using previously learnt lexical items, or in attempts of constructing a complex lexical item that has not been learnt as a unit. By making cross-linguistic comparisons (i.e. by contrastive analysis) one can often predict difficulties caused by interference of the L1 that learners may encounter when learning the target language. Namely, the learner’s approach to L2 learning is based on an ‘equivalence hypothesis’: ‘the learner tends to assume that the system of L2 is more or less the same as in his L1 until he has discovered that it is not’ (Ringbom, 1987: 135). The learner’s readiness to transfer may also be influenced by his perceptions of linguistic and cultural distance. Forming a kind of equivalence hypothesis enables learners to learn an L2 without having to go all the way back to learning how to categorise the world. However, equivalence hypothesis may fail and lead to erroneous conclusions because of the following reasons (Swan, 1997):

1. lexical units in two languages are not exact equivalents (i.e. there is more than one translation);
2. equivalent lexical units in related languages have different permissible grammatical contexts;
3. equivalents belong to different word classes;
4. equivalents are false friends;
5. there are no equivalents at all.

Coping with these problems may be overwhelming, and the learners tend to avoid such ‘difficult’ lexical items, especially if there is a semantic void in the L1. A possible explanation is that in such cases there is no foundation on which L2 knowledge may be built (Gass, 1989).

Finally, the L2 learner, unlike the child acquiring its L1, cannot significantly expand his or her vocabulary solely through exposure to the language input. The exposure to L2 input is often limited to the classroom context. The input may be increased by reading (cf. Ellis, 1997) or listening (Rivers, 1981) in the target language. But these activities, although undoubtedly useful, do not guarantee the development of rich vocabulary. Similarly, formal teaching of vocabulary has its limitations, for, as Rivers (1981: 463) claims, ‘vocabulary cannot be taught’.

#### Table 1.1 Intralexical factors that affect vocabulary learning (Laufer, 1997: 154)

<table>
<thead>
<tr>
<th>Facilitating factors</th>
<th>Difficulty-inducing factors</th>
<th>Factors with no clear effect</th>
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<tr>
<td>Familiar phonemes</td>
<td>Presence of foreign phonemes</td>
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<tr>
<td>Phonotactic regularity</td>
<td>Phonotactic irregularity</td>
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<tr>
<td>Fixed stress</td>
<td>Variable stress and vowel change</td>
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<tr>
<td>Consistency of sound-script relationship</td>
<td>Incongruency in sound-script relationship</td>
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<td>Word length</td>
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<tr>
<td>Inflectional regularity</td>
<td>Inflectional complexity</td>
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<tr>
<td>Derivational regularity</td>
<td>Derivational complexity</td>
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<tr>
<td>Morphological transparency</td>
<td>Deceptive morphological transparency</td>
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<tr>
<td>Synformy</td>
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<td>Part of speech</td>
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<tr>
<td>Concreteness/abstractness</td>
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<tr>
<td>Generality</td>
<td>Specificity</td>
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<tr>
<td>Register neutrality</td>
<td>Register restrictions</td>
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<tr>
<td>Idiomaticity</td>
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<tr>
<td>One form for one meaning</td>
<td>One form with several meanings</td>
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</table>
The Incremental Nature of Vocabulary Acquisition

Knowledge of an L2 lexical item consists of several components. Generally, it is characterised by several dimensions of word knowledge (i.e. phonological and orthographic, morphological, syntactic and semantic) and by knowledge of conceptual foundations that determine the position of the lexical item in our conceptual system. Finally, it inevitably includes the ability of productive use, i.e. efficient retrieval of the lexical item for active use.

Ideally, knowledge of a lexical item would include all of the above-mentioned dimensions and would be reflected in the ability to react in the manner of an educated native speaker. However, knowledge of a lexical item is not an ‘all-or-nothing’ proposition; it is rather to be conceived of as a continuum of knowledge at whose ends, according to some theoreticians, the receptive and productive knowledge is placed. It can be concluded that even partial knowledge represents a degree of knowing a lexical item. The initial degree is elementary knowledge, such as the visual recognition of a lexical item in a context that still does not enable a learner to produce it. Higher degrees of knowledge, close to productive knowledge, would suggest, for example, knowledge of multiple meanings of a polysemous lexical item or its collocations, etc. Whereas interpretation requires only as much information as is necessary to distinguish a lexical item from all other possibilities, production requires more information, which may even include the aid of an adequate stimulus (e.g. context) (Melka, 1997).

The Role of Memory in Vocabulary Learning and Acquisition

The role of memory is crucial in any kind of learning and vocabulary learning is no exception. According to the above-described continuum, learning of lexical items is not linear. Learners, without fail, forget some components of knowledge. In both long-term and short-term memory forgetting takes place in a similar way. When obtaining new information, most of it is forgotten immediately, after which the process of forgetting slows down. On the basis of available research results, Thornbury (2002) has compiled a list of principles that facilitate the transfer of the learning material into the long-term memory. These include multiple encounters with a lexical item, preferably at spaced intervals, retrieval and use of lexical items, cognitive depth (cf. Schneider et al., 2002), affective depth, personalisation, imaging, use of mnemonics and conscious attention that is necessary to remember a lexical item. A proper understanding of the role memory plays in vocabulary acquisition has an immediate practical value: as lexical knowledge is more prone to attrition than other linguistic aspects (Schmitt, 2000), the learning and teaching of vocabulary needs to be planned following the above mentioned principles if it is to be efficient.

The Organisation and Development of the Second Language Mental Lexicon

L2 vocabulary development is also influenced by the organisation of the mental lexicon. The mental lexicon is ‘a memory system in which a vast number of words, accumulated in the course of time, has been stored’ (Hulstijn, 2000: 210). This system is seen to be organised and structured, because it is the only possible explanation for the fact that people can, at an astonishing rate, in a vast quantity of lexical items stored in the memory, recognise and retrieve the lexical item they need to express what they want. Human memory is very flexible and it can ‘process’ a large quantity of data, but only if it is systematically organised.

It is not easy to gather the data on the organisation and functioning of the mental lexicon. Some answers can be found by studying various speakers’ behaviour, such as tip-of-the-tongue phenomena, slips of the tongue and problems manifested by people who suffer from aphasia (Aitchison, 1990) or by analysing communication strategies used by L2 learners (Ridley, 1997). It is understandable, therefore, that many conclusions about the development and organisation of the mental lexicon are based on assumptions. Nevertheless, such studies have yielded results that significantly contribute to modelling the mental lexicon. Research on the L2 mental lexicon is further complicated by the presence of at least one more language. In addition to the organisation and development of the L2 mental lexicon, these studies deal with similarities and differences between the L1 and L2 mental lexicon and the degree of separation or integration of the two systems.

The term mental lexicon or mental dictionary is reminiscent of a traditional printed book dictionary only because it refers to a collection of lexical items. But, a printed dictionary is necessarily static, limited and prone to become outdated, whilst the mental lexicon encompasses a multitude of features suggesting a more complex yet far more efficient organisation. Aitchison (1990) lists additional differences between the mental lexicon and a book dictionary.
The mental lexicon can partially be organised according to initial sounds, but the order will not be strictly alphabetical as in book dictionaries. Other features of a lexical item’s structure, such as suffixes or stress, may also play a role in its placement in the mind. Furthermore, words in the mind seem to be connected into semantic networks, and the strongest links, as shown by association tests, are coordination and collocation. Moreover, the mental lexicon is characterised by fluidity and flexibility (Aitchison, 1990: 12). These characteristics are reflected in the unlimited human creativity in applying the knowledge in new ways and interpreting new situations in light of previous knowledge. But the amount and the range of information on every single ‘entry’ provided by the mental lexicon (such as information on collocation, meanings in relation to other words, frequency of usage, syntactic patterns a word may slot into, etc.) must be held as the greatest difference between the mental lexicon and the dictionary-book. Also, the mental lexicon offers multiple access to information; processes of word recognition and word production activate more words than necessary, only to make a final selection and suppress the ‘unnecessary’ information.

On the basis of the above considerations it is assumed that the place of a word in the mental lexicon should be represented by a three-dimensional model ‘with phonological nets crossing orthographic ones and criss-crossing semantic and encyclopaedic nets’ (McCarthy, 1994: 41). However, the links between individual nets are very fragile and can ‘break’. This is manifested in such cases when a speaker cannot produce the sound of the word although he/she has produced it before, knows that it exists and what it means, and can even give many descriptive details about it. This situation, in addition to the fact that a speaker of a language can understand novel forms, is often taken as empirical evidence supporting the existence of the dichotomy between receptive and productive vocabulary.6 Speakers of a language intuitively support this view and assume that receptive vocabulary is much larger than productive vocabulary, and that receptive vocabulary precedes productive vocabulary. The current literature, however, does not offer an adequate definition of the two notions, and the distinction has been criticised as being too simplistic in that it implies the idea of the mental lexicon as a static unit consisting of two separate compartments. Melka (1997) has concluded from the review of a number of studies that there are two directions in understanding the dichotomy between receptive and productive vocabulary. On the one hand, reception is thought to precede production and the distance between the two asymmetric notions is fairly large. Moreover, reception and production are two different processes dependent on different mental processes. An opposing view is that reception may precede production, but the gap between the two notions is not that significant and it varies and shifts. The above-mentioned contrasting views of reception and production have led to different estimates of receptive and productive vocabularies (cf. Melka, 1997). One group of researchers estimates the receptive vocabulary to be double the size of productive vocabulary, another that the distance between reception and production, although constantly present, diminishes with the development of knowledge, and a third group does not find the gap that significant at all. Although it is impossible to reach a definite conclusion, primarily because of different ways of testing and interpreting results, it is plausible to suppose that the ‘truth may lie between the second and the third possibilities’, says Melka (1997: 93). A further suggestion put forward by the same scholar is that the notions of receptive and productive vocabularies should be replaced by other notions, such as familiarity and degrees or continuum of knowledge. Namely, there are different stages of familiarity with a lexical item that enables one to recognise it when its production is still impossible. These stages bring us closer to the border of reception and production and to the point where reception finishes and production starts, if only partially. The mental lexicon is seen as a ‘mixed system which has found a workable compromise between the requirements of production and those of comprehension’ (Aitchison, 1990: 193).7

Although research on human capacity to acquire, store and use vocabulary has been conducted to a large extent on L1, these findings may be a source of useful information for more efficient learning and teaching of second or foreign languages as well. This is not to suggest – as McCarthy (1994) points out – that the processes of storing, memorising and recalling are identical in L1 and L2. Similarities exist but may have different manifestations. An example of this is the fact that the dynamic characteristic of the mental lexicon becomes more prominent in L2 learning; not only are new lexical items constantly added, but the information on existing ones is expanded and completed. Dynamism is also reflected in the concept of spreading activation (Hulstijn, 2000). For example, two lexical items can be stored without any interconnection. After that, they can be linked via some formal or semantic features, with other types of links being added later on. These links are characterised by different degrees of strength, which also varies; it can increase or diminish in the course of time. Moreover, memory strategies, such as the Keyword Method, facilitate the formation of such links.
The debate on similarities and differences between L1 lexicon and L2 lexicon(s) can be summarised into four basic hypotheses as follows (Hulstijn, 2000):

1. the extended system hypothesis: L1 words and L2 words are stored in a single store;
2. the tripartite hypothesis: words are stored in separate stores;
3. the dual system hypothesis: similar words (e.g. cognates) are stored in a common store, and language-specific words are stored in separate stores;
4. the subset hypothesis: L1 words and L2 words are stored in two relatively separated subsets, but both subsets are stored in a common store.

It is claimed by many that for L2 learners networks of semantic associations are not the most frequent way of word association as is the case in the native language: more often L2 learners connect words on the basis of their phonological similarity. Meara (1984) concludes on the basis of his research that techniques for word storage and handling may depend on the language, i.e. that the L2 mental lexicon is considerably different from that of the native speaker. Consequently, says Meara, learners use strategies inadequate for the given language, which can account for some difficulties in L2 learning. Swan’s approach to this issue is somewhat different. He claims that one should not conclude that there are ‘...generalisable, significant qualitative differences between the L2 mental lexicon and the L1 mental lexicon for all language learners’ (Swan, 1997: 175). The above-mentioned difficulties in L2 learning may as well be attributed to other factors. According to Singleton (1999), the conclusion that the activation of the mental lexicon is primarily phonologically conditioned has been made on the basis of the nature of the research design. The implication is that in L2 learning attending to form precedes attending to meaning. There is, however, a body of research findings suggesting other possible explanations. For example, results of the study conducted by O’Gorman (1996) supply evidence in favour of semantic links with prompts. Worth noting in this context is the finding of Henning (1973) who explored the parameters of lexical coding in memory. Focusing his research on two parameters, of semantic and that of acoustic grouping, Henning attempted to answer the question whether L2 learners code vocabulary in the memory in phonological or semantic clusters, and whether there is a correlation between learners’ proficiency and the type of coding. The results indicated that learners do code vocabulary in acoustic and semantic clusters. Namely, low-proficiency learners registered vocabulary by phonological rather than semantic similarities, whereas high-proficiency learners demonstrated the reverse: they relied more on meaning than sound. One can therefore assume that formal processing is equally important in L1 and L2 mental lexicons, particularly in the initial stages of learning, whilst semantic processing takes over in the advanced stages of linguistic development. The Trinity College Dublin Modern Languages Research Project (cf. Ridley, 1997; Singleton, 1999) has shown concretely that lexical interconnections and operational procedures were semantically-pragmatic in nature (at least in the tests used in the studies). Moreover, their findings seem to refute the idea that L1 and L2 mental lexicons are separate entities, but do not suggest their total integration either. Singleton (1999) assumes that the relationship between the two lexicons corresponds to the above-mentioned subset hypothesis: although stored separately, the L1 and L2 lexicons communicate either via direct links between L1 and L2 lexical nodes, or via a common conceptual store (or both). What is implied in the above discussion – and what is of immediate relevance for the subject of this book – is that the lexico-semantical relationship, i.e. the relationship between an L1 and an L2 word in the mental lexicon, is likely to vary from individual to individual. What this suggests is that organisational resources (such as L1 and L2 connections) available in the mental lexicon are used by every individual in a different way, depending on the way the word has been acquired, on the level of the word’s acquisition, and on the perception of formal and/or semantic similarity between the L1 and L2 word. Obviously, a balance must be struck between the aspiration to determine universalities in L2 acquisition and the fact that there are individual differences influencing all aspects of L2 learning and teaching.

A number of studies, reported in Gass (1989), seem to associate the organisation of the mental lexicon with the concept of prototypes. The theory of lexical prototypes reflects the idea that some concepts are central and more prominent, or ‘best-fit members of a conceptual category’ (Gass, 1989: 101). Other members of the given conceptual category are peripheral. For example, given the field of ‘vehicle’, most native speakers would mention ‘car’ as the prototypical member of the category, followed by items such as ‘boat, scooter, tricycle, horse, skis’ (McCarthy, 1994). Gass (1989) also points to a significant body of research showing the prototypes to be the foundation for L2 vocabulary development: learners more readily learn the prototypical meanings of lexical items, whereas non-prototypical meanings are learnt later.
Furthermore, errors often occur in the area of non-prototypicality, i.e. where L1 meanings do not overlap with L2 meanings.

**The Source of Vocabulary (Exposure to Linguistic Input)**

Research on L1 vocabulary acquisition has shown that the primary source of vocabulary for native speakers is a wide range of contexts that enable them to experiment and to confirm, expand or narrow down the lexical nets (Carter, 1992). Naturally, this process is not based on explicit formal instruction, but on incidental learning from large amounts of language input. When it comes to learning an L2, however, the answer is not that simple. Although some research results have confirmed the assumption that L2 vocabulary can also be acquired through exposure to various contexts (such as reading, see Sternberg, 1987), these conclusions cannot be interpreted without taking into consideration the factors that directly affect the efficiency of the process. Clearly, the role of the context in initial stages of vocabulary learning is relatively negligible. The success of contextual inferencing will depend on the learner’s proficiency level, i.e. on the various categories of knowledge (linguistic knowledge, world knowledge and strategic knowledge) that the learner needs to apply (Nagy, 1997).

Beginners do not have enough linguistic knowledge, so they have to make deliberate attempts at learning lexical items often connected to a synonym, definition, translation into L1, or an illustration. A significant amount of vocabulary can be successfully learnt through the often criticised rote learning (Carter, 1992). Still, vocabulary acquisition is not merely a mental collection of individual lexical items with a 1:1 correspondence to L1 lexical items. As has already been mentioned, familiarity with a lexical item includes more than knowing its semantic aspect. Vocabulary learning is the acquisition of memorised sequences of lexical items that serve as a pattern on the basis of which the learner creates new sequences. The main task is to discover the patterns in the language, starting from phonological categories, phonotactic sequences (i.e. allowable arrangement of phonemes), and morphemes, to collocations and lexical phrases, and their analysis into meaningful units or chunks (which are units of memory organisation). This implies that language production is based on assembling ready-made chunks suitable for particular situations, and that language comprehension relies on the ability to predict the pattern that will appear in a given situation. Although it might appear illogical at first sight, it is the ability to use conventionalised and predictable language sequences that brings an L2 learner closer to the native speaker. Namely, ‘native speakers do not exercise the creative potential of syntactic rules of a generative grammar’ (Ellis, 1997: 129), it is the use of idiomatic, frequent and familiar units that reflects a native-like competence. Therefore, the task of the L2 learner is to acquire lexical sequences (collocations, phrases and idioms), as well as sequences within lexical units. A precondition for an automatic analysis of such information is sufficient exposure to language input or explicit teaching and awareness raising (Ellis, 1997).

An important source of vocabulary in L2 learning is a wide range of contexts. Learners can learn lexical items if they are exposed to sufficient amounts of comprehensible input. Nagy (1997) claims that an average learner can learn to recognise up to 1000 words a year from written materials. As has already been stated, the role of the context in initial stages of learning is limited, but its significance grows as the learner’s knowledge expands. An ideal source for learning L2 vocabulary from context is reading (Ellis, 1997). Low-frequency lexical items (the ones that are characteristic of individuals with a wide vocabulary) occur more frequently in written than in spoken language. Besides, the learner has more time at his or her disposal for analysis, hypothesis testing and inferencing if working on a written text. Context-based inferencing contributes to the knowledge of morphological rules, collocations, additional meanings (for it is the context that determines the meaning of a lexical unit), etc. However, mere exposure during reading does not guarantee a rapid vocabulary growth. In order to accelerate the process, the learner must have critical strategic knowledge that will enable him or her to turn the incidental learning into an explicit learning process.

**Individual Learner Differences**

Vocabulary learning strategies play an important role in vocabulary learning. Their significance is reflected practically in all the factors discussed so far. Vocabulary learning strategies activate explicit learning that entails many aspects, such as making conscious efforts to notice new lexical items, selective attending, context-based inferencing and storing into long-term memory (Ellis, 1994). However, the influence of other factors that account for individual learner differences, such as the affective ones (motivation, attitudes towards vocabulary learning, fear of failure) or the language learning aptitude, should not be neglected. This will be addressed in more detail in Chapter 2.
The Role of the Teacher and Vocabulary Teaching Strategies

Finally, in the discussion of the factors influencing vocabulary learning, we come to the question that is of great significance in the framework of formal L2 instruction, namely that of the teacher and vocabulary teaching strategies. A look at the teaching practices in the past suggests that the status of formal vocabulary teaching has always been influenced by current trends in linguistic and psycholinguistic research. The naturalistic approach to language teaching, for example, favoured implicit incidental vocabulary learning. The emphasis was on guessing the meaning from context and using monolingual dictionaries, whereas defining and translating lexical items were to be avoided. However, a closer look at the effects of exposure to a variety of contexts – generally considered as extremely important in vocabulary acquisition – revealed that inferring word meaning is no easy matter. A precondition for successful inferencing is a sufficient level of knowledge and inference skills. However, even if this precondition is met, inferring word meaning may still result in incorrect guessing, and such errors may be difficult to rectify. Although having inference skills may contribute to vocabulary growth, rich vocabulary is not necessarily a consequence of having inference skills. All in all, implicit incidental learning seems to be a slow and inefficient process which does not necessarily imply long-term retention (Sökmen, 1997).

It has become apparent, on the basis of the above-mentioned arguments, to all subjects involved in the processes of language teaching and learning, that vocabulary acquisition cannot rely on implicit incidental learning but needs to be controlled. The advocates of this view – not disputing the significance of acquiring grammatical – syntactical structures or the role of the context – have begun to insist on more intensive, explicit vocabulary teaching from the very beginning of any language learning programme (Judd, 1978). Explicit vocabulary teaching would ensure that lexical development in the target language follows a systematic and logical path, thus avoiding uncontrolled accumulation of sporadic lexical items. However, the contribution and effect of explicit vocabulary teaching on vocabulary acquisition is still under dispute. Learners do not learn everything that teachers teach. Lewis (2000b) describes teaching as being linear and systematic, but it is wrong to conceive of learning as being the same. The contemporary approach to vocabulary teaching, one concludes, recognises the importance of both implicit and explicit teaching, taking into account the results of scientific research, with the aim to increase the efficiency of teaching and learning of target language vocabulary.10

In vocabulary teaching, teachers can apply a host of strategies and activities.11 According to Hatch and Brown (2000: 401), teaching strategies refer to everything teachers do or should do in order to help their learners learn. Which teaching strategy a teacher will employ depends on the time available, the content (i.e. the component of knowledge learners are to acquire), as well as on its value for the learner (i.e. which learning strategy he or she can learn or apply). Teaching strategies are also dependent on specific principles and in correlation with other factors influencing vocabulary acquisition discussed earlier in this chapter. A distinction is made between planned and unplanned vocabulary teaching strategies (Seal, 1991). Unplanned teaching strategies relate to teachers’ spontaneous reactions with the aim to help learners when the need arises, in which case teachers improvise. Seal suggests The three C’s, a three-step procedure where the teacher (1) conveys the meaning, (2) checks meaning by, for example, asking questions and (3) consolidates the meaning in learners’ memory by, for example, relating it to the context or personal experience.

Planned vocabulary teaching refers to deliberate, explicit, clearly defined and directed vocabulary teaching. It encompasses the use of teaching strategies, i.e. ways in which teachers introduce and present the meaning and form of new lexical items, encourage learners to review and practice, i.e. recycle what is known, and monitor and evaluate the level of acquisition of various components of lexical knowledge. Such teaching presupposes dedicating a certain amount of time to dealing with vocabulary, involving ‘exploration’ of the different aspects of lexical knowledge, as well as inducing learners to actively process lexical items (cf. Nation, 2001). A review of the literature (Hatch & Brown, 2000; Nation, 2001; Sökmen, 1997; Thornbury, 2002) has yielded a comprehensive list of teaching strategies that fall into two major categories: (1) presentation of meaning and form of new lexical items and (2) review and consolidation (recycling and practising) of presented lexical items. In the following subsections we turn to a more detailed exploration of each of the two categories.

Presentation of new lexical items

Under the presentation of new lexical items one understands the teaching of preselected lexical items in the planned stage of a lesson. Learners are mostly passive recipients of linguistic facts, although some
procedures may involve learners’ active participation. The teacher presents both the meaning and form of the lexical item, which may occur in either order. The meaning of lexical items can be presented verbally or non-verbally. The most frequently mentioned ways of presentation are the following:

- **Connecting an L2 item with its equivalent in L1.** This teaching strategy is mostly used when checking comprehension, but can also be used when it is necessary to point out the similarities or differences between L2 and L1, especially when these are likely to cause errors (e.g. false pairs, connotations or sociolinguistic rules affecting word choice, etc.).

- **Defining the meaning.** Definitions can take many forms: synonym, antonym, analytic definition (X is a Y which), taxonomic definition (Autumn is a season), giving examples (Furniture – something like a chair, sofa, etc.) or the reverse, giving the superordinate term (A rose is a flower), describing the function (Pen – use it to write), grammatical definition (worse – comparison of bad), definition by connection (danger – lives have not been protected), definition by classification (Family – a group of people), and the so-called full definition, the one resembling word definitions in monolingual dictionaries. Definitions should be simple and clear and supplemented with other procedures with the view to lexical development and long-term retention of lexical items.

- **Presentation through context.** The teacher creates a situation (a sort of a scenario) in which he or she clearly contextualises the lexical item. The context can be given in one sentence only, but the teacher can also give several sentences in which the word appears. Learners then guess the meaning on the basis of the cumulative effect of the sentences.

- **Directly connecting the meaning to real objects or phenomena.** This strategy is widely used with beginners or young learners. It includes procedures such as demonstration, realia and visual aids, which at the same time serve as cues for remembering lexical items. These actions are even more effective if supplemented by, for example, a verbal definition, not only because it reduces the possibility of incorrect guessing, but also because it results in ‘dual encoding’, i.e. linguistic and visual storing of information (Nation, 2001).

- **Active involvement of learners in presentation.** The teacher encourages learners to discover the word’s meaning from its parts or by elicitation: for example, the teacher shows a picture and invites learners to supply a word, or the teacher gives the word but invites learners to give its definition or synonym. Worth adding here is personalisation, because it enhances memory, as has already been noted earlier in this chapter.

Furthermore, in order to establish a connection between meaning and form learners need to be stimulated to attend to the orthographic and phonological form of the word as well. The following are some of the ways in which the form can be presented:

- **Oral drill.** The teacher pronounces the word several times, learners listen. Learners repeat the word aloud (chorally or individually), and then learners individually pronounce the word to themselves (in low tones).

- **Phonetic transcription and graphic presentation** (of the stressed syllable, for example).

- **Presentation of the graphic form** (by writing the word on the board, underlining it or highlighting it in the text).

- **Encouraging learners to try and spell the word.**

### Review and consolidation of lexical items

The second category of vocabulary teaching strategies refers to those procedures whose aim is to get learners to review lexical items, for this review is necessary, as has been stated on several occasions so far, to consolidate them in long-term memory. According to the principle labelled as ‘expanded rehearsal’ (see Schmitt, 2000), it is necessary to review the material immediately after initial learning and then at gradually increasing intervals (e.g. 5–10 minutes after learning, then 24 hours later, a week later, a month later and finally 6 months later). The teacher’s task is to provide learners with opportunities for practising and connecting words in various ways and to stimulate them to retrieve words from memory and use them for all language skills. Principles of memorising words, discussed in one of the above sections, may serve as guidelines in planning and selecting tasks and activities at this stage of vocabulary teaching. The activities most frequently mentioned in the literature are the following:

- **Mechanical repetition of words.** Although deep level processing is more effective in the long run, loud repetition may also contribute to memorisation of a word.

- **Copying words.** If accompanied, for example, by loud repetition or visualisation of its meaning, copying can aid memory. If learners
copy words onto word cards, other possibilities of revision activities present themselves.

- **Word manipulation.** This includes examples of tasks such as matching words and their definitions, grouping words, finding the odd one out, etc.

- **Integrating new words with the already known.** Activating linguistic pre-knowledge and knowledge of the world creates a link between new words and already known words. In the process of creating the links, new words become more meaningful and organised, and thus easier to learn. This can be achieved in various ways, as for example by semantic elaboration.

- **Semantic elaboration.** It facilitates the creation of links and semantic networks, as well as deep level of processing. According to Sökmén (1997), the following are procedures based on semantic elaboration: semantic feature analysis (e.g. a componential analysis); semantic mapping, which also serves as a visual reminder of links between words; ordering or classifying words, which helps learners to organise and distinguish differences in meaning between words; pictorial schemata, such as grids or diagrams, which emphasise distinctive features and require learners to deeply process words by organising words and making their meanings visual and concrete. These techniques are also suitable for presenting and revising collocations.

- **Creating mental images** by drawing diagrams, illustrations of meaning etc.

- **Personalisation.** Personalisation makes the learning material psychologically ‘real’. It can be achieved by giving personal examples, i.e. by relating a word to real events or personal experience, etc.

- **Tasks for word identification.** The aim of these tasks is to get learners to pay attention to specific lexical items and to recognise their form. Concrete examples are finding words in a text, working on a ‘word snake’ puzzle, solving anagrams, etc.

- **Tasks for recalling words from memory.** Activating knowledge, i.e. an attempt to recall a word’s meaning with the help of the given form or vice versa, by recalling the form on the basis of given meaning, and thereby enhancing memory. Therefore, the teacher should deliberately encourage recall at spaced intervals. This task may be realised through a number of activities: acting the word out, replacing the word with its synonym or antonym, giving a definition, translation, cross-word puzzles, etc. Also, reading and listening activities stimulate word identification.

- **Tasks for expansion of lexical knowledge.** These are concerned with providing additional information on lexical items in order to cover as many components of lexical knowledge as possible. The activities that seem worthwhile in this respect are analysis of word formation, analysis of grammar categories and forms, highlighting collocations, etc.

- **Productive use of words.** By using words in a meaningful context learners create mental links. Activities that promote productive use of vocabulary include the following: completing sentences or texts, with words offered or not, using words in sentences, conversations, stories, etc.; various games (e.g. Hangman, I spy, Bingo). All speaking and writing activities by definition include productive use of vocabulary.

- **Multiple encounters with the word.** All above-listed activities can offer learners opportunities to encounter words many times and in different contexts. A variety of tasks and multiple encounters of a word ensure a more systematic coverage of various aspects of lexical knowledge and enable learners to build up an adequate lexical knowledge and consolidate it in long-term memory.

When planning and teaching a vocabulary lesson, in addition to the tasks and objectives discussed above, one must take into consideration general teaching strategies, principles of planning and organising a lesson, and other relevant components of the teaching process. Not unlike in other areas of L2 teaching, in vocabulary teaching the teacher continuously monitors comprehension and production, corrects errors, directs, evaluates, tests, encourages and rewards his or her learners. It is the teacher’s mission to motivate learners and develop their interest in expanding their lexical knowledge. Related to this is the reason why teachers should make every effort to ensure a continuous and systematic revision and assessment in vocabulary and to insist on lexical richness. This awareness of the need for constant lexical development is especially important at advanced levels in order to prevent learners from using the avoidance strategy and from opting for semantic extension (Lauffer, 1991). Formal L2 vocabulary instruction should be based on a variety of teaching techniques and activities in order to cater for individual learning styles and to break the classroom routines. It is of extreme importance to encourage learners’ active participation in vocabulary learning and cooperation with their peers and the teacher. Also, learners need to be supported in their own discovery of lexical items, in finding ways of expanding their lexical knowledge (by, for example, giving them...
confidence in using a dictionary), and in a systematic and continuous expansion of vocabulary outside the classroom as well (by emphasising the need for taking notes, recycling, the importance of exposure to language input through reading or the media, etc.). It is in this latter context that vocabulary learning strategies become prominent. Although vocabulary learning strategies are embedded in practically all objectives and principles of L2 vocabulary teaching, it is recommended – on the basis of research findings – that elements of explicit strategy training be included. At any rate, learners need to be encouraged to discover new and develop the existing vocabulary learning strategies in order to be able to deal with lexical items on their own and outside the classroom.

**Conclusion**

To conclude, one has to admit that achieving the goals of L2 vocabulary instruction is no easy matter. Even a well planned vocabulary lesson based on contemporary pedagogical principles cannot guarantee that learners will acquire the vocabulary that is taught. Learning vocabulary through formal instruction is a complex process influenced by a number of factors: the teacher’s approach to vocabulary teaching (i.e. vocabulary teaching strategies) and his or her understanding of the key notions in vocabulary acquisition, the effort invested by learners in vocabulary learning (i.e. vocabulary learning strategies) as well as their readiness to take responsibility for their own learning, and, finally, the interaction of all the factors discussed in this chapter.

**Notes**

1. For more on corpora see McCarthy and Carter (1997).
2. Laufer (1997) lists 10 different categories of synforms, each representing a different type of similarity between the target lexical item and the error produced by L2 learners.
4. see Chapter 3.
5. For an extensive review of the most frequently quoted models of the L1 mental lexicon, see Singleton (1999).
6. In the literature there is a host of different terms used, not necessarily synonymously, to refer to receptive and productive vocabulary, the most frequent being the following: active versus passive; comprehension versus production; understanding versus speaking, recognitional vocabulary versus actual or possible use.
7. For the summary of the organisation requirements of the mental lexicon see Aitchison (1990: 198–199).