

PEK

for English Language Teachers

英语教师专业素养丛书

丛书主编

顾永琦

Peter Yongqi Gu

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Guoxing Yu

Teaching and Learning Vocabulary in EFL

外语词汇教学的方法

Paul Nation (新西兰) Peter Yongqi Gu (新西兰) 著

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Series Editors' Preface

Pedagogical Content Knowledge for English Language Teachers is a series that aims to provide a comprehensive knowledge base for busy classroom teachers. As the name suggests, the series covers issues related to the nature of language competence and how this competence is best taught, learned and assessed. It is hoped that, armed with this broad range of pedagogical content knowledge, ESL/EFL teachers will be able to meaningfully interpret the targets of teaching, learning and assessment, diagnose and solve problems in the teaching process, and grow professionally in the meantime.

The series includes the following seven broad areas:

- 1) Principles of language teaching
- 2) Curriculum and targets of teaching
- 3) Teaching language skills and knowledge
- 4) Teaching methodology and teaching tools
- 5) Testing and assessment
- 6) Language learning
- 7) Teacher as researcher

Unlike other books that aim for a similar knowledge base, this series attempts to be a digest version that bridges between theories and practice. It also aims to offer easy reading and inexpensive texts that teachers will find easily accessible and applicable. To achieve these aims, all books in this series are written in simple English or Chinese. Each book in this series is authored by an acknowledged authority on the topic. It includes a brief introduction to theories plus a brief review of major research findings. The main text, however, focuses on how the theories and research can be applied to the ESL/EFL classroom.

In addition to the print copy for each book, an e-book version will also be

available. Short videoclips may also be made available at the publisher's website where some authors introduce their books.

Besides English language teachers who teach ESL/EFL at secondary and primary schools, target readership of this series also includes trainee teachers on short and intensive training programmes. Preservice teachers who are studying for their MA TESOL/Applied Linguistics and Year 3/4 English majors who aspire to be English language teachers should find the series very useful as well.

In this book, *Teaching and Learning Vocabulary in EFL*, Paul Nation and Peter Gu draw on their extensive research experience and present to readers concise and practical guidance on three interrelated topics that are of interest to teachers – what vocabulary learners need to know, how vocabulary should be taught and learned, and how learners' vocabulary knowledge should be assessed. With prereading questions, examples of tasks, and suggestions for further readings in each chapter, teachers will find their guidance informative, practical and easy to implement in teaching and assessing vocabulary. The questions listed in the section "What a teacher should do after reading this chapter?" as well as those highlighted in Chapter 9 provide readers an important checklist for action. This is a research-based checklist for teachers' professional development, for reflecting on their own practice in teaching, and most importantly for engaging their learners in the activities recommended.

Peter Yongqi Gu and Guoxing Yu
Series Editors

Acknowledgments

- Nation, P. (2019) Fast Track Book 1. Sachse, Texas: Seed Learning.
Nation, P. (2019) Fast Track Book 2. Sachse, Texas: Seed Learning.

TO THE READER

Who is this book for?

This book is aimed at teachers of English as a foreign language, particularly those teaching beginners and intermediate level learners of English. It is also useful to EFL teachers who use a theme or topic-based approach to their teaching of English, or who teach English through the curriculum.

What is this book about?

This book looks at the teaching and learning of vocabulary for learners of English as a foreign language.

This book deals with three major topics:

- the vocabulary learners need to know
- how this vocabulary should be learned
- how learners' vocabulary knowledge can be assessed.

There has been a long history of research and discussion on the nature of vocabulary and vocabulary learning and, over the last thirty years, there has also been enormous growth in research into the teaching and learning of vocabulary. This book draws on this research and interprets it for teachers and learners.

An overview of the book

Chapter 1 looks at the five levels of vocabulary and the roles that vocabulary can play in understanding texts.

Chapter 2 looks at how vocabulary is learned and examines the conditions of repetition and quality of processing. It provides a range of suggestions for making sure these important conditions occur in a course.

Chapter 3 explores a framework called "the four strands". Using this framework ensures that learners get a proper balance of learning

opportunities. This chapter also looks at principles important for the design of the vocabulary component of a language course. These principles are explained further in the following chapters as they are applied to learning the four skills of listening, speaking, reading, and writing.

Chapters 4 and 5 look at how students can learn vocabulary through the receptive skills of listening and reading, and the productive skills of reading and writing. These chapters use a framework of tasks which involves three major kinds of learning tasks:

- guided tasks, where the teacher has designed activities that support the learners while they do the tasks
- shared tasks, where learners can do the tasks because of the help of others
- experience tasks, where learners do tasks that are well within their previous experience or that have been brought within their experience.

Chapter 6 discusses vocabulary learning strategies and their role in vocabulary learning.

Chapter 7 looks at the assessment of vocabulary knowledge, both for the measurement of vocabulary size and for measuring progress in learning vocabulary.

Chapter 8 looks at how learners and teachers can use computer programs and electronic collections of texts to gain information about vocabulary. The computer tools now available are very powerful resources for language teachers, and language teachers should know how to use them. Most of these tools can also be used by learners and there is increasing research on the effect of such learning activities.

Chapter 9 responds to ten commonly asked questions about vocabulary. Some of these questions draw together or highlight issues raised in this book and a few focus on topics not covered earlier.

How to use the book

The chapters in this book are designed to be read in sequence. However, you may want to focus on a specific chapter because it relates to a segment of your training course or to an issue of particular interest to you. For this

reason, each chapter has been designed as a self-contained unit with cross-references provided to other relevant chapters.

* * *

Prereading questions

Each chapter includes several prereading questions which provide a focus for your reading. It is useful to spend some time thinking about these questions and, if possible, make some notes in response.

* * *

Tasks within chapters

Within a chapter you will find a series of tasks. You may be asked to think about your own views on something before you read on, or to read a particular text and respond to it, or to reflect on issues in relation to your own students. Although you may be tempted to skip the tasks, you will find that doing them helps clarify ideas and, we hope, makes your reading more enjoyable.

* * *

Summaries

All chapters, except Chapter 9, conclude with a brief summary of the main topics and ideas. We recommend that you read the summary as you complete a chapter and consider what you have learned from the chapter.

* * *

What should a teacher do after reading this chapter?

This book is meant to have very practical messages for teachers and to make sure that these practical messages are clear, each chapter ends with direct suggestions about what teachers should do to include the ideas in the chapter in their teaching. Sometimes these suggestions focus on particular teaching techniques. Sometimes these suggestions focus on course planning (The number one job of a teacher is to plan). Sometimes the suggestions include doing a little more reading to increase understanding but this is always followed by a practical application in a

course.

Keep looking at Paul Nation's website. This has many free resources for teachers and in 2019 there will be a link to a website containing free short videos of the most useful teaching techniques. They are all described in this book, but soon you will also be able to see them in action.

To get the most value out of this book, apply the ideas in each chapter to your teaching.

* * *

References and Further reading

References are provided at the end of each chapter and after some of the questions in Chapter 9. As you are using the book you may come across a reference that is especially relevant to your work. Make a note of it so that you can retrieve it when you have access to a library or catalogue. All of Paul Nation's articles are available free under the heading Publications on his website. As this resource is intended as an introductory text, we recommend that you follow the suggestions for further reading in the areas that are of special interest to you.

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CHAPTER ONE

VOCABULARY LEVELS AND KNOWING A WORD

PREREADING QUESTIONS

Think about a recent lesson.

- What vocabulary caused difficulty for the learners?
- What did you do about the vocabulary?
- What principles guided you when deciding what to do?

Introduction

In this chapter, we look at the five major kinds of vocabulary that learners need to be aware of, and what is involved in knowing a word.

The five levels of vocabulary

It is useful to distinguish five levels of vocabulary. Each requires different kinds of attention at different times from the teacher. Three levels are based on frequency of occurrence of vocabulary, that is, how often words occur in normal use. The three frequency levels are:

- high frequency vocabulary
- mid-frequency vocabulary
- low frequency vocabulary.

There are also two levels based on where the words occur. The first of these is the Academic Word List which includes words that occur often in a wide range of academic texts. The second level includes technical words. These are words that occur often in a particular subject area. For example, there is a technical vocabulary of economics including words like *price, cost, demand, fiscal, margin*. These two levels cut across the frequency levels. This means that an academic or technical word may also be a high frequency word, mid-frequency word or low frequency word.

* High frequency vocabulary

High frequency vocabulary includes the very common wide range of words of the language. It consists of around 3000 headwords of which around 175 are function words such as articles, prepositions, conjunctions, pronouns, numbers, auxiliary verbs and adverbial

particles. The remaining 2825 or so are content words: nouns, verbs, adjectives and adverbs. These high frequency words are needed in all uses of the language in speaking, writing, listening and reading, and in all kinds of formal subject areas and informal uses of the language.

Typically, high frequency words make up from 85% to 95% of the words on any page in a text. The less formal the use of the language, the greater the proportion of high frequency words.

The unmarked words in Figure 1.1 are high frequency words. The words in bold are academic words, the underlined words are technical words, the words in italics are mid-frequency words, and the few words in capitals are low frequency words. Some words belong to more than one vocabulary level. For example, *disabled* is both a mid-frequency and a technical word.

Figure 1.1 A text showing the five levels of vocabulary

Private hospitals had very few group outings for residents, the only one mentioned being a Christmas shopping expedition organised by the local *Lions* club, which one resident in the survey **participated** in. Another two people were taken out occasionally by staff on an **individual** basis. There were no organised outings for residents living in acute wards, but in all hospitals there was someone prepared to **assist** people to make **individual** trips for **specific** purposes. Sometimes this was as part of the staff member's duties – when a resident needed to visit a *dentist* or OPTOMETRIST for example. **Similarly** the person who was planning to live at home with a friend had been **accompanied** there by a staff member several times to **assess** the situation and arrange for **modifications** to be made. However, other outings were arranged on a purely personal level in the staff's own time.

(to be continued)

(continued)

Holidays

Holidays away from the hospital were rare or *non-existent luxuries*. Only 15 people had spent more than a day away from hospital since their last admission and three of these had been holiday **transfers** to other hospitals. One person went to a different hospital every year for a three-week break, the other two had only been once or twice to be near **adult** children who lived in different parts of the country.

Five people had attended the yearly week-long camps organised by the PARAPLEGIC and **physically disabled** association at *Otaki* and enjoyed it **enormously**, but only one went regularly. Unfortunately, these camps became too costly for the association and have now been *discontinued*. The remaining seven residents had all been to stay with relatives or friends, but none went regularly or often and two in group b had now become so *forgetful* that it was unlikely that there would be any more *overnight* visits.

Even for the fully aware home visits could be highly problematical. One resident, for example, was planning to attend an important family event which would involve at least one overnight stay. She was independently mobile in a wheelchair but dependent on others for most personal care, and the outing **consequently** took on the **proportions** of a **major expedition**. This person had had the opportunity to stay with relatives before but had always **declined** because of concern about the amount of care she **required** and *embarrassment* about **adult** children providing such *intimate* care, including toileting. There was therefore **considerable apprehension** about the outing, but also a strong desire for it to be successful as it would then *boost* her confidence to accept other invitations.

(Wellington Written Corpus: Text J13)

Unmarked = high frequency, Italics = mid-frequency, CAPS = low frequency,
Bold = academic, Underlined = technical

Task 1.1

Look at the high frequency words in Figure 1.1. Find six function words. Find the following content words: a noun, an adjective, a verb and an adverb. The text is 424

words long. Estimate how much of the text is made up of function words. If you knew only the high frequency words (the ones not marked in the text), could you understand the text?

There are several lists of high frequency words. One of the oldest and most widely used lists is A general service list of English words by Michael West (1953) (available on Paul Nation's website). This contains around 2000 words. The more recent BNC/COCA word lists consist of 1000 word lists up to the 25th 1000 (available from Paul Nation's website). See Dang and Webb (2016) for an evaluation of some lists of the most useful 2000 words. Other lists differ according to their purpose and the collection of texts (the corpus) on which they were based. There is usually an overlap of around 80% to 90% between different high frequency word lists.

The high frequency words are the basic essential words of the language. Without knowledge of these words, it is not possible to make use of the language. Learning the high frequency words of the language is a very important first step for learners. This first step takes learners of English as a foreign language several years.

* **Mid-frequency vocabulary**

The mid-frequency vocabulary consists of 6000 words. Mid-frequency vocabulary can make up around 9% of the words in a text. If learners know the high frequency vocabulary (3000 words) and the mid-frequency vocabulary (another 6000 words), they will be familiar with around 98% of the words in a text. Native speakers of English who are just finishing primary school at the age of 12 years old know all of the high frequency words and most of the mid-frequency words. To study at university, a learner of English as a foreign language would need a total vocabulary of around 5000–

6000 words to do undergraduate study, and around 9000 words to do doctoral study. Mid-frequency words are in italics in Figure 1.1.

* **Low frequency vocabulary**

Beyond the 9000 high and mid-frequency words, the rest of the vocabulary of English is low frequency vocabulary. There are thousands of low frequency words. It is not possible to teach all the low frequency words, so it is important that teachers train learners in strategies to deal with low frequency words. These strategies include guessing from context, deliberate learning using word cards, word part analysis and dictionary use. Learners need to take responsibility for their learning.

* **Academic vocabulary**

There is a group of 570 words that are very important for learners who will study academic subjects through the medium of English. In Figure 1.1 these words are in bold type and include words like *participated*, *modifications* and *aware*. A list of academic words can be found in Coxhead (2000) and Nation (2013a). Averil Coxhead's website contains the Academic Word List and a range of other resources using the list. The words in the Academic Word List account for around 10% of the running words in academic texts, around 4% of the running words in newspapers, and only a small proportion (less than 2%) of the running words in novels and conversations.

Academic words are the next words to learn after the high frequency words, if learners are going to study academic subjects through English. Donley and Reppen (2001) describe the different learning environments for technical and academic vocabulary and present some data indicating that during academic study, academic vocabulary is less likely to be learned than technical vocabulary. These learning environments involve factors which include the

salience of words to the topic, the relationship of the word to other words in the text, and the presence of definitions and illustrations in the text. These factors affecting learning favour technical vocabulary over academic vocabulary. So, it is useful for teachers to draw learners' attention to these words and to teach them when necessary. A lot of the words in the Academic Word List are also high frequency words. The rest are mid-frequency words.

If learners already knew the high frequency words of English, it would take a twelve-week intensive course to get good control over the academic words. This would involve direct study and teaching of the words, lots of reading of newspapers and academic texts, giving formal talks, listening to lecturers and discussions, and doing academic writing.

* **Technical vocabulary**

The fifth level of vocabulary includes technical words. These are the words used in a specialised area and are usually not so commonly used outside that area. These words are underlined in Figure 1.1. Technical words can also be high frequency words (for example, *hospital*), academic words (for example, *resident*, *aware*) or mid- or low frequency words (for example, *mobile*, *toileting*, *paraplegic*, *acute*). Technical vocabulary is important for someone studying in a particular subject area because learning technical vocabulary is very closely related to learning the subject content. Indeed, one of the ways of testing how well someone knows a technical subject is to test their knowledge of the technical vocabulary.

Task 1.2 Here are four lists of technical words. What areas do they come from? If some areas are difficult to guess, why?

- *blend, sauté, sear, fold, whisk, dice*

- *pixel, mouse, rom, ram, folder, reboot*
- *cost, price, demand, margin, supply, consume*
- *nog, dwang, purlin, soffit, plane, frame*

Table 1.1 summarises the information about the five levels of vocabulary.

Table 1.1 The five levels of vocabulary and their treatment

Levels	Treatment
High frequency (3000 words)	The first words to learn. Learners should meet these words in listening, speaking, reading and writing. These words should be deliberately taught and studied. Teachers should spend class time on these words.
Mid-frequency (6000 words)	Teachers should train learners in strategies for dealing with these words. Learners should deliberately study them, but also do lots of reading to have a chance of learning them. Teachers should not spend time teaching these words.
Low frequency	Teachers should train learners in strategies for dealing with these words. Learners should learn them incidentally through reading. Teachers should not spend time teaching these words.
Academic (570 words)	Learners should meet these words in listening, speaking, reading and writing. These words should be deliberately taught and studied. Teachers should spend class time on these words.
Technical (1000–3000 words)	These words need to be learned while studying the subject content.

Vocabulary as a barrier to understanding

Unknown vocabulary may be a barrier to understanding the subject area task that the learner needs to do. The unknown vocabulary may be technical vocabulary that is important in that subject area or it may be vocabulary that is used to contextualise the task.

In technical texts between 15% and 30% of the vocabulary on a page may be technical vocabulary. Some technical vocabulary is explained with the help of an accompanying diagram and a description in the text. Learners need to be aware of these clues to meaning.

Learners need to study the technical vocabulary in the context of the subject content. In other words, the learner needs to give attention to the vocabulary while learning the content. The teacher needs to decide how much attention to give to the vocabulary during the lesson. One way of deciding is to see if the vocabulary occurs in other lessons in the book. If the words do not occur again, any attention to them will not be repaid later in the book. This is a common problem with courses that cover a wide range of different topics. When the topics range over blood circulation, excretion, reproduction, electricity, stars and galaxies, there are reduced opportunities for the same technical vocabulary to occur again.

If a learner needs to learn the vocabulary, then the teacher should deal with it thoroughly in a particular lesson and plan revision during the course. Some of the technical vocabulary may get extra attention in a course by being:

- put in bold or italics in the text
- listed in a glossary at the end of the book
- formally defined in the text.

Teachers can make technical vocabulary easier to learn by:

- drawing attention to useful word parts – *organelles* contains the word *organ*
- relating technical uses to less technical uses of the word – *strands*, *organism*, *kingdom*, *code* all have more common meanings
- helping learners recognise and understand definitions.

There are several sources of difficulty in comprehending a technical text and each source has its own solutions. Table 1.3 lists these sources of difficulty and suggests ways of investigating them.

Table 1.3 Analysing understanding of technical texts

Area of focus	Way of investigating and solutions
Step 1 Do the learners know the material in their first language?	If not, then allowing the learners to discuss the material in their first language can have very positive effects on understanding it in the second language.
Step 2 Do the learners understand the technical vocabulary?	Check this through translation or the use of diagrams. If they do not understand the technical vocabulary, then give deliberate attention to it.
Step 3 Can the learners relate the material in the course book to the real world?	Check this by asking the learners questions that require connecting the knowledge to real life. For example: Have you ever seen a kidney? What happens to the water you drink?

Knowing and learning a word

Where English is studied through the curriculum, there is potentially a double learning load – learners have to learn the content matter of the subject and the language that conveys this

content matter. For native speakers of the language, studying the content involves some vocabulary learning, particularly the technical vocabulary of the subject. For non-native speakers, there is also the need to learn the technical vocabulary, the academic vocabulary and the mid-frequency words. If the high frequency words are not known then the load becomes even heavier.

Supporting English through the curriculum is done in two main ways:

- 1 by designing the learning tasks so that they are shared, guided or experience tasks which help bridge the gap between the learners' present knowledge and the demands of the task
- 2 by providing for direct deliberate language teaching and learning, such as vocabulary teaching and study, and grammar study.

Later chapters of this book show how this support can be provided.

Developing knowledge of the vocabulary in a course is a cumulative process with the immediately needed aspects of the word being learned first and this knowledge then being strengthened and enriched by later meetings with the word.

Usually what a learner needs to learn when first meeting a word is its spoken and written form and its meaning. Most often a first language translation is a sufficient starting point for learning the meaning. Sometimes the learner has to learn other forms of the word early, for example *pollen*, *pollinator*, *pollination*, *cross-pollination*. Sometimes the use of the word in sentences or phrases is important. For example:

Silicon compounds

Consisting of silicon and argon

Silicon does not exist as a free element.

Sometimes the concept of the word is the early focus of development. For example, *transpiration* can be defined as “the process by which a plant loses water”, but the unit of work on transpiration aims at enriching and refining this concept by showing how transpiration occurs, why it occurs, and what affects it. By the end of the unit the learner will be well on the way to having a very well-developed concept of *transpiration*.

Table 1.4 from Nation (2013a: 49) lists the various aspects of what is involved in knowing a word. In the table, R= receptive knowledge, and P= productive knowledge.

Table 1.4 What is involved in knowing a word

Form	spoken	R P	What does the word sound like? How is the word pronounced?
	written	R P	What does the word look like? How is the word written and spelled?
	word parts	R P	What parts are recognisable in this word? What word parts are needed to express the meaning?
Meaning	form and meaning	R P	What meaning does this word form signal? What word form can be used to express this meaning?
	concept and referents	R P	What is included in the concept? What items can the concept refer to?
	associations	R P	What other words does this make us think of? What other words could we use instead of this one?

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Use	grammatical functions	R	In what patterns does the word occur?
		P	In what patterns must we use this word?
	collocations	R	What words or types of words occur with this one?
		P	What words or types of words must we use with this one?
	constraints on use (register, frequency...)	R	Where, when and how often would we expect to meet this word?
		P	Where, when and how often can we use this word?

In Table 1.4, collocations are words that typically occur together. For example, the word *heavy* often occurs with *rain*. *Heavy traffic* is also a common collocation. Constraints on use are conditions that limit the use of a word. For example, some words like *rectify* are rather formal words. *Kids* meaning “children” is an informal word.

In Table 1.5 we look at the technical word *transformer*. This word occurs in a unit on the generation of electricity.

Table 1.5 What is involved in knowing the word *transformer*

Form	spoken	The stress is on the second syllable.
	written	The spelling is regular.
	word parts	The word is a derived form of <i>transform</i> and contains the suffix <i>-er</i> .

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Meaning	form and meaning	The word parts <i>trans-</i> , <i>form</i> and <i>-er</i> are related to the meaning of the word.
	concept and referents	A technical word that means "a device for changing the voltage of an alternating's current".
	associations	There are various kinds of transformers – step-up and step-down, and they are part of a generating system.
Use	grammatical functions	A countable noun
	collocations	Step-up, step-down
	constraints on use	There are no constraints on the use of this word.

The learning burden of the word *transformer* lies in its form (if *transform* is not already known) and in its concept.

Task 1.3 Choose a word from a unit of work in a course book and show what aspects of the word are developed by the unit of work. Use Tables 1.4 and 1.5 to help you.

It is important to become familiar with the ideas in Table 1.4. This allows the teacher to see what is involved in knowing and learning a word. It also allows the teacher to analyse what makes a particular word difficult, and this makes the teaching of vocabulary more focused and effective.

In the next chapter we will look at ways in which a teacher can gather information about a word and also about words in general.

* * *

Summary

There are five major kinds of vocabulary – high frequency words, mid-frequency words, low frequency words, academic words, and technical words. High frequency words need to be learned first and deserve a lot of classroom time. Academic and technical words are very important for learners studying through English. Learners need to learn technical vocabulary while they are dealing with the subject content. Learners need to learn mid- and low frequency words, but teachers should train learners in strategies to deal with them. Teachers need to look analytically at tasks to see where vocabulary is causing problems for learners.

What should a teacher do after reading this chapter?

- 1 Use the Updated Vocabulary Levels Test on Stuart Webb's website to see how well your learners know the high frequency words.
- 2 If your learners are at an intermediate level, use the Academic Word List section from the New Vocabulary Levels Test or the Academic Word List test on Averil Coxhead's website to see how well they know the Academic Word List.
- 3 Decide if learning the words on the Academic Word List is a useful goal for your learners. Will they do academic study through English? Will they need to read newspapers? Will they need to read or write texts in formal English? If the answer is yes to any of these three questions, they need to learn the words on the Academic Word List.

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Further reading

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CHAPTER TWO

HOW VOCABULARY IS LEARNED

PREREADING QUESTIONS

- What has helped words stay in your memory?
- When you are reading do you notice repeated words?
- How important is teaching vocabulary in helping learn new words?

Introduction

Vocabulary learning requires two basic conditions – repetition (quantity of meetings with words) and good quality mental processing of the meetings. Other factors also affect vocabulary learning. For example, learners may differ greatly in their motivation to engage in learning, and words may differ greatly in their learning burden. However, without quantity and quality of processing, learning cannot occur. The greater the number of repetitions, the more likely learning is to occur. The deeper and more thoughtful the quality of processing, the more likely learning is to occur. This chapter explains quantity and quality, and shows how teachers can increase the quantity and quality of learners' processing of vocabulary, thus increasing their vocabulary size.

Quantity and quality of learning

Quantity and quality are closely related to each other. Many of the conditions affecting quality, such as retrieval, productive use, and varied meetings, depend on a word having been met before, and repetition usually involves changes in the quality of the mental processing of a word.

Quantity of meetings (repetition)

Repetition occurs when a word is met more than once. There are other quantity factors such as the density of unknown words in a spoken or written text, the number of unknown words and the overall frequency of words in the language. However, these factors have a more indirect effect on learning than repetition. The density

of unknown words can affect the opportunity to guess from context clues. The number of unknown words can affect motivation and the manageability of the task. The overall frequency of words can affect the usefulness of the words that are learned.

Repetition occurs after an initial meeting with a word. A critical factor in repetition is the spacing of repetitions within a task or learning session and between tasks. The overwhelming finding is that spaced repetition results in better long-term retention than massed repetition (Nakata 2015). That is, it is better to meet a word now and then at spaced intervals than to concentrate on learning a word by putting all the repetitions in one concentrated learning session. Early research suggested that the repetitions should be increasingly spaced, but more recent research suggests that evenly spaced repetitions are also effective. The important factor is that the repetitions should be spaced.

The importance of repetition for learning suggests that the first meeting with a word should be seen as only one small step in the eventual learning of the word. The first meeting with a word should result in enough learning to last until the next meeting. This means that teachers need not present words as if the presentation will result in full learning. Rather than being concerned about how to present a word for the first time, teachers should be more concerned with providing opportunities for words to be repeated. Nevertheless, a brief effective initial meeting can increase the effectiveness of later meetings because there is some useful knowledge of the word to draw on and build on. Effective initial meetings can come from

- guessing from context while listening or reading
- deliberate learning from word cards or flash card programmes,
- looking up words in a bilingual or monolingual dictionary or glossary
- brief L1, L2 or pictorial explanations by the teacher (Elley 1989)

- the teacher showing the relationship of the L2 word to an L1 cognate or loan word (Daulton 2008)
- the teacher doing word part analysis to relate the unknown L2 word to a known L2 word (Wei & Nation 2013)
- or using a mnemonic technique like the keyword technique (Pressley 1977).

Repetitions can be verbatim or varied. A verbatim repetition involves meeting the word again in exactly the same form, context and circumstance as the previous meeting. Verbatim repetition is most likely to occur during flash card learning and when re-reading or listening again to the same text. In general, most repetitions are varied repetitions, but there is a wide range of degrees of variation. We will look at this more closely in the following section on quality of meetings, but here we will consider the role of word families in repetition.

A word family consists of a word stem and its closely related, inflected and derived forms (Bauer & Nation 1993). “Closely related” means that as well as a regular form relationship between the members of a family, the meaning of the stem remains roughly the same in the inflected and derived family members. Let us look at an example, the word family based on *amaze*, to clarify this.

amaze

amazed

amazes

amazing

amazingly

amazement

Every member contains the stem *amaze*. The family consists of the stem form, three inflected forms, and two derived forms. Note

that to be a member of the *amaze* family, all the members need to share the stem meaning of “unexpected surprise”. The size of a word family depends on the learners’ knowledge of the affixes of English. It is possible for a very short period of time in their learning, learners may consider *amaze* and *amazed* as different words. *Amazingly* might be a challenge for some learners even when they know *-ly*. Being able to comprehend the members of a word family involves an increase in the quality of knowledge of a word. It also means an increase in the potential repetitions of a word because meeting different family members is effectively a repetition of the same word. Developing learners’ knowledge of the most common affixes of English is a very important means of increasing the opportunities for learning words through repetition.

How many repetitions are needed for learning? The safest answer to this question is the more the better, although there are diminishing returns for each successive repetition. Receptive knowledge of some words is established with as few as three to five repetitions. In an innovative study, Pellicer-Sánchez (2016) used eye tracking technology to measure how many repetitions it took when reading a text before learners spent the same amount of time focusing on a previously unknown word as focusing on already well-established words. She found that around 3 to 5 repetitions there was a noted increase in speed of retrieval as evidenced by fixation time. With 8 occurrences (the maximum in her study) retrieval time was close to that of known words. A follow-up set of vocabulary tests showed learners scored well on form and meaning recognition and moderately well on recall. It seems safe to assume that for many but not all words around ten to twelve repetitions may be a useful goal (Horst, Cobb & Meara 1998; Webb 2007; Pellicer-Sánchez & Schmitt 2010). Deliberate learning, especially flash card learning of vocabulary requires fewer repetitions, though it must be borne

in mind that deliberate learning is more likely to involve verbatim repetition which is likely to be less enriching in aspects of word knowledge than the more varied repetition which is typical of meetings in listening and reading input.

Single meeting learning may occur, especially when a word is a cognate or loan word, but teachers need to see repetition as being essential for all words, and vocabulary learning of each word as being a cumulative process.

How can we increase repetition in a course?

In many ways planning for vocabulary learning can be seen as a battle between repetition and Zipf's law. Zipf's law (see Sorell (2012) for a clear explanation) shows that while there is a rather small number of words in a text or collection of texts that are often repeated, around half of the different words in the text occur only once. That is, around half of the words in a text are not repeated. A well-planned vocabulary course deals with this in several ways. The following recommendations are ranked in order of importance.

1. The vocabulary in the course is controlled in carefully designed stages so that words which are way beyond the learners' current level do not occur in the course material. This ensures that low frequency one-timers do not occur in the material, and reduces the density of unknown words. Graded readers are an essential part of this approach.
2. There are large amounts of vocabulary-controlled input so that high frequency and mid-frequency vocabulary have plenty of opportunities to be repeated. Nation (2014) estimates that around 300,000 tokens of input are needed to get at least twelve repetitions of words at the 3rd 1000 level, and around one million tokens of input are needed to get at least twelve repetitions of words at the 5th 1000 level. One million tokens of reading requires around 33 minutes of reading per day, five

- days a week for forty weeks of the year. Vocabulary-controlled texts still demonstrate Zipf's law with large numbers of words occurring only once. However, in a vocabulary-controlled text, every word is worth learning and is likely to be repeated in other texts.
3. Learners are taught to memorize and have practice in recognising the most frequent affixes of English, beginning with inflections and quickly moving to the most regular, frequent and productive derivational affixes (see Bauer & Nation (1993) for an ordered list).
 4. One-quarter of the time in a well-balanced course should be spent on deliberate learning. Some of this should involve individualised independent vocabulary learning using flash cards. Such learning is not affected by Zipf's law because it does not involve texts.
 5. Learners are trained in deliberate vocabulary learning strategies so that the quality of their learning reduces the need for substantial repetition. We will look at these strategies in the next section of this chapter. Learners who are old enough should know about the importance of repetition and how to add quality to their mental processing of vocabulary.
 6. One-quarter of the time in a course should be spent on developing fluency across the four skills of listening, speaking, reading and writing. Increasing reading fluency through speed reading courses will increase the amount of reading input that learners can get. Fluency, quantity of input and vocabulary repetition can also be increased by re-reading texts that have been read before and listening to texts that have been read or listened to before. Sonia Millett's website contains a range of free vocabulary-controlled speed reading courses. There are also commercially produced courses (Malarcher & Nation 2017).
 7. There are teaching activities and approaches to lesson and course design that increase the opportunities for repetition. Perhaps the best example is the linked skills activity (Nation 2013c, Chapter 15 presents a lot of examples and a rationale for this activity). In a linked skills activity, learners focus on the same topic three times across three

different skills. For example, they read about the topic, talk about it and then write about it. This allows the same topic vocabulary to occur in all three steps of the activity. Similarly, content-based instruction (also called Language through the Curriculum and Content and Language Integrated Learning) increases the opportunity for repetition and a reduction in vocabulary load through a narrowing of topic focus (Sutarsyah, Nation & Kennedy 1994). Narrow reading (Gardner 2008) and narrow listening (Krashen 1996) may have similar effects. The common feature in all these activities and approaches is the sustained focus on the same topic or topic area.

Task 2.1 Suggest three ways of coming back to the same topic of *Making a cake* or *An exciting thing that happened to you* aiming for varied repetition.

Quality of meetings

The importance of quality of processing in memory research was highlighted by the Levels of Processing hypothesis (Craik & Lockhart 1972). The Levels of Processing hypothesis says that what really determines what is remembered is the level or quality of mental processing at the moment that learning takes place. If the processing is deep and thoughtful, then the learning will last. If it is superficial, then it will soon disappear.

Table 2.1 lists levels of processing for vocabulary. The major distinction is between incidental attention and deliberate attention. This distinction is not an easy one to make as many instances of incidental attention contain some elements of deliberate attention. Nonetheless, we can distinguish vocabulary learning while engaging in meaning-focused use of the four skills of listening, speaking, reading and writing (incidental learning) from deliberate

attention to words as words rather than as part of the message. Typically deliberate attention is more efficient and effective than incidental attention. This is not surprising because incidental attention assumes that most attention is focused on something else.

The conditions in column one of Table 2.1 are listed in order of quality of processing with noticing being the most superficial, followed by retrieval, varied meetings and use, and the deepest level of elaboration. Each of these four levels can apply to both incidental and deliberate attention, and each level can be divided into receptive and productive with productive attention being deeper than receptive attention. So, retrieval for example can be receptive retrieval as in reading and listening when the learner meets the word form and has to retrieve its meaning, or productive retrieval as in speaking and writing where the learner has a meaning to express and needs to retrieve the appropriate word form.

Table 2.1 Vocabulary learning conditions and example activities

Quality of attention	Incidental attention	Deliberate attention
Noticing	Guessing from context Noticing a gap when speaking or writing	Text highlighting Focusing on a form or meaning using word cards Looking up in dictionary or glossary Being taught words
Receptive or productive retrieval	Meeting a previously met word while listening or reading and recalling its meaning Recalling and using a recently met word in conversation or writing	Retrieval using word cards Doing vocabulary exercises after reading a text Recalling using a word wall

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Quality of attention	Incidental attention	Deliberate attention
Varied receptive meetings or varied productive use	Meeting a previously met word in a new form or context while listening or reading and recalling its meaning Recalling and using a recently met word in a new way in conversation or writing	Looking at a concordance Filling the blanks True/false sentences
Elaboration	Meeting and using a word in genuine high-stakes communication Meeting and using a word in relation to pictures Interactive reading (Shared blown-up book)	Using the keyword technique Semantic mapping Word part analysis Focusing on words in teacher-led intensive reading Find the core meaning

Noticing involves giving attention to a word. It does not involve recalling anything about the word or analysing it in any way. Noticing occurs if we study a list of words and their meanings or if we meet an unknown word in a text. Often our first meeting with an unknown word involves noticing.

Retrieval not only includes noticing but also includes an attempt to recall something that we have already noticed about the word. Retrieval can only occur if we have met the word or a related word before. For example, if we have looked up the meaning of a word in a dictionary, the next time we meet the word in listening or reading we can try to retrieve its meaning. Similarly, if we have made word cards with the word on one side and its translation into the L1 on the other side, then when we go through the cards looking at the words, we can try to retrieve its L1 translation before turning over

the card to see if we are correct. Retrieval is a powerful learning condition and each successful retrieval strengthens the form-meaning association we are trying to learn. Retrievals work best if they are spaced, so listening and reading set up good conditions for retrieval because the occurrences of a word do not occur immediately after each other but are spaced by other parts of the text. When deliberately studying words on flash cards, it is good to be working on several words because this means that the other words occur between the repetitions of any particular word thus spacing its occurrences.

Receptive retrieval occurs when we see the word form and need to retrieve its meaning. Productive retrieval occurs when we need to express a meaning and thus need to retrieve the word form. Productive retrieval is more difficult than receptive retrieval (Griffin & Harley 1996) (see Nation (2013a: 46–58) for a discussion of possible reasons for this).

The next level, varied meetings and use, is a form of retrieval except that retrieval occurs with variation in the form, meaning or use of the word. This variation most likely enriches the associations with the word and thus strengthens its learning. When we meet a word several times in listening or reading, the word typically occurs in different contexts, sometimes with different affixes or meaning senses. The degree of difference from previous meetings directly affects the strength of learning of the word, with greater difference resulting in stronger learning (Joe 1998). It is possible to set up a scale of differences, with inflectional changes like singular or plural or minor collocation differences being at the less different end of the scale. At the large difference end of the scale, the word may be used with a different but related sense, or it could have added different derivational affixes, or it may occur with strikingly

different collocates. That is, with varied meetings and varied use, there is a range of variation and the degree of variation affects the strength of learning. In describing this level of processing, “varied meetings” refers to receptive meetings, and “varied use” refers to productive use.

The deepest quality condition, elaboration, includes a variety of ways of providing elaborative, analytical and enriching processing of vocabulary. In incidental learning involving normal language use, elaboration relates to the memorable nature of the language use and to the combination of visual and language related aspects of the use. Elaboration is likely to occur during genuine communication, especially that related to the here-and-now in the presence of objects such as when learning how to operate something, following directions or buying something. In deliberate learning, elaboration occurs when words are analysed for their known word parts and the meaning of the parts is related to the meaning of the word. It also occurs when using the well-researched keyword technique which similarly relates form and meaning, and uses visualisation of a linking image. Semantic mapping makes deliberate connections between the visual and mental relationships between ideas and thus sets up the condition of elaboration. As with varied meetings and varied use, we could create a scale of degrees of elaboration, with greater elaboration resulting in stronger learning.

How can we increase the quality of meetings?

The quality of meetings depends on how much the teacher and learners can include the conditions of noticing, retrieval, varied meetings and use, and elaboration to the opportunities for learning that occurs.

1 Deliberate learning using word cards or flash card programmes

- quickly provides a basic amount of knowledge of each word that is then available for retrieval or varied meetings and varied use. Such deliberate learning using flash cards makes use of the conditions of receptive and productive retrieval and in some cases elaboration when the keyword technique or some other mnemonic trick is used. This deliberate learning can be planned so that the most useful vocabulary is covered systematically.
- 2 Graded reading and where possible graded listening provide the condition of retrieval through varied meetings. If this learning through meaning-focused input is related to vocabulary learned through word cards and flash card programmes, then repetition and quality of processing are nicely combined.
 - 3 Relating input and output allows varied meetings to lead to varied use. In other words receptive knowledge can become productive knowledge. It is important that this relating of listening and reading input to speaking and writing does not restrict the amount of meaning-focused input. Dealing with the same content in a variety of different ways not only provides repetition of vocabulary but also varies the contexts in which words occur. This varied occurrence enriches and strengthens word knowledge.
 - 4 Learners should be trained in how to learn vocabulary. This training should include the guessing from context strategy, the word cards and flash card programmes strategy with an understanding of the importance of spaced retrieval and receptive and productive retrieval, the word part strategy, the keyword technique, and an elaborative dictionary use strategy that involves looking for core meaning, related words and extra examples of use. Learners should also know how to test their own vocabulary size and how to choose the most useful vocabulary to learn based on this knowledge of their vocabulary size.
 - 5 We can regard fluency of retrieval as an aspect of quality. Some high frequency vocabulary such as numbers, days of the week, months of the year, greetings, and survival vocabulary (Nation & Crabbe 1991) should

get targeted fluency practice, largely involving deliberate repeated retrieval. For example, the teacher says numbers in a random order and the learners point to them. In addition there should be fluency practice in each of the four skills of listening, speaking, reading and writing so that vocabulary knowledge is readily available for use.

- 6 Genuine communication can involve both receptive and productive varied meetings and use. It can also provide visual and episodic associations that make words memorable.

Task 2.2 How could you increase the amount of receptive and productive retrieval in your course?

Repetition and quality of processing

Table 2.2 combines the recommendations given above for increasing repetition and the quality of processing. The recommendations are ranked in order of effectiveness in providing repetition and quality of processing. The justifications typically explain how each recommendation provides opportunities for repetition and quality of processing.

Table 2.2 Recommendations for repetition and quality

Recommendation	Justification
1 Control the levels of vocabulary in the course to match the learners' current level and needs	Vocabulary control ensures that all words met in a course are useful and that time is not wasted on less useful vocabulary.
2 Include vocabulary learning using word cards or flash card programmes	Deliberate learning is both efficient and effective, and provides opportunities for elaboration. Cards involve retrieval and allow for plenty of repetition.

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Recommendation	Justification
3 Run a substantial, well-monitored extensive reading programme and an extensive listening programme	Although learning from meaning-focused input is not as efficient as deliberate learning, large quantities of input provide plenty of opportunities for repetition and varied meetings.
4 Use theme-based learning and activities that give repeated attention to the same topic across the same or different skills	Limitation of topic areas reduces the number of different words, and revisiting the same topic increases repetitions and opportunities of varied meetings and varied use.
5 Teach the most frequent affixes and give plenty of practice in recognising them	Being able to deal with words as a part of word families greatly increases repetitions and quality of processing through varied meetings.
6 Train learners in strategy use and understanding of how to learn	Knowing why you are doing a particular activity increases motivation and focus. Awareness and strategy use increase elaboration and allow learners to consciously apply the conditions needed for learning.
7 Have a strong fluency development component in the course	Fluency development increases the amount of input and output and thus repetition and varied meetings and use.

The first recommendation, on vocabulary control, ensures that learning effort is directed towards what is useful. The major effect of vocabulary control is to deal with Zipf's law in ensuring that learners do not have to deal with large numbers of non-repeated words that are well outside the learners' current vocabulary needs. In many ways the recommendations are macro-level recommendations that apply to course design and lesson planning. It is also worth considering the need for repetition and quality of

processing at a micro-level which applies to what the teacher and learners are doing at any particular moment in the classroom or in independent activities outside class. The sixth recommendation of strategy training and awareness of how to learn encourages this micro-level thinking. Teachers should regularly look at what is happening in the classroom and ask themselves “At this moment are the learners applying good learning conditions? If not, how could I adjust the activity so that there are opportunities for repetition and deeper quality processing?”. For an example of these questions applied to spoken activities see Nation (2013a, 190–199).

The most notable omission from Table 2.2 is recommendation 6 from the section on quality of processing about genuine communication. One reason for the omission is that that recommendation affects only quality of processing and does not have positive effects on repetition. Another reason is that there is a lack of research evidence to support this recommendation. Nevertheless, it seems a reasonable goal for a language course to be relevant and engaging, and for language use to involve real-world high-stakes communication.

Task 2.3 Theme-based learning involves spending several classes covering the same topic across the different skills of listening, speaking, reading and writing. Are there any topics in your course that you cover in this way? Is it possible to include some theme-based units on your course? What topics would you cover?

Vocabulary learning and the four strands

The recommendations cover all the four strands of meaning-focused input, meaning-focused output, language-focused learning,

and fluency development (Nation 2007, 2013b). This suggests that a well-balanced course set up good conditions for learning. Table 2.3 classifies the recommendations in Table 2.2 into the four strands.

Table 2.3 The four strands and the conditions for vocabulary learning

Strand	Recommendation
Meaning-focused input	1 Vocabulary control 3 Extensive reading and extensive listening
Meaning-focused output	4 Repeated focuses on the same or related material
Language-focused learning	2 Word cards learning 5 Learn the most useful affixes 6 Training in strategies and learning how to learn
Fluency development	7 A fluency development strand

Recommendation 1, vocabulary control, is placed in meaning-focused input because it most easily applies to the use of graded readers. However, it is relevant to all the other strands as well. Similarly, recommendation 4 is placed in meaning-focused output when it really applies across all four strands. Recommendation 4 suggests an important addition to the principle of the four strands. The principle states that a well-balanced language course should provide opportunities to learn across the four strands and roughly equal time should be given to each strand. To better take account of the conditions for learning, the content and language focuses within and between the strands need to be well integrated so that learners get plenty of opportunities to focus on the same material. This integration of reading with listening, speaking with reading, fluency development with deliberate learning and so on would increase repetition of vocabulary and quality of processing.

Task 2.4 Classify the following activities into the four strands.*Extensive reading**Semantic mapping**Breaking words into parts**Saying a word over and over to yourself**Looking at a word in a glossary in the margin of the text**Explaining the meaning of a word to someone who does not know it**Closing your eyes and thinking about the new words you met in reading and what they meant*

* * *

Summary

Research on vocabulary learning shows that there are clear guidelines to follow when planning vocabulary learning in a course to ensure that there is repetition and quality of meetings with words. There are guidelines that can be followed to make sure that good conditions for learning occur. These include using vocabulary control, covering the four strands, and using theme-based learning. Their application is not difficult and the effects should be beneficial for vocabulary learning.

What should a teacher do after reading this chapter?

- 1 Make sure that about one-third of the activities and texts in your course are given spaced repeated attention.
- 2 Look at the activities in Table 2.1. Which ones are new to you? Make sure you understand them and consider how they could be used in your course.
- 3 List the activities in your course over the last month. Classify them into the four strands. Are all the strands given roughly equal time in your course? If not, how can you equalise the time?
- 4 Look at the list of guidelines given in Table 2.2. Check your

course against them.

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CHAPTER THREE

PLANNING FOR VOCABULARY IN LANGUAGE PROGRAMMES

PREREADING QUESTIONS

- How can attention to vocabulary occur in a language course?
- What are the features of a good vocabulary programme?
- How can you find out what vocabulary your learners already know?

What vocabulary should a teacher focus on?

The most important decision when planning a vocabulary programme is determining what vocabulary to focus on. This decision is important because:

- 1 different levels of vocabulary require different kinds of treatment by the teacher
- 2 learners need to be aware of what vocabulary to learn so that they can take some responsibility for their own learning
- 3 appropriate material can be chosen for listening, speaking, reading, and writing activities.

* High frequency words

The high frequency words of the language are an essential foundation of all vocabulary knowledge and language use. Because these words are, relatively speaking, a rather small group of around 3000 word families, it is reasonably easy to test learners to see how well they know these high frequency words. The first choice of a test for these words would be a bilingual test where the learners have to match first language translations with the second language words. This kind of test is easy to do, does not make the learners deal with complicated second language definitions, and can be sat in a short time. Here is a sample item for learners whose first language is Chinese.

- | | | |
|-----------|-------|----|
| 1 kill | | |
| 2 reply | _____ | 前进 |
| 3 advance | _____ | 回答 |
| 4 appoint | _____ | 杀死 |
| 5 divide | | |
| 6 receive | | |

Bilingual 1000- and 2000-level tests are available at <http://www>.

victoria.ac.nz/lals/staff/paul-nation.aspx. If the learners are from a variety of language backgrounds, then a monolingual test can be used, for example, the Updated Vocabulary Levels Test (Webb, Sasao & Ballance 2017). An electronic version is available at (https://vuw.qualtrics.com/jfe/form/SV_6Wrb5aUvXjIAs6h?Q_JFE=qdg).

* **Academic words**

If learners score well on the 2000 level of the Updated Vocabulary Levels Test and they have to study through the medium of English, then the next vocabulary to consider is the Academic Word List. This list is relevant to learners at secondary schools and universities. This vocabulary makes up around 10% of the running words in academic texts, meaning that on average there is one word from the 570-word Academic Word List in every line of an academic text. The New Vocabulary Levels Test (McLean & Kramer 2015) has an academic word list section.

* **Technical words**

Each subject area, like mathematics, general science, history and accounting, has its own technical vocabulary. Testing knowledge of the words is not straightforward because testing knowledge of these words is like testing knowledge of the subject. Probably the best way to assess knowledge of technical vocabulary is to get the learners to do tasks on subject content or to choose technical words for direct testing.

* **Mid-frequency words**

In some subject areas many of the technical words are also mid-frequency words. However, there are 6000 mid-frequency words and learners need to keep learning them in roughly the order of their frequency. There are lists of the headwords of the first 10,000

words of English in groups of 1000 on Paul Nation's website. The mid-frequency words are those in the fourth to ninth 1000 words inclusive. If learners know the high frequency and academic words, it is useful to have some idea how much mid-frequency vocabulary they know. This is because learners need at least a 5000-word to 6000-word vocabulary to deal with unsimplified or uncontrolled text and, for graduate study at university, probably a 9000-word to 10,000-word vocabulary. The Updated Vocabulary Levels Test includes the 4th 1000 and the 5th 1000 levels, which are the first two lists in the mid-frequency words. The Vocabulary Size Test measures an advanced learner's vocabulary size, and can be used with learners who already know a lot of words.

* **Low frequency words**

This level of vocabulary is by far the largest. There are thousands of low frequency words, ranging from words of moderate frequency to those used only once every five or so years, if at all. They are best left to be learned incidentally through listening and reading. The Vocabulary Size Test tests those words as well as the high and mid-frequency words.

Task 3.1

Look at the Updated Vocabulary Levels Test and answer these questions.

- *How many words are tested at each level?*
- *What number of words do these tested words represent?*
- *How many levels are there in the test?*
- *What levels represent the high frequency words?*
- *What levels represent some of the mid-frequency words?*

The four strands

A well-balanced language course spends approximately one quarter

of the total course time on each of the following four strands (Nation 2013b): meaning-focused input, meaning-focused output, language-focused learning and fluency development.

* **Meaning-focused input**

Meaning-focused input involves learning through listening and reading where the learners' attention is on understanding and hopefully enjoying what they are listening to or reading. Learners should already know around 98% of the running words in the input material and they can learn the remaining 2% or one word in fifty from context. An extensive reading programme is an essential part of the meaning-focused input strand.

If learners are to have meaning-focused input at all levels of their proficiency development, graded readers are an essential component of the course because they can provide the needed 98% coverage. In this strand of the course they can be used for extensive reading and extensive listening. Extensive listening can include individual listening to taped versions of graded readers, and the class listening to the teacher who read a graded reader aloud chapter by chapter over several days.

Meaning-focused input also occurs when learners work on the same topic for several lessons. Although the first lesson or two may not be meaning-focused input, when the learners gain some knowledge of the ideas and language, then the later lessons become meaning-focused input.

* **Meaning-focused output**

Meaning-focused output involves learning through speaking and writing where the learners' attention is on communicating messages to other people. The same kinds of vocabulary conditions apply as

for meaning-focused input. Meaning-focused output occurs when the learners speak and write about what they have just heard or read. Activities that fit into this strand include presenting or writing book reports, discussing a graded reader they have just read, discussing a topic they are studying and writing up the results of a discussion, pair conversation and problem-solving discussion.

Pair conversation involves two learners talking on familiar topics such as talking about their families, the music they like, their friends, a movie they have seen, or a recent holiday. It can also involve the kind of talking involved in shopping, going to the bank, using public transport, getting directions, buying takeaway food and going to a restaurant. For low proficiency learners, a useful beginning point is learning the survival vocabulary (Nation & Crabbe 1991). This is available in English and several other languages on Paul Nation's website, and involves around 120 words and phrases. When learners know the survival vocabulary and can use it fluently, they can practise memorized dialogues on more topics, and eventually move to freer conversations.

Problem-solving discussion (Nation 1991) involves learners working in small groups using English to solve a problem. Here are some example problems.

Dear Joan,

My son will soon be old enough to get a driving licence. He has been asking me to teach him how to drive. I am very worried about this because I know that most traffic accidents are caused by young men. I have been trying to encourage him to wait for a few years and then I will teach him, but he wants to learn now. If I teach him to drive now, he may kill himself and others. What can I do?

Worried parent.

Your cousins have come to visit your family. While your parents go out with them, you have been given the job of entertaining their eight-year-old son. You have twenty dollars and have to entertain him for five hours in or near your town. You can do anything that is in your town.

Working together as a group, suggest as many possible ways as you can of entertaining the child. Then choose a suitable number of them to fill the required time and to meet the other requirements and restrictions.

- a. The films which are now showing are *Star Wars*, *Snow White and the Seven Dwarfs* and *Fright Night*. Admission is \$10 for adults and \$6.50 for children under 15 years old.
- b. The swimming pool is open all day. The entry fee is \$3 each.
- c. Your town has a fun park with slides, swings, a maze and an adventure trail. Entry is free.
- d. Your relative comes from a very small town.

Nation (1991) provides lots of suggestions for making these discussion activities and for including role play.

* **Language-focused learning**

Language-focused learning gives deliberate attention to language features. It can involve pronunciation practice, studying new vocabulary and collocations, learning grammatical features, and deliberately giving attention to discourse features (Ellis 2005). Subject content texts and lessons can be a source of new words to deliberately learn. They can also be used for intensive reading where the teacher and the learners work together through a reasonably short piece of text to come to a full understanding of the text by dealing with its various language features. Language-focused learning also includes deliberately learning strategies for vocabulary learning as well as deliberately studying new vocabulary using word cards and dictionaries.

* **Fluency development**

Activities that develop fluency make the best use of what is already known and involve very easy material. They should not contain any unknown vocabulary, grammatical features, or discourse features and the content of the activities should be largely familiar.

Fluency development activities need to occur in each of the four skills of listening, speaking, reading and writing. In reading, there are three major kinds of fluency development activities:

Speed reading practice

This is where learners read a short text of around 300 to 1000 words as fast as they can and then answer questions based on it. Their speed in words per minute is timed for each text and is recorded on a graph. Their comprehension score is also recorded on a graph. A very large collection of free speed reading courses can be found on Sonia Millett's website. They include courses at the 500 word level, 1000 word level, 2000 word level, 2000 plus Academic Word List level, and 3000 word level.

Extensive reading of graded readers

The second type of reading fluency practice is extensive reading of graded readers that are well below the learners' normal reading level. That is, if their level of reading for meaning-focused input is at level four in the Oxford Bookworms series, then for fluency development they should be reading graded readers at levels one, two or three, and reading them as quickly as they can. Graded readers can also have a role to play in fluency development in listening. For listening the teacher can read stories to the class from very easy graded readers. The teacher reads aloud at a reasonably quick speed getting faster as learners get familiar with the story.

Linked skills

The third kind of reading fluency activity involves linked skills. The learners read and study a topic, talk about it, solve problems and write about it. Finally they read an easy text on that topic. This reading is developing fluency because by now the topic and associated language are very easy for the learners.

Task 3.2

Which of the four strands do the following activities fit into?

- *reading with a dictionary*
- *watching TV*
- *using word cards*
- *listening to classmates giving talks in English*
- *learning to guess from context*
- *read and retell*
- *writing a summary*
- *reading the newspaper*
- *writing about familiar topics*
- *listening to the teacher to explain something*

Planning for high frequency words

There are some well-established principles for planning a programme to increase learners' control of the high frequency words of the language.

- 1 *Where possible, work with material that uses very little vocabulary outside the high frequency words.* This makes sure that the high frequency words are given attention and that teachers and learners are not distracted by low frequency words that are well outside the learners' present level. It also makes sure that the learners have a chance of being able to listen to and read material with a reasonable level of comprehension.

- 2 *Do deliberate teaching of the high frequency words when they occur in lessons.* The other side of this principle is do not do deliberate teaching of mid- and low frequency words. The deliberate teaching of high frequency words needs not be systematic but needs to be persistent. The goals of such teaching are to make learners aware of the high frequency words they don't know, to take knowledge of each word forward at least a small step, and to increase understanding of the material the learners are working on.
- 3 *Give learners opportunities to use high frequency vocabulary both receptively in listening and reading, and productively in speaking and writing.* High frequency vocabulary needs to be available for productive use as well as receptive use. One of the most effective ways of providing opportunities for productive use is to use linked skills activities where learners listen to or read material that then becomes the basis for speaking and writing. There needs to be plenty of receptive use before pushing the learners to use it productively, but teachers should see productive use of high frequency vocabulary as an important vocabulary learning goal.
- 4 *Encourage and train learners to deliberately learn vocabulary and to reflect on their vocabulary learning.* Deliberate learning includes these strategies:
 - guessing from context
 - using small bilingual word cards
 - learning useful prefixes, suffixes and stems to do word part analysis
 - using visualisation techniques
 - learning to use a dictionary well.

There are effective ways to get learners to reflect on their vocabulary learning. A useful task is to get learners to use a word counting programme like the Frequency programme (available from www.lex Tutor.ca/freq/) to turn a text into a word list with frequency figures.

When using this with learners, it may be more effective if they use part of one of their texts as the input. About 500 running words would be enough. Get the learners to consider the following questions:

- How many words are needed to cover 25%, 50%, 75% of the text?
- What kinds of words are the most frequent words in the text?
- If you saw only the most frequent 20 words in the list, could you guess what kind of text they came from?
- Is there a connection between the length of words and their frequency?
- What proportion of the different words occurs only once?
- What percentage of the running words is covered by the words that only occur once?
- What conclusions about learning vocabulary can you make from these observations?

Another way of getting learners to reflect on their learning is to get them to make a set of 30 or 40 word cards and keep a careful record of their learning over ten separate learning sessions. They could use a table like Table 3.2.

As well as this, there could be some questions to guide their reflection on their learning, such as:

- What words were difficult? Why?
- Did you use any tricks to help you remember some words?
- What words were the easiest? Why?

Get learners to report on their learning to others in the class or in a small group.

Table 3.2 Monitoring learning using word cards

Learning session date, time of day	Time spent learning	Number of repetitions	Number known
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

- 5 *Develop fluency with high frequency words.* Learners not only need to know words, they also need to access them fluently. At all stages of language learning, learners need fluency practice using vocabulary they already know. About one quarter of the class time should be spent developing fluency in listening, speaking, reading and writing. This is particularly important for the high frequency words, and even more important for some groups of related words like numbers, greetings and politeness routines, ways of referring to time (*last night, next week, seven-thirty*), and high frequency collocations. We will look closely at fluency development later in Chapters Four and Five.
- 6 *Monitor and measure progress in vocabulary learning.* The teacher should look at the tasks the learners do and give periodic tests to make sure they are moving forward in their vocabulary learning. The teacher should also make learners aware of this progress and the vocabulary

learning goals of the course.

- 7 *Be aware that learning a word involves knowledge of a range of aspects of the word.* These aspects include knowing the spoken form, the written form, the word parts that go to make up a word and the family members of the word, the meaning of the word, the grammar and common collocations of the word, and any particular constraints on the use of the word, such as whether the word is polite or not, whether it is largely used in Australia or in Britain, whether it is a colloquial word or a formal word, and so on (see Table 1.4).

Task 3.3 Choose one of the seven principles described above and suggest three ways it could be applied in your course.

Planning for mid- and low frequency words

There are a few additional principles that apply to mid- and low frequency words.

- The teacher should train the learners in strategies for dealing with mid- and low frequency words.* These strategies include guessing from context, and using word cards, word parts and dictionaries. Each of these strategies requires training and practice spread in small amounts over several months. We will look at the development of these strategies in Chapter Six.
- Learners should take responsibility for their vocabulary learning.* There are so many mid- and low frequency words to learn that teachers cannot teach them all. In addition, learners will differ greatly in the words they know and need to know, and so a programme of teaching particular low frequency words is likely to be inefficient. Learners should therefore be encouraged and trained in making well-informed decisions about what words to learn, how to learn them, and how to monitor their learning. The teacher's job is to show the learners how to do this and help motivate them to do it. To do this learners need to

know where to find the lists of mid-frequency words (the 4000 to 9000 headword lists on Paul Nation's website).

Planning a vocabulary programme and putting it into action

There are many different kinds of effective vocabulary programmes. Some have special vocabulary classes. Others deal with vocabulary in the context of other lessons. In a good programme it is important that the teacher has a plan and a principled way of putting the plan into action.

*** Step 1**

Use tests and observation to decide what level of vocabulary the learners should be focusing on – high frequency words, academic words, technical words or low frequency words. Where English is a second language rather than a foreign language, we would expect learners to increase their vocabulary size by around 1000 word families a year.

*** Step 2**

Decide where attention to vocabulary fits into the course. Here are some of the options. You should choose more than one option.

- Have one or two vocabulary classes a week.
- Have a vocabulary focus as a part of lessons on listening, speaking, reading and writing.
- Focus on vocabulary as a part of content-based lessons in mathematics, science, history and English.
- Set regular vocabulary-focused tasks such as reading graded readers, learning a certain number of words each week, and learning word parts.
- Run intensive modules on aspects of vocabulary learning, such as dictionary use, guessing from context, and what it means to know a word.

*** Step 3**

Keep a rough record of the language learning activities over a two-week or one-month period and classify all the activities into the four strands of meaning-focused input, meaning-focused output, language-focused learning and fluency development. Each of these four strands should get roughly the same amount of time. If they don't, work out how to get a more equal balance.

*** Step 4**

Plan two or three points of assessment to see how learners are progressing in their knowledge of the target vocabulary.

*** Step 5**

Keep a checklist of the important parts and focuses of a language programme to make sure that nothing important is left out. Table 3.3 is a possible checklist. The teacher needs to check items on the checklist not just once but several times during the course.

Table 3.3 A checklist of important parts and focuses of a language programme

Parts and focuses	Date of checking					
Meaning-focused input Are the learners getting plenty of listening at the right level?						
Are you giving target words some brief deliberate attention during listening?						
Are the learners doing plenty of reading at the right level?						
Are the learners keen on reading?						

(to be continued)

(continued)

Parts and focuses	Date of checking					
Meaning-focused output Are the learners getting plenty of chances to speak and write?						
Are the learners producing language in a range of relevant genres?						
Are the learners negotiating language during speaking activities?						
Language-focused learning Are the learners getting strategy training in: — guessing						
— using word cards						
— using word parts						
— dictionary use						
Are there regular intensive reading activities?						
Are the learners reflecting on their learning?						
Are you teaching useful vocabulary?						
Fluency development Are the learners doing plenty of easy listening?						
Are the learners doing a speed reading course?						
Are the learners doing easy extensive reading?						
Are the learners doing speaking activities like retelling, repeated tasks?						
Are the learners getting practice in writing quickly?						

The approach to planning described here is one based on principles.

This requires:

- a good knowledge of the principles involved and their application
- occasional monitoring of the application of the principles.

Task 3.4 Apply Step 3 described above to your course.

* * *

Summary

A first step in planning is to find out what vocabulary learners know. This helps the teacher decide what level of vocabulary to focus on. The next step is to decide how to focus on the vocabulary. There are well-supported principles to guide this focus. In a well-balanced course there should be opportunities to learn through the four strands of meaning-focused input, meaning-focused output, language-focused learning and fluency development.

What should a teacher do after reading this chapter?

- 1 Does your course include an extensive reading programme? If not, consider how to include one. We will look at this again in Chapter Four.
- 2 Do you have a fluency development programme in each of the four skills as a part of your course? If not, include the activities of quicklistens, 4/3/2, speed reading and 10-minute writing. These small additions will make a big difference to your learners' proficiency levels.
- 3 Do you train your learners in the vocabulary learning strategies of guessing from context, using word cards, word parts, and dictionary use? If not, introduce and practise these well-proven strategies.

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CHAPTER FOUR

VOCABULARY AND THE RECEPTIVE SKILLS OF LISTENING AND READING

PREREADING QUESTIONS

Think about the English course you are teaching.

- What are the opportunities for learning through listening and reading?
- Does your course have a strong extensive reading programme?
- How do you make difficult material in the course easier for the learners?

Vocabulary and listening

Most listening activities require a smaller vocabulary than reading activities – around 6000–7000 words for unsimplified material. Listening is a very important source of vocabulary learning and provides excellent opportunities for what Krashen (1981) calls “comprehensible input”. To set up the best conditions for vocabulary learning through listening the teacher should:

- give learners listening where the number of unknown words is small – preferably no more than one unknown word per 100 words
- make sure that learners have a good understanding of what they are listening to, so that they can guess the unknown words from context clues
- quickly write a few of the important target words on the board when they occur in the listening, and briefly explain them, without interrupting the flow of the listening too much
- enable learners to exercise some control over the input by encouraging them to ask questions about what they are listening to and encouraging them to control the speed and repetitions of the input by telling the teacher to “Please say that again!” and “Please speak more slowly!”
- observe the learners carefully to make sure they are keeping up and repeat, slow down, restate parts of the input, and note points on the board to help them understand and keep up.

Listening material can include graded readers read to the learners, explanations of content subjects, classroom instructions, interactions with other learners, and watching DVDs.

* Listen and read

A simple but useful technique is to get learners to quietly read a text while they listen to it. Most graded readers now come with a DVD or with an accessible recording of the text. Each learner

can read a different text at the right level for them and listen through headphones. This activity helps vocabulary learning and helps connect spoken and written forms of words. Some apps allow the speed of the listening to be changed and this can help develop listening fluency.

Vocabulary and reading

Quite a large vocabulary of around 8000–9000 words is needed to read newspapers, novels and academic texts. Because it takes several years to reach this vocabulary size, the use of specially graded reading material is essential if learners are to have comprehensible input for reading. To set up the best conditions for vocabulary learning through reading the teacher should:

- provide texts where at least 98% of the running words are familiar to the learners; at the most, no more than one unknown word in every 50 running words – the maximum density of unknown words for unassisted reading
- provide plenty of interesting graded reading material – most major publishers have several series of graded readers at levels beginning around 100 words and going up to around 3500 words. There are also mid-frequency readers at the 4000, 6000 and 8000 word levels available free from Paul Nation's website.
- get learners to do large quantities of reading in order to get plenty of repetitions of vocabulary
- provide some reading that is a little more difficult than that ordinarily used for meaning-focused input and that can be used for assisted intensive reading where there is a deliberate focus on vocabulary and other language features
- provide learners with opportunities for fluency development by getting them to do a timed speed reading course and extensive reading of very easy material.

Reading material can include the English course book, graded readers, content-based texts like science texts and history texts, material found on the Internet, other learners' writings, texts and course material provided by the teacher, and books for reading for pleasure.

Learning vocabulary through listening and reading

*** Listening to classroom instructions**

Using English as the language of classroom management is a useful way of providing repeated listening input. At first the teacher needs to be careful to use a small number of repeated expressions like:

Open your books at page 15.

Move into reading groups.

As the learners become familiar with the limited set of expressions, the teacher can begin to use more varied language. Most classroom directions are related to the here-and-now and so can usually be easily understood from the context.

Task 4.1 Work with a partner to make a list of ten useful classroom instructions in English that you could regularly use in the classroom with a selected group of learners. Justify the wording of these instructions.

*** Listening to stories**

Listening to stories is an enjoyable activity that can be used to relax a class and to give them a rest while still providing good opportunities for vocabulary learning. The teacher chooses a graded reader that contains only a small amount of vocabulary just beyond the learners' present level. The story should be interesting. A list of award-winning readers can be found at the Extensive Reading Foundation website at <http://www.erfoundation.org/>. The

teacher then sits near the board so that she can write on it without getting up, and reads the story to the class who just have to listen. In the early stages of reading the story, the teacher reads quite slowly and repeats sentences to make sure that the learners can follow the story. Any words that may be new to the learners or which they may have trouble recognising in their spoken form are quickly written on the board. When those words occur again in the story, the teacher points to them on the board. Where necessary, quick translations or explanations are given for some of the words. The teacher reads a chapter or a few pages each day, so the story becomes like a radio or TV serial that the learners look forward to.

*** Intensive listening and intensive reading**

Listening to explanations of subject content can be a form of intensive listening. That is, the learners listen with the support of the teacher and accompanying material. Intensive reading is also well suited to subject content and can be a good way of giving deliberate attention to vocabulary. We will look at intensive listening and intensive reading in detail later in this chapter.

*** Extensive reading**

Graded readers are an important resource in language learning and teaching. They can provide material at a level which suits the learners' present proficiency level, and can do this at a very wide range of levels. They are sometimes criticised because they are not authentic. However, there are two ways of looking at authenticity. One is to see authenticity as a feature of a text. The other is to see authenticity as a feature of the use that the learner makes of the text.

Usually a text is considered to be authentic if it was written by and for native speakers of English and if it is a text that native speakers would typically meet in their daily life. Most of such authentic

texts are likely to be very difficult for non-native speakers who do not have advanced proficiency in the language. Learners are often eager to work with such texts because they often represent the language use goals that they are aiming for.

The use that learners make of a text is authentic if they respond to it in much the same way as native speakers or highly proficient users of the language would respond. That is, a reading text is used authentically when the readers gain information from it, read it with a reasonable degree of ease, react to it with pleasure or find it boring, perhaps are critical of the way it is written, and see how the information in it relates to their own lives and knowledge. To be able to do these things, the learners' proficiency level and the text need to match up. In other words, the text needs to be at a level which will provide meaning-focused input for the learners. Graded readers are essential if learners are to have authentic reading and listening experiences. A quick look at a graded reader and the original text on which it is based shows the reasons for this. The text *Lord Jim* is available as a graded reader at level 4 in the Oxford Bookworms series. Table 4.1 compares the vocabulary load of the graded reader version and the original text.

Table 4.1 A vocabulary load comparison of the simplified and unsimplified versions of *Lord Jim*

	Graded reader	Original text
Length of the text	20,123 tokens	152,538 tokens
Percentage of running words in the first 2000 words of English	92.81%	87.82%
Number of different words outside the 2000 word level	179 word families	4284 word families

(to be continued)

(continued)

	Graded reader	Original text
Number of different words outside the first 2000 word level occurring only once	75 types	2828 types

The original text is much longer and would be a challenging read for a beginning or intermediate non-native speaker. Note that in the graded reader, almost 93% of the running words are within the first 2000 words of English (proper nouns have been excluded from these figures). This means that there is on average one unknown word in every fourteen running words. The original text has a much greater percentage of words outside the first 2000 and the number of these occurring only once in the text indicate the chances of learning vocabulary from the text. The original has a very rich vocabulary but most of the words do not get enough repetitions to help learning and many of them are also words that will not be the most useful words for the learners to add to their vocabulary at this stage. Here are some of the one-timers from the original text – *blotches, blubber, espousal, somnolence, sonorous, wraith, yoke*. Learners would be much better off learning more frequent words.

Task 4.2

A teacher has criticised the use of graded readers saying they are not authentic texts. Briefly list four arguments to oppose this view.

Running an extensive reading programme

We have seen how graded readers are essential if we are to have a meaning-focused input strand in a language course. We have also seen how graded readers are essential if we are to have an

extensive reading programme where learners gain authentic reading experiences. Let us now look at what research tells us about how an extensive reading programme should be organised.

Here are the levels from the Oxford Bookworms series.

Table 4.2 Oxford Bookworms vocabulary levels

Level	New words	Cumulative words
1	400	400
2	300	700
3	300	1000
4	400	1400
5	400	1800
6	700	2500

Ideally, learners should start reading at a level where 98% of the running words are already familiar to them. Choosing this level can be done by trial and error, or by using information from a test like the Updated Vocabulary Levels Test or the New Vocabulary Levels Test.

There should be plenty of interesting and attractive books for learners to choose from at each level. Learners should choose for themselves and stop reading a book and change it for another if they do not find it interesting. Learners should read at least one book every week. It is better if they read more than this. Doing this allows the memory of previously met vocabulary to be strengthened and enriched by new meetings with it. If learners read fewer than one book every two weeks, then they may forget previous meetings before the vocabulary is reinforced. It is also

good to read at least three books at a level before going to the next level. This makes sure that all the new words at a level will be met several times (Nation & Wang 1999). The main requirement for a good extensive reading programme, however, is that learners get excited about reading. This can be helped by getting learners to talk to others about the books they have read, giving rewards to learners who read a lot and “advertising” good books by showing them and talking about them in class. Ideally just under a quarter of the total course time should be spent on extensive reading.

Task 4.3

Work with a partner to decide how you will fit extensive reading into your course. Discuss the questions below.

- *Will you get learners to do most of the extensive reading in class or give it as homework?*
- *Will you have special times for extensive reading?*
- *How will you start the learners off on extensive reading?*
- *How will you monitor how much extensive reading learners are doing?*
- *How will you keep your learners enthusiastic about extensive reading?*

One of the best experiments on vocabulary learning from reading a graded reader is a study by Waring and Takaki (2003). It is in the web-based journal *Reading in a Foreign Language* which can be accessed at <http://nflrc.hawaii.edu/rfl/>. In the study, the learners read a graded reader containing 26 words that they did not know. After reading, they sat three vocabulary tests. That is, each word was tested in three different ways – a word form recognition test (Did you see this word while reading the text?), a multiple-choice test and a word translation test. Each of these tests measure different strengths and types of vocabulary knowledge. On average, the learners correctly chose 15 out of the 25 words as ones they had

seen in the text, correctly answered 10 out of 25 multiple-choice items and correctly translated 4 out of 25 words. Waring and Takaki see the translation test as the most valid measure of learning, but this understates the vocabulary learning benefits. Another way to consider the results is to say that by reading one graded reader, about four words were well learned, about another 6 (10 minus 4) were well on the way to being known, and another 5 (15 minus 10) had been taken a first step on the journey to being known. This is a very good outcome when it is considered that vocabulary learning is not the only goal and not necessarily the major goal of extensive reading. Several other older studies support the finding that only a few words are learned well from reading one graded reader. Waring and Takaki's use of three tests for each word made it possible to see that looking at thorough learning using only one test does not give the full picture.

One of the most important studies on the benefits of extensive reading was a study in Fiji (Elley & Mangubhai 1981). The tests used in this study, however, did not try to measure vocabulary learning but looked at effects of extensive reading on grammar knowledge, reading skill and writing skill. This study and others repeating it (Elley 1991) have shown that extensive reading can have a wide range of learning benefits. This has encouraged the suggestion that such reading is all that is necessary for learning a second or foreign language. However, there is plenty of evidence that other kinds of learning and other focuses (as reflected in the four strands) can help learning (Ellis 2005).

A typical list of the benefits of extensive reading for the learner notes that it:

- enables learning of new vocabulary incidentally
- establishes known vocabulary

- improves reading skills
- provides enjoyment
- develops fluency in reading
- develops other skills like writing and listening
- develops knowledge of grammar
- provides access to literature.

This chapter has focused largely on the vocabulary aspect of extensive reading and using graded readers. An extensive reading programme is an essential element in a well-designed vocabulary development programme. The irony is that by limiting the vocabulary, learners actually have better opportunities to learn more vocabulary and to learn it well than by reading unsimplified texts. The benefits of using graded readers were recognised over eighty years ago by pioneers like Michael West (1955). Subsequent research has supported their beliefs and experience. Teachers now need to continue to put these research findings and experience into practice.

* **Intensive reading and listening**

Intensive reading involves the teacher and the learners working together to understand a text and to help the learning of language features that will be useful in other texts. Therefore the two major criteria for deciding which items to focus on are:

- 1 items that are essential for understanding a particular text
- 2 items and strategies that will be of use beyond this text.

The following vocabulary items and strategies will be of use beyond the text:

- *High frequency words*. These 3000 words are important for all users of the language. Attention to them is repaid well by later opportunities to meet and use these words.

- *Academic words.* Words from the Academic Word List are very common in all kinds of academic texts and in newspapers.
- *Technical words.* These words are highly likely to occur again in the same subject area.
- *Vocabulary coping and learning strategies.* These include guessing from context, using word parts, using a dictionary, and the unknown-to-known imaging strategy where learners relate new material to old using images (see Chapter 6).
- *Systematic features of vocabulary and vocabulary use.* These include sound-spelling correspondences, word parts, grammatical features, collocations, and constraints on the use of words, particularly the constraints of formality (compared with colloquial language) and frequency (infrequent words compared with very frequent words).

There are several ways teachers can deal with words in intensive reading (see Nation (2004) for further discussion):

- Deal quickly with the word, giving its meaning and perhaps pronunciation. Ways of quickly giving the meaning include translation, a quick drawing, giving a second language synonym, explaining in the second language, showing an object or pointing to something in the textbook.
- Spend time on the word, focusing on at least two aspects of its form, meaning or use. This could include looking at the prefix, stem and suffix of the word, the word's spelling and pronunciation, the meaning of the word and its related uses, the lexical set it fits into if most of the members are known, the grammar and collocations of the word, and constraints on the use of the word. (Is it a formal word? A colloquial word? A rare word? A technical word?)
- Use the word as an opportunity to train learners in the strategies of guessing from context, and using word parts, a dictionary or unknown-to-known imaging. This has the double benefit of focusing on a word and learning the strategy.

Drawing attention to words in intensive listening is similar to drawing attention while reading, except that the time pressure on listening limits the possibilities.

Task 4.4

Read the text below. Choose three words that you would focus on during intensive reading. Write the answers to these questions in the table below the text.

- *Why would you focus on each of these words?*
- *What aspects of each word would you focus on? (See Table 1.4 in Chapter 1.)*
- *How will you focus on the words?*

Money in History

- The oldest currency still used today is the UK's pound sterling. It was first used in the 700s A.D.
- In the US, Benjamin Franklin designed a coin worth one cent in 1787. It had the words "Mind Your Business" on it. Coins in the US today have the words "In God We Trust" on them. The first coin like that appeared in 1864.

Making Money

- How many trees are cut down each year to make banknotes? Zero! Banknotes are not made from paper.
- Every year, the US government prints more than \$900 million worth of new banknotes and coins. But the company that makes the game Monopoly prints more than that! Every year, the company prints \$30 billion in Monopoly money!

Money's Cost

- It costs twice as much to make a US penny than the money is worth. With the cost of materials and labor included, it costs about 2.41 cents to make one penny.
- Along the same lines, it costs 11.18 cents to make a US nickel, which is worth five cents. On the other hand, it only costs 5.65 cents to make a dime, which is worth ten cents.

(from Fast Track Book 1, page 28)

Word	Reason	Aspects	Technique
1			
2			
3			

* Using experience tasks to prepare learners for texts

Intensive reading helps learners while they read a text. Turning reading or listening into an experience task involves helping learners before they read or listen to the text. There are three major ways of helping learners:

- 1 *Simplifying the text.* Choose a text on a topic that the learners already know a lot about, or simplify or adapt a text to suit learners' present knowledge.
- 2 *Stimulating previous experience.* Stimulate, share and organise learners' existing knowledge of the topic by brainstorming and discussing the topic in groups or with the whole class.
- 3 *Preteaching.* Preteach vocabulary and content matter.

The idea behind each of these three ways is that, when the learners come to the text, they already have a substantial amount of experience. This is why this way of setting up a task is called the "experience" approach. As a result of the control or preparation, the reading or listening task should be largely very familiar to the learners. The experience that learners bring to a task includes:

- knowledge of the language items, such as vocabulary and grammar knowledge
- knowledge of the content matter
- skills in listening, speaking, reading and writing
- familiarity with the types of discourse being used.

There are many ways of setting up experience tasks. When looking at the following activities, it is worth thinking which of the three ways above they fit into – simplifying the text, stimulating previous experience, or preteaching.

- Before the learners read or listen to the text, the teacher explains the content to them in the first language.
- The text is rewritten with helpful subheadings, definitions, pictures and diagrams to make it much easier to understand.
- Before reading the text, the learners read a simpler text on the same topic.
- Before reading the text, the learners work in groups to fill in an information transfer table on the same topic like the one in Task 4.4 above.
- Before reading the text, the learners watch a DVD on the same topic and then talk about it.
- The learners do an experiment or get involved in some activity like a field trip before reading the text on the same topic.

During most of the preparatory activities described above, the teacher should bring in vocabulary that will occur in the later reading. Thus, when learners eventually read the text, they will know most of the vocabulary or it will be at least partly familiar to them. A useful way of making experience tasks is to use linked skills activities. Linked skills activities involve a sequence of two or three or more activities all focusing on the same topic but using a combination of listening, speaking, reading or writing skills. So, for example, the learners can talk about a topic, then write about it, and finally read a text about it. The final task in the series is an experience task because the previous tasks have prepared learners for the final task (see Nation (2013c), Chapter 15 for more about linked skills activities).

An important characteristic of experience tasks is that learners do them in much the same way that a native speaker would do them –

without a lot of outside assistance during the task, and with a reasonable degree of ease and fluency.

Experience tasks and the preparation for them can help vocabulary learning by:

- setting up good conditions for guessing from context
- establishing well-formed concepts
- providing plenty of repetition of the target vocabulary
- enabling learners to meet the vocabulary in a variety of ways
- building on the direct teaching of vocabulary.

* **Getting help with the text from others**

So far, we have looked at two ways of helping learners deal with difficult texts – intensive reading, and turning the reading or listening into an experience task. We will now look briefly at a third way – getting help from other learners.

Learners can listen to or read a text in pairs or in a small group. As they read, they can discuss what they are reading, seeking clarification through the discussion and consulting a dictionary or the teacher. This can also happen with listening if there are times when the teacher pauses the spoken input so that learners can talk about what they have listened to so far.

Task 4.5

Paired reading involves two learners working together to read a text. They discuss the text with each other as they read to make sure they really understand it. What would you look for to see if paired reading was contributing to vocabulary learning? For example, did the vocabulary in the text occur in the discussion? Suggest two or three other things to look for.

Discussion of a text can help vocabulary learning in several ways. Firstly, some of the vocabulary will get focused, deliberate attention and its meaning in the context will be directly discussed. Deliberate learning is usually very effective. Secondly, the meanings of the words will be set within the meaningful context of the text. These rich associations will help the word be retained in memory. Thirdly, if the word occurs in the discussion, this provides repetition of the word (it occurs in discussion and in the text) and these repetitions are likely to be varied repetitions, that is they will differ from each other. Repetition and varied use are conditions favouring vocabulary learning.

Useful deliberate learning

When English is learned incidentally, the focus tends to be on the meaningful use of words, with language learning being incidental to the content-focused task. However, because of the effectiveness of deliberate learning, it is worth looking at how the deliberate learning of vocabulary can be included in a unit of work.

Firstly, words can be directly taught in the preteaching of vocabulary before learners read a text. They can also be taught as a part of intensive reading. They may occur in a glossary that accompanies the text. They may also occur in discussions where learners work together on the text. Using the first language to convey the meanings of words is very effective.

Secondly, teachers can deliberately train learners in vocabulary strategies.

Thirdly, learners can put these strategies to use by consulting dictionaries, doing word part learning and word part analysis, and

learning words on word cards.

It is important that learners give deliberate attention to vocabulary and there needs to be a balance between incidental learning and deliberate learning. One without the other is not enough. Together they are a strong combination.

Fluency development

Learners need to know vocabulary but they also need to be able to access it fluently when it is needed. Some fluency development can focus on isolated words. For example, it is very effective to practise accessing numbers quickly. This can be done by quickly dictating numbers to the class “ten, eight, five”, while they write the figures 10, 8, 5.

However, most fluency development needs to involve learners working with extended texts. It is worth running a speed reading course for learners. This takes about five to ten minutes per session and needs to be done about three times a week for about seven weeks. Each session involves the learners quickly reading an easy text, noting the time taken to read it, and then answering ten questions on the text. They mark their own answers. They record their speed and competence on a graph. Speed reading courses are at the 500 word level, the 1000 word level, the 2000 word level and 2000 plus Academic Word List level. These courses are available free from Sonia Millett’s website. These speed reading courses in a controlled vocabulary are very effective and greatly increase the amount of reading that learners can do. Other fluency development activities are repeated reading, where learners read the same text several times, and reading easy graded readers.

All fluency development activities are experience tasks, that is, they need to involve easy material. They should not contain unknown vocabulary or grammatical features, there should be some pressure or encouragement to read faster, and there should be plenty of practice. About one quarter of the time in a course should be spent on fluency development.

Summary

Typically learners need a large vocabulary of around 6000 to 9000 words to cope easily with unsimplified listening and reading. Because of this it is important that a language course has a strong extensive reading programme that allows for successful and enjoyable reading at all levels of proficiency. This necessarily involves the use of graded readers. These controlled or simplified texts can provide authentic reading experiences for learners and these can make a major contribution to language learning. Teachers also need to optimise learning by doing intensive reading and listening, by using experience tasks where learners bring a lot of knowledge to the task, and by using shared tasks where learners support each other.

What should a teacher do after reading this chapter?

- 1 If you have not heard about graded readers before, search for them on the web. Get hold of a graded reader and read it to see what they are like. There are two free elementary graded readers on Paul Nation's website. Graded readers are very valuable resources for learning English. Find ways of making graded readers available for your learners.
- 2 Learn more about extensive reading programmes beginning with the guide to extensive reading on the Extensive Reading Foundation website. Include an extensive reading programme in your course. It is the most effective change you can make to a

language course.

3 Look at each of the techniques and activities described in this chapter. If some of them are new to you, consider including them in your course.

4 Look at Nation (2007) (available under Publications on Paul Nation's website) to learn more about experience tasks. Turn some of the things you do in your course into some experience tasks.

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CHAPTER FIVE

VOCABULARY AND THE PRODUCTIVE SKILLS OF SPEAKING AND WRITING

PREREADING QUESTIONS

Think about a recent lesson you taught.

- How did you prepare the learners for the activity?
- How did you monitor the activity to see if learners were learning?
- How did you get learners to work together?

Vocabulary and speaking and writing

It is possible to cope effectively with speaking and writing using a much smaller vocabulary than is needed for listening and reading, less than 3000 words. This is because learners can control what they produce but have little control over what they have to listen to or read. To set up the best conditions for vocabulary learning through speaking and writing, the teacher should:

- provide learners with substantial receptive practice with the words before they need to use them productively
- provide models as support so learners can use the words productively
- tolerate incorrect use of the words until the learners begin to feel comfortable using them
- provide helpful feedback to improve use of the words
- design tasks that encourage the use of the target vocabulary.

Learning vocabulary through speaking and writing

* Substitution tables

A substitution table looks like this.

We They	waited wished decided preferred intended refused	to	go leave stay remain part think about it again have another try make another attempt
------------	---	----	---

The learners make sentences from the table by joining the parts together. Here are some examples. *They decided to remain. We*

preferred to think about it again. We refused to part. Note that every sentence is a sensible grammatically correct sentence. Learners make sentences from the table either orally or in writing.

* Copying texts

Learners at very low levels of proficiency may find value in copying texts. This can be especially helpful where the writing system of the learners' first language differs from that of English. The vocabulary in the text needs to be familiar to learners. The teacher can train learners to do delayed copying (Hill 1969). This is where learners look at a phrase in the text and then try to hold it in their memory. Then they look away from the text and write a phrase without looking back at the text. The aim of the activity is to hold as long a phrase as possible in their memory. It does not matter how long learners look at the text trying to remember the phrase.

There is a spoken version of this copying activity called Read and Look Up (West 1941). Readers hold a text just below eye level and slightly to the left. They look at a phrase in the text, try to hold it in their memory and then look at their partners who are sitting facing them. They then say the phrase without looking back at the text. The listeners have the job of checking that the readers do not look at the text while speaking. This activity can be a good preparation for a prepared talk. Dictation is another similar technique in this family of related techniques (Nation 1991a).

* Dictation

A text for dictation is around 100 words long. The learners should already know all the vocabulary in the text. The teacher reads the whole text aloud for the learners to listen to it. Then the teacher reads it phrase by phrase and the learners write what they hear. If the learners are not good at listening, each phrase can be read

twice. Each phrase should be around five words long and should be a grammatically coherent phrase. It is a good idea for the teacher to cut the text into phrases before presenting the dictation. Then when the dictation is completed, the teacher reads the whole text again so that the learners can check their work. Then the teacher can project the whole text on the board so that the learners can correct their own work.

Before correcting their work, the learners can compare their completed dictation in pairs and then in small groups to see where there are differences, and to work out what the right form might be.

* **Dicto-gloss**

Dicto-gloss (Wajnryb 1988, 1989) is a guided writing task that also involves a lot of speaking. The teacher chooses a passage of around 150 words that contains familiar vocabulary and that is based on a previous unit of work. The teacher reads the text aloud to the learners at a normal speed. They can take notes while they listen and can ask the teacher questions about the passage after listening. Then they hear the text again. In groups of three or four, they have to reconstruct the text from memory. This involves a lot of discussion amongst the members of the group. Much of this discussion will focus on language, that is, vocabulary and grammar. This activity is especially useful if the text they are trying to reconstruct is one that contains a lot of important ideas from the material they have recently studied.

An activity like dicto-gloss is good for vocabulary learning because it:

- moves vocabulary that learners have met receptively into productive use
- involves some deliberate attention to vocabulary
- allows learners to work together to clarify word form, meaning and use issues.

*** Issue logs**

An issue log is a very effective technique involving speaking and writing, as well as listening and reading. Early in the course, the teacher helps each learner choose a topic that is related to the course content but that is not dealt with in depth during the course. For example, if pollution is dealt with in the course, then possible topics could be electric cars, anti-smoking laws, recycling computers, and wind generation of electricity. Each learner chooses a different topic and during the course gathers and organises as much information as possible about this topic. Sources of information could include the course book, newspapers, television and radio news, the internet, books and journals, and other people. Each week the learners gather in small groups in class and tell the others in their group the new information they have found. They also keep a written record of this information and eventually produce a report summarising and integrating the information for others to read. Because the learners are getting information in a narrow topic area, they will quickly have control of the technical vocabulary of that topic and will have a deep understanding of the ideas involved. This sets up good conditions for producing oral and written reports that use the vocabulary of that topic.

Presenting formal talks and writing academic reports are important parts of academic study and it is good if they are well prepared for. Requiring the learners to make weekly reports to others ensures that the data gathering and the thinking about the topic are done over a period of time and not hastily gathered just before the talk or report is due.

Task 5.1 Choose a topic from the curriculum and think of ten smaller related topics that could be used for learners' issue logs.

There are several very good features of issue logs which will help vocabulary learning. These are described below.

- Certain vocabulary related to the topic will occur several times during the activity as well as the collocations that these words occur in. There is also likely to be useful repeated academic vocabulary from the Academic Word List.
- The learners have to process the vocabulary in a thoughtful way to be able to prepare a summary and to write an assignment on the topic. Interacting with other learners and dealing with their questions will also encourage thoughtful processing of the ideas and vocabulary.
- Learners will have to read about the topic, listen to information about the topic, talk about it and write about it. This turns the activity into a kind of linked skills activity which will encourage varied use of the vocabulary. Varied use is an excellent condition for helping retain vocabulary.
- There will be several repeated opportunities in the activity to guide the successful production of the vocabulary. Repetition helps learning.
- Issue logs are interesting because learners soon know a lot about the topic and become a kind of local expert on it.
- Issue logs involve the learners working alone, in small groups and as a whole class. The individual work encourages independence. The group work encourages cooperation and learning from each other. The class work builds confidence in presenting material to large groups and pushes learners to perform well.

We have used issue logs to illustrate good conditions for vocabulary

learning and so let us now make a general summary of the features that encourage vocabulary learning through such discovery-based activities.

- 1 The target vocabulary occurs in the written input. The greater number of times it occurs, the better.
- 2 The learners need to use the vocabulary during the activity.
- 3 The learners are actively involved and interested.
- 4 The learners use the vocabulary in ways that encourage learning. The learners:
 - i process the vocabulary thoughtfully
 - ii use the vocabulary both receptively and productively
 - iii can negotiate the meanings of the words with each other
 - iv use the vocabulary several times in a variety of contexts
 - v have opportunities for varied use of the vocabulary, that is, they can use the vocabulary in ways that differ from the ways it is used in the written input.
- 5 The vocabulary is set within the wider framework of the topic of the task. Words in sentence type relationships are learned more easily than unrelated words or words in lists (Nation 2000).

The five features listed above can be used to guide and evaluate the design of activities to ensure that they are providing good conditions for vocabulary learning. A few small changes to issue logs could further help vocabulary learning, although it already sets up several good conditions for learning. The learners could report on their findings to others. If the learners use only brief notes or no notes when reporting to each other, then they would have to retrieve the vocabulary they needed from memory. If the listeners listening to an issue log presentation have a chance to think of questions in pairs before asking them, there will be more discussion and feedback on the presentation and more use of the target vocabulary.

Teachers should look carefully at each kind of activity they use to see

how they can make it most effective for vocabulary learning (see Webb & Nation (2017) Chapter 5 for more examples of this kind of analysis).

Coping with difficult speaking and writing tasks

Speaking and writing tasks can be made easier by providing support and guidance during the writing task, by sharing the job with others, and by making it an experience task (Nation 1990). We will look at each of these three ways in turn.

*** Guided tasks**

Teachers can guide learners by:

- having a model to follow
- having questions to answer or a set of points to address
- providing items to classify or reorganise.

Here are examples of each of these types of guidance.

Following a model

It can be helpful if there is a model for learners to follow when doing speaking or writing. For example, when describing something, a learner can follow a set model (Nation, 1978).

It's black and silver.

It's heavy.

It's made of metal and rubber.

It costs a lot of money.

We can find it on the roads.

It has two wheels and a motor.

It is used for going from one place to another.

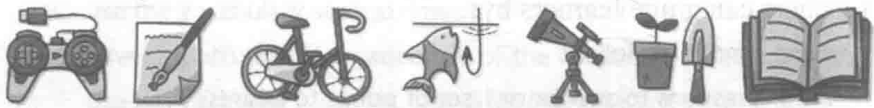
This set of sentences can be used to describe most things by substituting the appropriate words in the underlined parts of

the sentences.

Answering guiding questions

The second kind of guidance involves guiding questions. Guiding questions are a useful way of making the speaking or writing task easier. The greatest guidance is provided when the words used in the questions can also be used in the answers.

Read the examples of some popular hobbies. Where do people do them? What equipment or things do they need? Fill in information for two more hobbies. Then share your ideas as a class.



Hobby	Where to do it	What you need to do it
Gardening	<i>a yard, a small area of land, pots</i>	<i>seeds, plants, water, garden tools</i>
Fishing	<i>a pond, a lake, a fishing cafe</i>	<i>fishing pole, bait, lures, knife</i>
Watching movies		

(from Fast Track 2, page 27)

This kind of activity does not require learners to retrieve vocabulary from memory, but it does slightly change the context in which the vocabulary appears, that is, a question becomes a statement. This provides a small degree of varied use which helps learning.

Classifying items

Activities in which learners have to classify items are very useful for developing vocabulary knowledge. Classifying or reorganising items requires three major kinds of speaking – naming the items, seeking information about them, and deciding where to put them. Naming the items develops familiarity with the forms of the words. Seeking or providing information about the nature of the items develops understanding of the concepts. Deciding where to put them can develop knowledge of both the form and concepts of the classification categories.

Here is an example of a classification activity (Nation & Hamilton-Jenkins 2000).

Group these jobs into those that you think require registration (like nursing) and those that do not.

teacher	doctor	shop assistant
lawyer	plumber	bus driver
cleaner	engineer	computer programmer

Guided tasks provide useful support while the speaking or writing is being done. They are particularly useful when there is a standard way of expressing something. Their main disadvantage (which can also be seen as an advantage) is that part of the work is already done for the learner. To get the greatest benefit from guided tasks, this guidance should be gradually removed as the learners get more proficient.

* Shared tasks

Learners can work with others to describe or explain something orally or to produce a piece of writing. By sharing the task, learners

can reach a higher than usual standard of performance because they can motivate each other to do the task. They can also explain ideas, language items and procedures to each other so that understanding and learning are increased, and they can get more work done by dividing up the parts of the task.

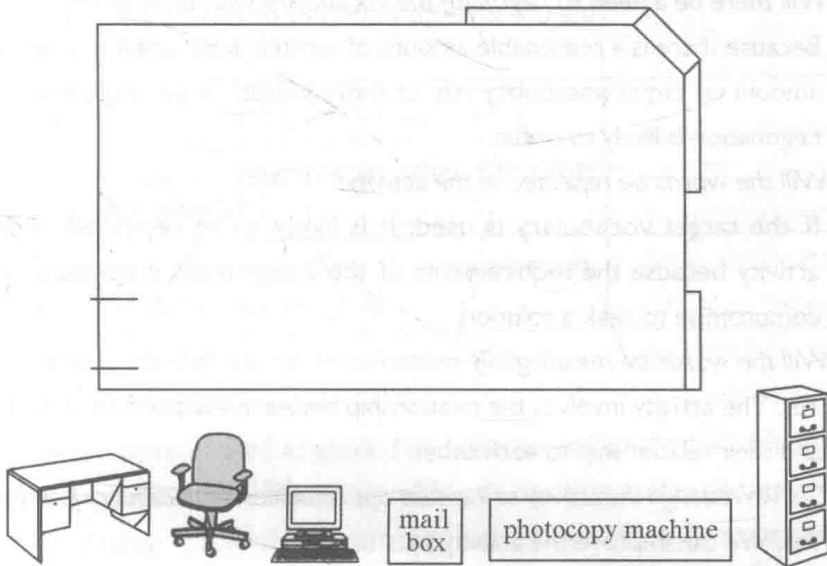
Shared tasks can help develop vocabulary knowledge (Nation 2000) by providing learners with opportunities to:

- hear others using the target vocabulary (this accounts for most vocabulary learning during shared tasks)
- use the words themselves
- negotiate the meanings of words and the forms of words (spelling and pronunciation) with each other (even just observing this negotiation helps learning)
- hear repetitions of the words as different members of the group use the vocabulary
- set the vocabulary within the wider framework of the topic of the task. (Words in sentence-like relationships are learned more easily than unrelated words or words in list-like relationships.)

Let us look at a discussion task to see how these opportunities might occur (Nation 1991b).

The secretary of the organisation is going to move to a new office located in a sunny corner of the building. Work together in groups to arrange the office furniture in the best possible way. In the plan, the room and furniture are all drawn to scale. While you do the arranging you should cut out the pieces of furniture and place them on the plan to see if they will fit where you want them to go. You should also be careful about the following things.

- The computer should not be in direct sunlight and its screen should not reflect light.
- The computer should not sit on the desk.
- Many people come into the office to use the photocopier and collect mail.
- The photocopier is a little noisy.
- It should be possible to move easily from working at the desk to working with the computer.



The activity requires the learners to work in groups. They need to meet the requirements set up by the task. The target vocabulary (*sunlight, noisy, reflect, organization, locate, collect, possible, arrange*) is in the written input to the task.

The following questions can be used by the teacher to evaluate the vocabulary learning potential of an activity.

- 1 Will the activity allow use of the vocabulary? Will it be generative use?
- 2 Will there be a need to negotiate the vocabulary with each other?
- 3 Will the words be repeated in the activity?

- 4 Will the words be meaningfully related to other words in the activity?
- 5 Can we redesign the activity to increase opportunities for vocabulary learning?

Let us apply these five questions to office design activity.

- *Will the activity allow use of the vocabulary?*

The words in the written input *locate*, *furniture*, *sunlight* etc. need to be understood. They also need to be used as description and justification when doing the activity.

- *Will there be a need to negotiate the vocabulary with each other?*

Because there is a reasonable amount of written input and a reasonable amount of target vocabulary (six or more words) in the written input, negotiation is likely to occur.

- *Will the words be repeated in the activity?*

If the target vocabulary is used, it is likely to be repeated in the activity because the requirements of the design make it necessary to compromise to seek a solution.

- *Will the words be meaningfully related to other words in the activity?*

Yes. The activity involves the relationship between the parts of an office and their relationship to each other.

- *Can we redesign the activity to increase opportunities for vocabulary learning?*

Yes. We can improve the activity by:

- adding to the written input by including a few more restrictions such as background information about the secretary and the need to leave space for new technology.
- getting each group to show and justify their arrangement to another group or to the class. This will get more repetition of the vocabulary.
- including a very difficult restriction so that a solution will require some kind of compromise. This will increase the amount of discussion and thus the amount of repetition involved.

Trying out the activity will help us see if these changes are effective

in increasing the vocabulary learning opportunities or not. When trying out the activity the teacher can use the following table to take note and to guide the observation of the activity.

Opportunities	Examples from the activity
Will the activity allow use of the vocabulary? Will it be varied use?	
Will there be a need to negotiate the vocabulary with each other?	
Will the words be repeated in the activity?	
Will the words be meaningfully related to other words in the activity?	
Can you redesign the activity to increase opportunities for vocabulary learning?	

* Experience tasks

So far we have looked at guided and shared tasks as ways of helping learners cope with difficult speaking or writing tasks and as ways of increasing vocabulary learning. Let us now look at experience tasks, where either the task is designed to be within the learners' previous knowledge or where the learners are prepared for the task by preteaching or by stimulating already existing previous knowledge. We have already looked at experience tasks in Chapter 4.

In a course where English is taught using theme-based units of work, there are useful sequences of activities where the later activities rely a lot on what has been learned before. Often the effect of this is to help learners develop fluency with the ideas and vocabulary.

If a task is too difficult for the learners to do, the teacher can:

- change the task so it only draws on what the learners already know
- talk about the ideas needed to do the task, reminding the learners of things they have already studied but may have forgotten
- preteach the ideas and language needed to do the task.

Let us see how this applies to the following activity.

You want your learners to write about ways of reducing the amount of money they spend.

We could turn the writing into an experience task by

- 1 getting the learners as a class to suggest ways of saving money. Write the suggestions on the whiteboard, adding in useful words and phrases where you can. Get the learners to classify the suggestions into groups of related ideas.
- 2 getting the learners to read about things you can do to have fun without spending money.
- 3 preteaching some useful words, phrases and clauses such as *spend money, save money, find a cheaper one, make a budget, income, outgoings*.
- 4 putting up a rough plan of the main headings for the piece of writing. Discuss the plan with the learners.

This preparation before learners do the writing task will make the task much easier and should result in higher quality work.

Simplify or control

The activity contains the difficult word *gradient*. The teacher could replace this with *sloping line*. It may also be necessary to give examples of *units of measurement*.

Stimulate past experience

Before doing the activity, the teacher could draw a simple graph

on the board and ask the learners to recall the names of the parts of the graph, how the vertical and horizontal axes relate to the gradient and so on. During this revision activity, the teacher could note the important vocabulary on the board and check learners' understanding of this vocabulary. Then the learners could do the activity.

Preteaching

If the learners do not have the previous knowledge and experience needed to do the task, the teacher may have to provide that for them by teaching them about graphs and about Ohm's Law. The teacher should use this time to preteach the important words – *voltage*, *current*, *resistance*, *ohm* – spending a reasonable amount of time on each word, and looking at several aspects of the word's form, meaning and use.

In a well-designed unit of work, most tasks are already experience tasks and so control, stimulating previous experience, and preteaching may not be needed.

Useful deliberate learning

In the productive activities of speaking and writing, it is important that learners have stable representations of the spoken and written forms of words. This is necessary to help learning of the words and to help the learners feel confident enough to actually use the words. Thus, some attention to pronunciation and spelling can be very helpful. The teacher should deliberately draw attention to pronunciation, relating it to the spelling where the relationships are regular and predictable, giving learners feedback on their pronunciation, and bringing words containing similar features together so that correctly pronounced known words can be

helpfully related to problem words. Some learners may need individual remedial attention to particular sounds and this helps if it is done in a willing and supportive atmosphere. If there is no motivation to improve pronunciation, there may be little point in spending too much time doing this. Here are two activities to help with pronunciation.

Distinguishing sounds

The teacher says two words containing a sound and its common mistaken replacement, for example, *three* and *tree*. If the two words are the same, for example, *three three*, the learners do nothing. If they are different, for example, *tree three*, they raise their hands. The aim of the activity is to help learners to hear the difference between the sounds. Being able to hear the difference is a good step towards making the sounds correctly.

Identifying sounds

This activity also uses two words, but each word is said by itself, for example *three*. If the teacher says *three* the learners raise their hands. If the teacher says *tree*, they do nothing. Identifying sounds is a little more difficult than distinguishing sounds. It is a useful follow-up to the distinguishing sounds activity.

Speaking can be improved by showing regular relationships between spelling and pronunciation, by copying and recalling written forms through visualisation, and by noting analogies between known words and problem words.

It is also useful to give deliberate attention to words and phrases. Deliberate attention helps the learning of vocabulary and collocations and has positive effects on the quality of the speaking

and writing (Boers et al 2006).

Fluency development

* Fluency activities for speaking

Fluency development activities are experience tasks. That is, there should be little or no unknown language items involved in the activities and the learners should bring a lot of background knowledge to the activity. The most useful fluency activities for speaking are 4/3/2, prepared talks, and the best recording.

4/3/2

4/3/2 involves the learners working in pairs. One is the speaker, the other is the listener. The speaker chooses or is given a topic that they are very familiar with. They then talk on that topic to the listener for four minutes. The teacher controls the time. Then they change partners, moving to a new listener and repeat their talk on exactly the same topic for three minutes. Then they change partners again and talk on the same topic for two minutes. During this time, the listeners do not speak or interrupt. They each hear three different talks, each one from a different speaker. After that, the listeners become speakers and give their talk three times in the decreasing timeframe of 4/3/2. This activity has all the required features of a fluency activity:

- The activity is easy and involves no unfamiliar material – the speaker knows a lot about the topic and delivers it three times.
- The learners are encouraged to go faster – the reducing amount of time (four minutes, then three minutes, then two minutes) encourages the speaker to speak faster with fewer hesitations.
- The focus of the activity is on communicating messages – the speaker is telling something to the listener.
- There is a large quantity of practice – there is a total of nine minutes'

speaking for each learner.

Prepared talks

Prepared talks involve the learners deciding on a topic for a talk, gathering material for a talk, planning it, and delivering it several times – to another learner, to a small group and then to the whole class.

Task 5.2

Suggest four topics for prepared talks. Take one topic and do the following.

- *Briefly list at least four kinds of preparation the learner could do for the talk. Remember to include ways of practising the talk.*
- *Show how your prepared talk meets the four conditions for a fluency activity.*

1 *message focus*

2 *familiarity of language and content*

3 *pressure to go faster*

4 *quantity of practice*

The best recording

The best recording involves recording learners' written talks but having several chances to record it. After each recording, learners listen to the tape and note points where they could make improvements for the next recording.

* Fluency activities for writing

The most useful activities to develop writing fluency are ten-minute writing and linked skills writing.

Ten-minute writing

In ten-minute writing, the learners write for ten minutes each

day on any topic they choose. The teacher carefully times the writing. After each piece of writing, the learners count how many words they have written and record that on a graph. The writing is not marked for accuracy but the teacher may respond to the content of the writing, by saying things like "That was interesting. Write more on that next time". or "Explain more about this. I did not understand this point". The learners' goal is to write as much as possible in the limited time.

Linked skills writing

Linked skills writing involves activities like reading about a topic, talking about it, listening to something about it, taking notes about it and then writing about it. Many combinations of these activities are possible. If writing fluency is the goal, then the writing activity should be the final activity in the series.

Task 5.3 Suggest three sequences of linked skills activities with three parts to each sequence. Take one of these sequences and explain how the ideas and vocabulary reoccur in each of the parts of the sequence.

Fluency activities fit nicely into a theme-based programme because a programme that works through a topic or theme over several weeks allows learners to eventually bring a lot of content and language knowledge to the activities that they do. They can then do these with confidence and fluency. It should be possible to look back through a substantial unit of work to see how well a particular activity in the unit has been prepared for by the earlier work.

Developing the writing skill

To become good at writing, learners need to do regular written

work and get feedback on it, do a variety of written tasks to become familiar with writing in different genres and to develop fluency in their writing so that they can write well under time pressure.

Writing with feedback

Learners need to write regularly, around once a week, where they get their writing commented on and are guided to correct errors it contains. Teachers who are not native speakers of English may find it difficult to correct learners' writing, but at the very least they can focus on common repeated errors. With helpful feedback and with some checking systems, learners quickly learn to avoid common errors.

One way to do this is to set up a marking system like the following.

Table 5.1 A marking system for grammatical errors

Sign in the margin	Meaning of the sign	Mark in the text
A	Article usage. Incorrect usage of countable or uncountable nouns.	The noun is underlined.
J	Joining word (Conjunctions). A conjunction is missing or there are too many conjunctions.	Crossing out or an insertion mark.
Agr	Agreement. The subject and the verb or the pronoun and noun or the determiner and noun are not in agreement with each other.	The two items that should agree have a box around them and the two boxes are joined.
Sp	Spelling.	A diagonal line through the spelling error.

(to be continued)

(continued)

Sign in the margin	Meaning of the sign	Mark in the text
V	Verb group. The items in the verb group do not fit with each other.	The two items that should agree have a circle around them and the two circles are joined.
VF	Verb form. The wrong form of the verb (stem, -ing, -ed) is used.	The error is circled.
NS	Not a sentence. An essential element of a sentence (subject, verb) is missing.	An insertion mark.
P	Punctuation. A question mark or a full stop is missing.	The error is circled.

When marking the piece of work, the teacher makes a mark in the text where the error occurs (see column 3 of Table 5.1). This shows the learner where the error is. The teacher writes a letter of some letters in the margin at the beginning of the line (see column 1 of Table 5.1). This tells the learner what kind of error it is (see column 2 for the explanation). The teacher does not correct the error but uses the marks and letters to guide the learner to do the correction. Both the teacher and the learner need to learn this system. When they understand it, marking and correcting become much easier.

The teacher can teach the learner rules or guides to do the correction. For example, if you see the letter A in the margin, look at the noun and ask these questions. Is this noun countable or uncountable? If it is uncountable it should not have *a* or be plural. If it is countable, do I mean one or more than one? If I mean more

than one, it should be plural. If I mean one, it should have *a, the* or a similar word in front.

If you see the letter J in the margin, count how many verbs there are in the sentence. If there are two and you don't have a joining word (conjunction) you need to add a joining word. If you have two joining words, you only should have one.

Learners need to practise the various kinds of writing that they may need to do. These include writing lecture notes, writing reports, writing friendly letters or emails, writing texts, writing formal letters, writing answers to exam questions, and writing lists.

* * *

Summary

Discussion activities provide good opportunities for vocabulary learning, particularly if learners need to use the written input to the activity in the discussion. It is possible to design such activities for speaking and writing to support the learning of vocabulary. Teachers can help learners by turning the activities into guided, shared or experience tasks. Each of these three kinds of tasks provides useful opportunities for vocabulary learning. Fluency tasks like 4/3/2, prepared talks and linked skills activities are an important part of a balanced language programme.

What should a teacher do after reading this chapter?

1 This chapter contains descriptions of many teaching activities. Find the activities you have not used before. Learn about them by following up any references to them (look under Publications on Paul Nation's website) and looking in Nation (2013b). Try using these activities. They are described in this chapter because they are effective and well thought out techniques.

2 Read Nation (1990) on experience tasks so that you understand these kinds of tasks well. Think about your own teaching and note any times you use experience tasks. Try using some other experience tasks in your teaching.

3 Memorize the four criteria for fluency tasks – easy, push to go faster, message-focused, and involving large quantity of practice. Make sure you are regularly getting the learners to develop fluency in each of the four skills of listening, speaking, reading, and writing. Regularly using just one kind of fluency task for each skill (quicklistens, 4/3/2, a speed reading course, 10-minute writing) is enough to help learners become fluent in each skill.

4 Add regular writing with feedback to your course. Use a feedback system to make marking and correcting easier.

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CHAPTER SIX

LEARNER STRATEGIES IN VOCABULARY LEARNING

PREREADING QUESTIONS

Think about your own experience in learning the vocabulary of a second or foreign language.

- Were there any strategies for vocabulary learning that worked for you? If yes, why do you think they worked?
- Were there any strategies for vocabulary learning that did not work for you? If yes, why do you think they did not work?
- Did you try to manage your own learning of vocabulary? Why or why not?

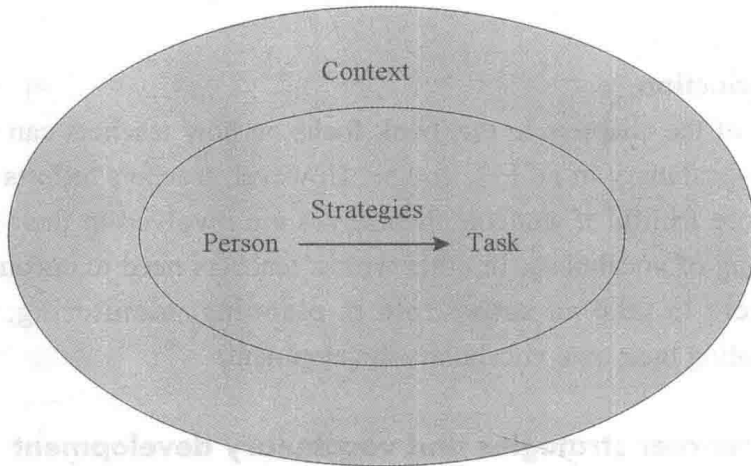
Introduction

Most of the chapters in this book focus on how teachers can deal with vocabulary in an EFL course. However, teachers' efforts will be more fruitful if students themselves are involved in their own learning of vocabulary. In other words, teachers need to encourage learners to take an active role in planning, monitoring, and evaluating their own vocabulary development.

Learner strategies and vocabulary development

A learner strategy is a series of actions a learner takes to help complete a learning task. A strategy starts when the learner analyses the task, the self, the situation, and the resources available to him or her. A vocabulary learning strategy, therefore, is the analysis of the vocabulary learning task and the planning, use, monitoring and evaluation of learning behaviours in order to acquire the vocabulary of a second language (Gu 2003b).

Figure 6.1 shows that the learner, task, context and strategy are interrelated. An analysis of learning strategies will not be complete without knowing the person-task-context configuration of the particular learning situation. Some strategies are more person-dependent, some are more task-dependent, and others are more context-dependent.

Figure 6.1 Person, task, context and learner strategies

(Gu 2005: 14)

The choice, use and effectiveness of a learner strategy depend on the learners' characteristics, the demands of the task, and the environmental or contextual affordances and constraints. Simply put, when learners approach a challenging task, they adopt certain strategies to solve the problem. This problem-solving process is constrained by the learning context in which learners tackle the problem. Language learning in general and vocabulary acquisition in particular are such problem-solving tasks at different levels of complexity. The strategies learners use and the effectiveness of these strategies very much depend on the learners themselves (for example, their attitudes, motivation, cognitive style, prior knowledge), the learning task (for example, type, complexity, difficulty, generality) and the learning environment (for example, the learning culture, the richness of the opportunities for using the language).

The vocabulary learning task

As has been shown in other chapters, vocabulary is a multidimensional

construct. The different dimensions or aspects of vocabulary require different learning strategies. Let us now look at the effectiveness of learner strategies for these different aspects.

* **Word and vocabulary**

If we think of *word* as a single item and *vocabulary* as the overall collection of interrelated words, then strategies for learning individual words should not be the same as those for developing the vocabulary in a second language. As Meara (1996: 34) rightly observes:

A vocabulary of 30–40 words can be efficiently handled by treating it as an unconnected list of discrete items. Bigger vocabularies, on the other hand, will contain subsets of words which are linked together on either semantic or morphological grounds, and these linkages must make it inefficient to treat the vocabulary as a simple list. At the very least, some sort of network structure must develop in a large vocabulary which reflects these relationships between the component items of the total vocabulary. Presumably, what makes it difficult to acquire a large vocabulary is that it takes time and effort for these connections to develop, and for a properly organised lexicon to emerge. This problem does not arise when the target lexicon contains only a handful of words.

* **The knowledge and skill aspects of a word**

There is an important distinction between the knowledge aspect of a word, that is “knowing” a word, and the skill aspect of a word, that is how well learners can control the use of the word. Learners need to “know” a word before they are able to use it automatically and appropriately in a wide range of contexts. However, learners “knowing” a word does not necessarily mean that they are able to use it in a range of contexts (Judd 1978; McCarthy 1984; Robinson 1989).

Research suggests that different mechanisms are responsible for the acquisition of the knowledge and skill aspects of a word (Ellis 1994). Explicit learning processes play a dominant role in learning a new word, and repetition and depth of processing determine to a large extent how well that new word is remembered. In other words, the more engaged we are in the learning task and the more often we meet a word, the better we will be able to remember it (Laufer & Hulstijn 2001). However, the final aim of vocabulary learning is, in addition to the memory of individual words, the automatic retrieval and production of vocabulary. In this case, processes that we cannot consciously control play a dominant role and the learning outcome depends on repetition and practice. In other words, the more we use a word, the more we will be able to automatically retrieve it when we need it for receptive or productive purposes.

Vocabulary acquisition involves both knowledge and skill, and therefore is determined by both explicit (conscious) and implicit (subconscious) learning mechanisms. Teachers should aim to enhance the vocabulary acquisition process by using strategies to help develop vocabulary knowledge (for example, memory strategies for the retention of word pairs) and those that help develop vocabulary skill (for example, strategies for contextual use and the activation of newly learned words).

* **Breadth, depth and automaticity**

Researchers often talk about the “breadth” and “depth” of vocabulary. Breadth refers to vocabulary size and is roughly the number of words a learner knows, while depth refers to how extensively words are associated with each other in the learner’s lexicon, and how well they are known. Recent years have also seen an emphasis on “automaticity”, that is the extent to which learners can automatically retrieve and produce words in normal

communicative language use. Learners need to use different learning strategies to develop vocabulary breadth, depth and automaticity respectively.

Task 6.1 Work with a partner and discuss the prereading questions. For each strategy that worked for you, which aspect of vocabulary is the strategy good for: breadth, depth or automaticity?

* Five levels of vocabulary

In Chapter 1, we distinguished five levels of vocabulary based on frequency and domain of use: high frequency words, mid-frequency words, low frequency words, academic words, and technical words. Clearly learners should use different learning strategies for each level.

When learners already have a fair knowledge of the first 3000 high frequency words, teachers need to design classroom tasks that ensure that learners continue to meet these words. Strategies that aim for vocabulary depth and automaticity of use would be suitable for learners at this level. Beyond the first 3000 words, where learners are learning English for general purposes, the next goal is to begin learning the mid-frequency words. Where English is learned for special purposes, a considerable portion of vocabulary learning is the addition of academic and technical vocabulary. A rapid development of these words would ensure a smooth acquisition of basic concepts for the content course. Therefore, memory strategies would be especially suitable for the initial stage, followed by more contextually oriented strategies for use. Mid- and low frequency words appear continually not only in textbooks but also throughout learners' lives. Learners should be trained to deal with these words differently in the kind of attention they give to them and in strategy use.

* **Stages of vocabulary learning**

From encountering a new word to incorporating the word fully into the learner's lexicon, vocabulary learning goes through a few stages. At each stage, the learning task focuses on a particular aspect of learning and the learner needs to use strategies, such as guessing the meaning of a word, to deal with the particular task.

Various researchers have identified several stages of vocabulary learning. Hatch and Brown (1995: 372), for example, outline the following "five essential steps in vocabulary learning" :

- 1 encountering new words
- 2 getting the word form
- 3 getting the word meaning
- 4 consolidating word form and meaning in memory
- 5 using the word.

Schmitt (1997) classifies vocabulary learning strategies into initial "discovery" strategies followed by "consolidation" strategies. Gu (2005) includes an "initial handling" stage, a "consolidation" stage and an "activation" stage. In the next section, we will look at the effectiveness of the strategies learners use for different stages of vocabulary learning.

Strategies for different stages of vocabulary learning

Most studies on vocabulary learning strategies have focused on strategies for a particular stage of vocabulary learning, for example, initial handling, consolidation (retention), or activation and use.

* **Initial handling strategies**

Guessing strategies

When learners identify a new word, whether and how they

guess its meaning will influence how they learn the word later. Research on contextual guessing indicates that incidental vocabulary learning through reading and listening is not only possible but also a plausible strategy for vocabulary development. However, this strategy seems to be more effective for native speakers and intermediate to advanced second language learners who already have at least a basic grasp of the four language skills (listening, speaking, reading, and writing). Even for these learners, the usefulness of incidental learning does not exclude the use of intentional learning strategies. Huckin and Coady (1999: 189–190) warned that “guessing from context has serious limitations. It is still seen as an important part of vocabulary-building, especially among advanced learners, but it requires a great deal of prior training in basic vocabulary, word recognition, metacognition, and subject matter”. The most recent tendency to see incidental learning as involving different levels of task involvement (Laufer & Hulstijn 2001) also suggests a need to combine incidental and intentional learning as a vocabulary learning strategy.

Task 6.2 Work in groups of three and complete the following steps.

- Step 1* Read the text below and, as a group, think of a target group of students. Decide on three to five potential new words from the text for your target group.
- Step 2* Take on roles as follows: A is the group leader and ensures that the group work is on task. B plays the student role and does the guessing, thinking aloud. C records all the clues B uses when guessing the meaning of each new word.
- Step 3* As a group, sum up all the clues B used for each new word and categorise them if possible.
- Step 4* Discuss the following questions:

- *Was the guessing successful? Why or why not? What made the guessing easy or difficult?*
- *To what extent could your students learn these words through guessing alone?*
- *What other possible strategies would you suggest for the learning of these words?*

Idioms are often used in speaking and writing, so it's useful to learn some of the most common ones. Here are a few that use weather-related vocabulary.

You don't want fair-weather friends. Those friends are only nice in good times. When things go wrong, you can't rely on their help.

Someone who promises to do something come rain or shine means you can depend on that promise. He or she will do it or be there, no matter what.

Have you heard that every cloud has a silver lining? That means every bad or difficult situation has some positive side to it.

(from Fast Track 1, page 41).

Dictionary strategies

There has always been a lively debate amongst language teachers as to whether learners should use dictionaries in the classroom, and if so which ones. Research on dictionaries has largely focused on comparing the usefulness of dictionaries with that of guessing (Knight 1994). Only a handful of these early studies have looked at how dictionary use can contribute to vocabulary growth (Knight 1994; Luppescu & Day 1993); most others have investigated the usefulness of dictionaries in reading comprehension. Dictionary strategies have normally been suggested without any consideration of research findings (Scholfield 1982; Thompson 1987).

However, in the 1990s and in more recent years, there has been a surge of interest in dictionary research in second language

contexts (see for example, Hulstijn 1993; Knight 1994; Laufer & Hadar 1997; Laufer & Hill 2000; Laufer & Kimmel 1997). Knight (1994), for example, discovered that while incidental vocabulary learning through contextual guessing did take place, learners who used a dictionary as well as guessed through context not only learned more words immediately after reading but also remembered more after two weeks. She also found that participants with low verbal ability benefited more from the dictionary than high verbal ability participants who benefited more from contextual guessing. Another interesting result Knight found was that high verbal ability students would look up a word even if they had successfully guessed its meaning. Research by Peters (2007) showed that the importance of a word in a text or its relevance to a task affected the likelihood of it being looked up in an online dictionary.

* **Vocabulary retention strategies**

Repetition strategies

The most frequently used approach to vocabulary involves using word lists, normally including foreign language words with first language translations listed on the side, often referred to as “paired associates”. One of the first problems learners encounter is how to commit a massive amount of second language words to memory, and the first and easiest strategy they use is repeating new words until they recognise them. It is therefore not surprising to see most of the earlier research focusing on various aspects of vocabulary repetition.

Empirical research on vocabulary repetition has produced convincing results that underscore one important message: it is necessary and legitimate to employ various repetition strategies at the initial stages of vocabulary learning. As Carter (1987: 153) puts it: “... quantities of initial vocabulary can be

learned both efficiently and quickly and by methods such as rote learning which are not always considered to be respectable. It may be dangerous to underestimate such a capacity”.

It is useful to guide learners in the use of word cards or flash card programmes to deliberately learn vocabulary. Good flash card programs apply the important conditions of retrieval, repetition, spacing, and elaboration that we looked at in Chapter Two. See Nakata (2011) for a list of criteria and an evaluation of some flash card programmes.

If you make your own flash cards, you just need some small cards about 2 cm by 5cm and you write the English word on one side and the first language translation on the other side.

Task 6.3 Work in groups of two or three. Compare the following two word lists. Figure 6.2 is from a high-achieving learner and Figure 6.3 is from a low-achieving learner. The learners created their lists after reading a passage and looking up unknown words. What are the major differences between the two learners in their use of word lists?

Figure 6.2 A high-achieving learner's entry for a word

stink /stɪŋk/ (stank, stunk)

vi. 发恶臭 That fish stinks.

He stank of garlic.

stink with money

stink in somebody's nostrils

vt. Stink somebody out

n. 恶臭

stinker

hem in the enemy 包围住敌人

Eat away, boys. There's enough time yet.

clog /klɒg/ *n.* 障碍, 妨碍

vt. 障碍, 妨碍

unclog

suffocate /'sʌfəkeɪt/

vt. 使……窒息

be suffocated by (with) excitement

suffocate the fire

vi. 闷死, 窒息

suffocation *n.*

suffocative *a.* 使人窒息的

(from Gu, 2005, p. 126)

Figure 6.3 A low-achieving learner's entry for a word

shape shape hope hope hope
 imagine imagine imagine imagine imagine
 natural natural natural natural natural
 consistent resistance resist resistance resistance
 create create create create create
 sensation sensation sensation sensation sensation
 cause cause cause cause cause
 proportion proportion proportion proportion proportion
 poke poke poke poke poke
 inspect inspect inspect inspect inspect
 existence existence existence existence existence
 consistent consistent consistent consistent consistent
 locate locate locate locate locate
 occur occur occur occur occur
 scratch scratch scratch scratch scratch
 damage damage damage damage damage
 sense sense sense sense sense
 visual visual visual visual visual
 injure injure injure injure injure
 affect affect affect affect affect
 ability ability ability ability ability
 glow glow glow glow glow
 bare bare bare bare bare
 no longer no longer no longer no longer no longer
 reconcile reconcile reconcile reconcile reconcile
 correspond correspond correspond correspond correspond
 chain chain chain chain chain

(from Gu 2005: 139)

Encoding strategies

Encoding strategies are strategies that aim to relate a new word to existing knowledge in the learner's mind. They create a meaningful connection between what the learner knows and what the learner is learning. Encoding strategies engage learners in various ways (for example, creating meaningful links, contextualising a new word) and are regarded as a deeper way of processing than simple repetition.

Memory strategies

Memory or mnemonic techniques have received the most attention among all encoding strategies. These techniques use a mediator such as an image or a sentence to create a connection in the learner's mind with a new word (Craik & Lockhart 1972). The purpose of such techniques is to make it easier to retain a difficult (usually meaningless and arbitrary) item by establishing a bridge between the target item and a meaningful, colourful, interesting, vivid, sensational or even bizarre and ridiculous mediator.

One mnemonic technique that has received the most attention is the *keyword* method, in which the learner remembers the second language word by linking it to a keyword, a sound-alike first language word, through an interactive image which involves both the second language and the first language word (Atkinson 1975).

Here is an example of the technique in use. A Chinese learner of English trying to remember the English word "customs" might first think of a keyword, a sound-alike Chinese phrase 卡死他们

(never let them through). He can then imagine a situation where many people are stopped at the customs and make up a funny image of this in his head. For example, many people are lining up in front of a large word “customs”, with someone from inside shouting “卡死他们!”.

A verbal version of the keyword method differs from the image version only at the last stage, where, instead of an interactive image, a sentence is made up in the learner's first language. In this sentence the keyword (in the first language) resembles the target second language word in form, and the target second language word is “doing something together” with the first language equivalent. For example, instead of using an image, a Chinese learner learning the English word “landlord” can think of a sound-alike Chinese phrase 懒得劳动, and then make up a sentence such as 地主懒得劳动 (The landlord is so lazy that he never works).

The second stage of the keyword method, that is the image or the sentence, involves the meaning connection whereby the keyword meaning interacts with the real meaning of the target word. It is hoped that the stimulus of the second language word will activate the sound-alike keyword, which will in turn activate the interactive image or sentence, resulting in the retrieval of the real meaning (which is embedded in the interactive image or sentence).

Task 6.4 Work in pairs. Find a word in English which sounds similar to a word in your native language. Create a mental image to link the meaning of the native language word and the English word. Draw a picture to illustrate the link. Show your drawing to your partner and discuss how learners

could use this strategy to learn English words.

Mnemonic techniques, such as the keyword method described above, have been extensively demonstrated to be effective for the retention of word pairs under experimental conditions. This is especially the case in tasks that call for the recall of word meanings when a word form is given as a prompt. There is no reason to doubt the applicability of mnemonics in situations where the aim is to remember a list of paired associates. However, so far as long-term vocabulary development is concerned, there is little evidence to indicate that mnemonic devices can compare favourably with context-based strategies that put new words to use directly.

Meaning-based strategies

Other encoding strategies that have been widely presented but not quite as extensively studied are meaning-based strategies typically using several related words, such as making use of the semantic field, semantic network or map, or semantic grid to present and organise interrelated lexical meanings (Channell 1981, 1988; Crow 1986; Crow & Quigley 1985; Stieglitz 1983). These meaning-based strategies, though intuitively appealing, tend to be, once again, not well supported by research. While some empirical evidence suggests their effectiveness (see for example Crow and Quigley (1985)), other researchers have warned against the danger of presenting closely related new words at the same time (Higa 1963; Nation 2000; Tinkham 1993).

Task 6.5 Textbooks often present terms and concepts using charts. These charts help learners not only understand concepts but also help them learn vocabulary. Study the following example and discuss how charts can help learners

remember words.

Dogs Family Country School

Loyalty

Lasts a long time Support A feeling

Form-based and context-based strategies

Compared to memory strategies and meaning-based strategies, form-based strategies, such as making use of word-formation information, and context-based strategies, such as remembering words in sentences, have not been given enough attention in empirical research. Likewise, except for a few qualitative studies (see for example Gu (2003a)), we still need more research in order to claim comfortably that strategies for using a newly learned word are indeed effective in incorporating the new word into a learner's own lexicon.

Learner self-management in vocabulary learning

So far, we have been focusing on strategies for different aspects of the vocabulary learning task. Some strategies, however, are more related to the learner than to the task. Gu (2003b: 17) indicates that good learners initiate their own learning, attend to words of their own choice, try to remember these words, and seek opportunities to use them. These general self-management strategies in learning are crucial in learning. Encouraging learners to manage their own vocabulary learning is an important first step towards developing learner autonomy.

It is interesting to note that there have been some efforts at compiling a measurement of “self-regulation in vocabulary acquisition” (Tse-
ng, Dörnyei & Schmitt 2006), with the hope of pinning down what self-management involves in accomplishing the task of vocabulary learning. This idea is based on Dörnyei’s analysis of “self-motivating strategies” (2001) and consists of five dimensions:

- commitment control
- metacognitive control
- satiation control
- emotion control
- environment control.

Commitment control strategies include learners’ efforts to maintain their initial commitment to the vocabulary learning task by deliberately reminding themselves of their expectations of success and of the value in achieving success. Metacognitive control involves learners monitoring and regulating their concentration to keep themselves on the right track. Satiation control is where learners use strategies that try to eliminate boredom in doing the task, for example by deliberately changing focus or by keeping a count of successful steps in progress. Learners use emotion control strategies to try to generate positive emotional reactions to the task and to manage negative emotions. Environmental control involves learners maximising positive environmental effects, such as asking for help in order to achieve the final goal.

While this measurement of self-management is a welcome development, it should be noted that learner self-management is more related to individual learner differences, such as learning style and personality, than to the specific task of vocabulary learning.

Developing learner autonomy

While many learners have self-management strategies, not every learner is able to manage their own learning and to learn strategically. Part of the teacher's job is to diagnose the strategy needs of the learners in the class and develop a training programme that caters to these needs.

Nation (2013a) identifies three factors that are crucial for learner autonomy: attitudes, awareness and capability. Attitudes refer to learners' motivation to be responsible for their own learning. Awareness refers to the conscious awareness of what approaches to learning are available and what is best for a particular task. Capability refers to the knowledge and skills that learners require in order to become autonomous. Clearly teachers need to take all three factors into consideration when developing their strategy training programmes.

* * *

Summary

When we talk about vocabulary learning strategies, we have to consider which aspect of the vocabulary learning task a strategy is good for. Strategies that aim to develop vocabulary size, for example, cannot be expected to develop automaticity of use as well. We should also be considering who the learner is, because learner characteristics such as motivation, learning style and willingness to take control are different from learner to learner. Ideally, the classroom teacher should take both person-dependent and task-dependent strategies into consideration, and develop a strategy training programme that caters to the specific needs of the individuals in the class.

What should a teacher do after reading this chapter?

- 1 Check if your learners are doing flash card learning, and encourage them to do this. Make sure they understand the importance of repetition, retrieval, and spacing.
- 2 Make sure that your learners are doing extensive reading at the right level so that they can practise the strategy of guessing from context. Guessing from context works best when only a very small proportion of the running words (around 2%) are unknown.
- 3 Make sure that your learners know their vocabulary size and where to find lists of the words they need to learn next. Paul Nation's website contains suitable frequency-based lists.

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CHAPTER SEVEN

MEASURING VOCABULARY KNOWLEDGE

PREREADING QUESTIONS

Look at these low frequency words:

boost, lyric, dairy, transcend, jar, thumb, grief

- Do you know some of these words?
- Can you give the meaning for some of them?
- Can you remember when you last met any of these words?

Vocabulary size

* Research on vocabulary size

No native speaker of English knows all English words. The best estimates, based on *Webster's Third New International Dictionary*, suggest that excluding proper nouns and archaic and dialect words, there are at least 130,000 word families in English (Goulden, Nation & Read 1990; Dupuy 1974). Much higher estimates (Miller & Gildea 1987; Diller 1978) are incorrect as they are based on faulty counting (Nation 1993).

Largely for reasons of practicality, research on vocabulary size has focused on receptive knowledge of written vocabulary. Unfortunately, research on total vocabulary size has suffered from severe methodological weaknesses which mean that many of the popular estimates are not correct. Although Thorndike (1924) warned of these weaknesses early in the twentieth century, most researchers were not aware of them and as a result produced over-inflated estimates of vocabulary size.

The best recent estimates suggest that young native speakers of English increase their vocabulary size by around 1000 words a year until the age of twenty or so. If we do not count the first two years of life when a child does not produce a lot of vocabulary, the rule of thumb for estimating a young native speaker's vocabulary size is age minus two times 1000. This means that a twenty-year-old native speaker has a vocabulary of about 18,000 words. A five-year-old native speaker knows around 3000 words. The research also shows, however, that there are likely to be variations in vocabulary size between individuals in the same age group, but most will be within 1000 or 2000 words either side of that

estimate. The evidence for this rate of vocabulary growth and these estimates of vocabulary size comes from direct measures of vocabulary size (Biemiller 2005; Goulden, Nation & Read 1990; D'Anna, Zechmeister & Hall 1991; Coxhead, Nation & Sim 2015), recalculations of faulty measures (Lorge & Chall 1963), and studies of likely success rates in guessing from context (Nagy, Herman & Anderson 1985).

Stahl and Nagy (2006: 29–32) consider that an average native-speaking child “learns between 2000 and 3000 new words per year”. Their higher estimates come from several differences in the methodology of estimating vocabulary size. The following four factors are certainly ones that will result in different estimates if they are applied in different ways:

- 1 the total number of words in English
- 2 what should be counted as words, for example, proper nouns, compound words, acronyms
- 3 what should be included in a word family
- 4 how words with multiple meanings are dealt with.

The most important factors are the first one and the third one and the most influential of these two is probably “what should be included in a word family”. The range of derivatives included in a word family affects the counting of the total number of words in English as well as the number of words someone knows. Bauer and Nation (1993) found that the 55,216 word types in the LOB corpus (Johansson & Hofland 1989) became 39,185 lemmas (see Task 7.1 below for examples of lemmas) and 30,786 families when the affixes up to and including Level 6 of their scale were used. As we have seen in Chapter 2, the unit of counting needs to match with the purpose of counting. Stahl and Nagy’s higher estimates are reasonable ones if the counting

is done to measure productive vocabulary, or if the estimates are used to measure the receptive vocabulary of young learners who do not yet have much control of the derivational affix systems of English.

Task 7.1

Look at the three sets of words in the table. They show how the same related words with the stem form *organize* can be divided into word families. Set 1 is one word family based on Level 6 of Bauer and Nation (1993). Level 6 includes inflections and a lot of derivational affixes. Set 2 is the same group of words divided into three word families based on Level 4 of Bauer and Nation which uses a much smaller set of affixes to decide family members. Set 3 is the same family divided into its nine lemmas. In Set 3 because only inflected forms can be members of the same family, the related words make a lot of families. Then carry out the activities below.

- 1 *From the point of view of reading (receptive knowledge), find examples for and against using Set 1 as the unit of counting. Here is one example – organisation has the meaning of a company or institution which is not easily inferred from context.*
- 2 *From the point of view of productive knowledge, find examples for and against using Set 3 as the unit of counting. Here is one example – reorganization is clearly and regularly related to reorganize.*

Set 1 Level 6 (1 family)	Set 2 Level 4 (3 families)	Set 3 Level 2 (9 lemmas)
organize	organize	organize
organisation	organise	organise
organisations	organised	organised
organise	organises	organises
organised	organising	organising
disorganised	organized	organized
disorganized	organizes	organizes
unorganised	organizing	organizing
organises	organiser	organisation
organising	organisers	organisations
organization	organizer	organization
organizations	organizers	organizations
organized	organisation	unorganized
organizes	organisations	unorganised
organizing	unorganized	organisational
organisational	unorganised	organizational
organisationally	organization	organisationally
organiser	organizations	organizationally
organisers	organisational	organiser
organizer	organizational	organisers
organizers	organisationally	organizer
organizational	organizationally	organizers
organizationally	disorganised	disorganised
reorganise	disorganized	disorganized
reorganises	reorganise	reorganise
reorganised	reorganises	reorganises
reorganising	reorganised	reorganised
reorganisation	reorganising	reorganising
reorganisations	reorganize	reorganize
reorganize	reorganizes	reorganizes
reorganizes	reorganized	reorganized
reorganized	reorganizing	reorganizing
reorganizing	reorganisation	reorganisation
reorganization	reorganisations	reorganisations
reorganizations	reorganization	reorganization
	reorganizations	reorganizations

* Estimates of vocabulary size based on language use

Estimates of native speakers' vocabulary size are not the best goals for non-native speakers because they do not take language use into account. A more satisfactory way is to estimate what vocabulary sizes are needed to perform certain tasks, such as reading newspapers, watching television, reading academic texts, or engaging in a friendly conversation. What is clear from studies that take this approach is that:

- there needs to be very good knowledge of the 3000 high frequency words of English
- even for the least vocabulary intensive tasks, like reading easy novels or engaging in conversation, learners need a minimum vocabulary size of 6000–7000 word families or more (Adolphs & Schmitt 2003; Nation 2006)
- for the more demanding tasks, such as reading academic texts, it seems likely that a vocabulary size of around 9000 word families is necessary (Nation 2006)
- for tasks involving some degree of specialised knowledge, such as academic study or the performance of a skill, profession or trade, learners need specialised vocabularies (these could range in size from a few hundred words to several thousand, for example, in medicine (Chung & Nation 2003))
- the greater the range of topics encountered the larger the vocabulary size needed (Sutarsyah, Nation & Kennedy 1994).

The most efficient way of deciding how many words learners of English need to know is to try to work out how many words are needed to do certain things, such as take part in a friendly conversation, read a newspaper or a novel, or watch TV.

Calculating vocabulary size based on language use

There are two kinds of calculations involved in working out

vocabulary size. The first is to see what percentage coverage of text learners need so they are able to read novels, newspapers or technical books, or to take part in friendly conversations or watch movies or TV programmes, or write letters or assignments. It is possible to read an academic textbook without knowing every word in it before you begin reading. But what proportion of the running words do learners need to know in order to get adequate comprehension? The best estimates that we can make from the small amount of existing research (Hu & Nation 2000; Schmitt, Jiang, & Grabe 2011) is that learners need to know around 98% of the running words before they can have adequate comprehension of a text. This means that there should be no more than two unknown words in every 100 running words, or no more than six unknown words on a 300-word page. This figure assumes that learners are not using a dictionary and have to work out the meaning of the unknown words from context clues. If learners use a dictionary then perhaps 95% coverage (one unknown word in every 20) is acceptable, but this would mean looking up about one word in every two lines or around fifteen words on every 300-word page. This amount of dictionary use would make a meaning-focused input task more like a language-focused learning task.

Task 7.2 Here is a text with the lowest frequency words crossed out at densities of 10%, 5%, and 2%. At what density does the text become easily readable?

Section a: 10% of words unknown (90% coverage)

The Railways _____ lost nearly \$45 million in the past financial year and says its future is “seriously at _____”. The \$44.77 million _____ for the year to March 31 compares with an overall _____ of \$19.97 million the year before.

Chairman Ross Sayers said in the _____ report tabled in Parliament yesterday the _____ could double its _____ in the year to March, 1977. He said this _____ took into account the combined effects of a loss of business through the 1983 _____ of the _____ industry and the funding of the voluntary _____ package. "Railways survival as a _____ business is seriously at risk," Mr Sayers said. "New Zealand cannot afford the _____ of a railway system providing services at a cost greater than their value to the economy, nor is it necessary." He added, however, that given _____ and a willingness to change, Railways could be a _____ and _____ part of the transport industry.

Section b: 5% of words unknown (95% coverage)

He said the board had to _____ the business to provide _____ long-term employment and competitive services for customers. But Mr Sayers said that Railways was "badly out of balance" with its _____ market, and its future had been put at risk unless some substantial cost reductions could be achieved. "This means a further reduction in manpower and a reduction in other costs." General manager Gordon Purdy _____ the "very difficult" year to a tight economic situation, competition for _____ and passengers, and revenue losses from industrial stoppages in a range of industries. Although staff numbers reduced by 400 to 17,800, _____ costs rose from \$44.5 million to \$409.4 million. This, said Mr Purdy, was a major element of expense.

Section c: 2% of words unknown (98% coverage)

The annual report came one week after the corporation and Mainzeal announced the Gateway development scheme, proposing seven office blocks, hotel, rooftop garden and

shops above Wellington Railway Station. Railways Minister Richard Prebble, who indicated other plans could follow for Railway land in many other cities and towns, estimated property development schemes could raise the corporation \$400 million. Mr Prebble said yesterday that major changes to increase productivity should be emphasised, including changes to freight train manning, _____ of freight terminals and workshops, and _____ administration. Opposition rail spokesman Winston Peters said the “quite massive” unexpected increase in salaries and wages meant that Railways was “just one further group misled last year by Treasury forecasts”. “Furthermore, the Government’s failure for over 22 months to address the real problem of Railways restructuring shows up in the report as significant reductions in volumes and a lack of competitive edge.” He said there was no use the corporation blaming _____ for the loss. “_____ has been around for four years, and there were no new competitive elements unknown to Railways at the start of the financial year in question.”

(from the Wellington Written Corpus A08 Evening Post)

The second kind of calculation involves working out how many words learners need to know in order to get 95–98% coverage of a text. The most valid way of doing this is to assume that learners learn the words of the language roughly in the order of their frequency and then to see which level of vocabulary learners need in order to get 95–98% coverage. Table 7.1 has figures for a first year university economics textbook. This textbook is very clearly written and tries to be as friendly as possible to the reader by using simple language. As a result, a vocabulary of 9000 words is needed to reach 98% coverage.

Table 7.1 Percentage coverage and word families at ten 1000 word levels for a university economics textbook

1000 word levels	Percentage coverage	Number of word families
1 st 1000	78.51 (78.51)	953
2 nd 1000	10.90 (89.41)	813
3 rd 1000	3.05 (92.46)	526
4 th 1000	3.41 (95.87)	430
5 th 1000	0.99 (96.86)	295
6 th 1000	0.60 (97.46)	190
7 th 1000	0.39 (97.85)	152
8 th 1000	0.13 (97.98)	121
9 th 1000	0.13 (98.11)	94
10 th 1000	0.16 (98.27)	87
Proper nouns	0.62 (98.89)	375

Note that a very large proportion of the high frequency words from the first and the second 1000 occur in the text, 953 of the first 1000 and 813 of the second 1000 words. 529 of the 570 words in the Academic Word List also occur in the text and give 9.4% coverage of the running words in the text but this is not shown in Table 7.1. The words from the Academic Word List are spread largely across the 1st 1000 to 9th 1000 word levels. The percentage coverage does not add up to 100% because there were some words beyond the 10th 1000.

In general, learners need to know around 9000 words before most texts become easily accessible for unassisted reading.

The lists needed to do this kind of analysis are available at <http://www.victoria.ac.nz/lals/staff/paul-nation.aspx>. It is useful to run a section of text that learners have to read through the AntWordProfiler programme to see what vocabulary demands are being placed on the reader.

Task 7.3

Run a text of about 1000 tokens through the AntWordProfiler programme using the British National Corpus lists and answer these questions.

- 1 How large a vocabulary is needed to reach 98% coverage?
- 2 What are some of the low frequency words?

An essential part of any text is the first 2000 word families, the higher frequency words of the language. These need to be the first major goal for a vocabulary programme. Then, if learners want to read newspapers or do academic study in English, the next major goal should be the 570 word families of the Academic Word List. After that learners should learn useful words as they meet them.

There are several ways of deciding whether a word is useful or not:

- Is the word marked in a learners' dictionary as coming in the first 10,000 words of English? *The COBUILD Learners Dictionary* and the *Longman Dictionary of Contemporary English* provide frequency level markings for some words.
- Have learners met the word before? If it is a word that seems vaguely familiar from previous meetings, it is probably worth putting on a word card for deliberate learning. If learners remember having looked it up in the dictionary before, or they have marked the word in the dictionary before, then it is probably well worth learning.
- Can learners think of common situations where the word might be met or used? Are learners likely to be in these situations? If

so, then the word is worth learning.

- Does the word look easy to learn? Does it contain familiar word parts or does it look like a first language word with a similar meaning? If it is not much effort to learn it then it may be worth learning.
- Is the word a technical word in a subject area that is relevant to the learners? For example, if the learners are studying mathematics in English, then the technical vocabulary of mathematics is worth learning.

Task 7.4

Which of the following words are worth learning by learners who already know the first 3000 words of English but not much more than that? Explain your decision for each word.

adapt border chew ecstatic fable improvise
lurch ostentatious pallor stowaway surly torpid

Teachers should not spend time systematically teaching low frequency words. The time spent in the classroom doing this does not match the return for knowing the words. There are much more useful ways to spend valuable classroom time. Learners need to eventually learn low frequency words and they have to take control of and responsibility for this learning.

As yet we have little information on the directions in which vocabularies grow. There is a reasonably strong relationship between the frequency of a word in general use and the likelihood of it being known (Read 1988), but at the very low frequency levels this relationship is not so strong and is difficult to measure. It seems likely that vocabularies grow in the same way as a tree does, with a core of general purpose words represented by the trunk quickly

developing and then bit by bit being added to, and with branches of various sizes representing areas of specialisation. Thus vocabulary growth beyond the higher frequency words of the language is likely to differ between individuals depending on the interests and career paths they choose. This makes measuring low frequency vocabulary knowledge very difficult because there is so much vocabulary to sample and individuals' areas of knowledge are likely to be different.

Measuring vocabulary size

*** The Vocabulary Levels Test**

The Vocabulary Levels Test can be used for measuring total vocabulary size with low proficiency and intermediate learners of English as a foreign language. It can also be used to measure particular high frequency and mid-frequency word levels. Two versions of the Vocabulary Levels Test are available from Paul Nation's website – the Updated Vocabulary Levels Test (Webb, Sasao & Ballance 2017), and the New Vocabulary Levels Test (McLean & Kramer 2015). Appendix 1 contains a guide to using and interpreting the test. The older Vocabulary Levels Tests (Nation 1993; Schmitt, Schmitt & Clapham 2001) are not as good as these newer tests because the newer tests are based on better word lists. An electronic version of the Updated Vocabulary Levels Test can be found on Stuart Webb's website.

Advanced learners of English as a foreign language should gain very high scores on levels up to and including the 5000 word level. Remember that this is a test of receptive knowledge, and therefore is relevant particularly to the vocabulary available for reading.

* The Vocabulary Size Test

The Vocabulary Size Test is a measure of total vocabulary size and it measures knowledge of the most frequent 20,000 words of English. It can be found on Paul Nation's website. An electronic version can be sat at <https://www.my.vocabularysize.com/>. It tests written receptive knowledge (the knowledge required for reading). The test words are in non-defining contexts with four meaning choices. For example:

employ: She was <employed> there.

- a married
- b a part of a group
- c made to stay
- d working

Each tested word represents 200 words so the score on the test is multiplied by 200 to get the total vocabulary size. So, a score of 73 on the 100 items means that the test-taker has a vocabulary size of 14,600 word families.

The Vocabulary Size Test can be used with native speakers of English or with advanced learners of English as a foreign language. It is not suitable for elementary or intermediate learners of English as a foreign language because it contains too many words that are likely to be unknown to them, and this would encourage random guessing.

The Picture Vocabulary Size Test was designed to measure the vocabulary size of young native speakers of English (up to the age of seven or eight years old) who cannot read well. It tests the first 6000 words of English. It can also be used with young non-native speakers. The test can be freely downloaded from Laurence Anthony's website (<http://www.laurenceanthony.net/software/pvst/>).

Task 7.5 Sit the Vocabulary Size Test at <https://www.my.vocabularysize.com/> yourself or get a learner to sit the Updated Vocabulary Levels Test at www.edu.uwo.ca/faculty-profiles/stuart-webb.html.

When measuring the proficiency of language learners, it is always useful to have a direct measure of vocabulary size as this makes it possible to distinguish between vocabulary knowledge and vocabulary use. That is, we can see if an individual's language use is likely to be at least partly caused by insufficient vocabulary knowledge, or if the problem lies elsewhere.

Measuring special purposes vocabulary

The vocabulary we acquire after we know the common higher frequency words is strongly influenced by the direction of the interests, study and jobs that we take on. A significant part of learning a new subject area is learning the technical vocabulary of that area. Indeed, tests of technical vocabulary have been used in reading research as a way of assessing background knowledge of a particular subject area.

An important vocabulary measure for an advanced language learners would be how well they have mastered the vocabulary of relevant specialist fields. It is now possible to develop reasonably valid technical vocabulary lists that could be used as a basis for tests of technical vocabulary (Chung 2003). For an example of a technical word list, see Ward (2009).

English has a 570-headword academic word list (Coxhead 2000) which is essential knowledge for any learner going on to academic study in English at senior high school or tertiary level. A test of

academic words is included in the New Vocabulary Levels Test designed by McLean and Kramer (2015). Because these academic words are drawn from the first six or seven thousand word frequency levels, they are known by teenage native speakers. Some learners who have advanced oral language proficiency in English as a second language, but who lack good reading skills and have done little academic study may have low scores on this section of the Vocabulary Levels Test.

Measures of vocabulary size are strongly affected by the first language of the learners (Cobb 2000). Where there are many shared words in English and the learners' first language, as for example in the case of French or Spanish, many receptive vocabulary tests may measure potential knowledge of some of the English words rather than learning. As long as this is realised when interpreting the test, this need not be a problem as the difficulty of learning a language is strongly affected by the learners' first language and tests will reflect this.

Measuring vocabulary in use in writing

Read (2000) argues the importance of testing vocabulary in use in order to gain a balanced picture of a learner's vocabulary knowledge. Measures of vocabulary in use take into account the following characteristics (Read 2000: 7–13):

- the assessment of vocabulary as part of a larger construct, such as the ability to read informative texts
- the total vocabulary content of the language use material
- the learner's understanding of a range of contextual information.

Measures of lexical richness in writing provide good examples of these characteristics. The learners do a piece of writing without being aware that their vocabulary use in that writing is going to

be investigated. The lexical richness measure is likely to be only part of the assessment of the quality of the piece of writing. The lexical richness measure considers all the vocabulary in the piece of writing. In the Lexical Frequency Profile (Laufer & Nation 1995), for example, the total vocabulary of the text is divided into frequency levels according to predetermined lists and the more vocabulary a text has from outside the high frequency levels, the greater the lexical richness rating. The AntWordProfiler programme using the lists from the General Service List and the Academic Word List can be used to get Lexical Frequency Profiles. When learners write the texts which are analysed for lexical richness, they have to take into account a range of contextual factors, such as the audience for the text, the nature of the subject matter being dealt with, the degree of formality required and so on.

Measures of lexical richness cannot tell the size of a learner's vocabulary but they indicate how skilful the learner is in drawing on vocabulary knowledge to perform communicative tasks.

There are now numerous measures of lexical richness in writing and the current view of these is that most are best seen not as competing measures but as complementary views of the nature of written lexical use. This standpoint fits nicely with discrete measures of vocabulary knowledge such as multiple-choice tests, word translation tests, and word recognition tests, which should not be seen as competing measures but as measures tapping different strengths and aspects of vocabulary knowledge. Having several measures provides a more comprehensive and thus useful picture of vocabulary knowledge. With each of the lexical richness measures there are usually cautions that apply to their use. For example, what was the most popular measure, the type-token ratio, has been shown to be strongly dependent on text length (Richards

& Malvern 1997). Thus, if this measure is used, the texts being compared must all be exactly the same length.

By far the most commonly used measures of vocabulary in use are rating scales, where the vocabulary component is one of several subscales. The vocabulary subscale typically has four or five levels ranging from very poor knowledge of vocabulary to a sophisticated and appropriate use of vocabulary. For example, Jacobs, Zingraf, Wormuth, Hartfiel and Hughey (1981) have five subscales in their English as a Second Language composition profile – content, organisation, vocabulary, language use and mechanics. Each subscale has four levels and the vocabulary subscale's levels are shown in Table 7.2 below.

Table 7.2 Levels of a vocabulary subscale

Vocabulary level	
20–18	EXCELLENT TO VERY GOOD: sophisticated range • effective word/idiom choice and usage • word form mastery • appropriate register
17–14	GOOD TO AVERAGE: adequate range • occasional errors of word/idiom form, choice, usage but meaning not obscured
13–10	FAIR TO POOR: limited range • frequent errors of word/idiom form, choice, usage • meaning confused or obscured
9–7	VERY POOR: essentially translation • little knowledge of English vocabulary, idioms word form • OR not enough to evaluate

Not surprisingly there are aspects of vocabulary knowledge in some of the other subscales – mechanics includes spelling, language use includes word order.

So far we have looked only at writing, but such analytic scales exist

for speaking, and they can be devised for rating the input material used for the receptive skills of listening and reading.

Small scale tests of vocabulary

We have looked at measuring vocabulary size and seeing what knowledge learners have of the high frequency words and the academic words as represented by the Academic Word List. The reason for looking at these kinds of measures is to see if learners have enough vocabulary and the right kind of vocabulary to cope with study in English as well as using English for a range of purposes in daily life, such as taking part in a friendly conversation, reading novels and newspapers, or watching movies. By using the results of these vocabulary measures, teachers can make sure learners are placed in the right classes, see if they need extra work on their vocabulary, and use material at the appropriate level.

We now need to look at using vocabulary tests to encourage and check on vocabulary learning. This testing can be done:

- to see how much and how well learners remember the vocabulary from previous lessons
- to provide revision of previously met vocabulary
- to provide a component of a grade for a completed unit of work
- to predict how much learners already know of a future unit of work.

There are several vocabulary test items that can be used for these purposes. We will look at three main ways of testing vocabulary:

- labelling or completing diagrams
- completing or evaluating sentences
- translating words into the first language.

There are many possible variations of difficulty within these three

ways and the choice of a particular way depends on the types of words being tested.

*** Labelling or completing pictures, diagrams and tables**

An effective and straightforward way to test recall of previously met vocabulary is to get learners to write the words in the appropriate places in a diagram, or to fill in an information transfer diagram.

In an information transfer activity (Palmer 1982), the learners fill in the parts of a table based on information they have just heard or read. Here are some examples. The learners listen to a description of a journey and fill in the route on a simple map they have in front of them. The learners have a blank timetable in front of them and fill in a person's appointments according to what they hear in a conversation.

Here is an example based on a recipe for the Indonesian dish *Gado-gado*, which consists of vegetables on rice covered with a peanut sauce. The information transfer diagram is based on the Instruction topic type (see Nation (2013b: 121–123) for more on topic types). The instruction topic type includes texts that tell (or instruct) you how to do something. The instruction topic type has the following parts:

- 1 the tools needed
- 2 the materials or ingredients needed
- 3 the steps involved
- 4 the cautions or conditions involved in some of the steps
- 5 the outcome or result of following the steps.

Tools needed	
Ingredients	
Steps	Cautions
1. 2. 3. 4. 5.	
Outcome	

There are some simple principles to guide the making of such tests.

- 1 The test will be easier if the picture or diagram in the test is the same as one that the learners have already studied. That is, the closer the context of testing is to the context of teaching, the easier the test will be.
- 2 The test will be easier if the learners are given some guidance or support in making the answers. This guidance can be in the form of the initial letter or letters of the words, a list of words (perhaps with some extra distractors) to copy into the right place, or a partly completed diagram.
- 3 Recognition tests are easier than recall tests. A recognition test provides the answers and the learners either have to choose the correct answer as in a multiple-choice test, or decide if the answer is correct or not as in a true/false test. A recall test requires the learner to provide the answer themselves.
- 4 Having to recall the meaning of a word (a receptive test) is easier than having to recall the form of the word (a productive test).
- 5 For lower proficiency learners, providing the meaning in the first language in a multiple-choice test makes the test easier than if the meaning is given in the second language.

* Completing or evaluating sentences

Here are some examples of this way of testing based on the following text. These examples all differ in difficulty according to the five principles outlined in the previous section.

Beetle raising is a popular hobby for some Japanese people. Their Japanese name, *kuwagata*, comes from the shape of a samurai helmet. They make a great pet in Japan as they take up little space in small Japanese homes. Beetles are especially popular with elementary school children.

Hens are pets that provide many benefits to their owners. They are intelligent and sociable animals with strong personalities. They can be very gentle around children. As well as being great companions, they eat insects like mosquitoes and provide fresh eggs.

In some parts of Australia, you can have a pet wallaby if you get a special license. Usually, the pets are wallabies that got injured in some way and need special care. Wallaby owners need a very large yard with a tall fence because wallabies are active animals that like to jump.

(from Fast Track 2, page 24)

- i) A mosquito is an _____.
- ii) Wallabies come from Australia. True/False
- iii) *Kuwagata* is a Japanese word. True/False
- iv) The following can be pets _____, _____, _____.
- v) Some elementary school children like keeping beetles as pets. True/False
- vi) Why do wallaby owners need a high fence?

* Translating words into the first language

Vocabulary test items can make use of the learners' first language. One difficulty with some technical words is that they may be loan words in the first language. For example, the word for radar in Chinese is 雷达. Here is an example of a translation test item.

Translate these words into your first language.

develop _____

partial _____

advance _____

adventure _____

The validity of test items

We have looked at the various forms of vocabulary test items. The most important feature of a test item, however, is its validity. That is, is it measuring what it is supposed to measure?

Making valid test items involves the two steps of:

- working out exactly what you want to measure
- making an item that does this.

Working out what you want to measure involves answering questions like:

- Do I want to measure receptive or productive knowledge?
- Do I want the test to be difficult?
- Do I want to give credit for partial knowledge?
- What aspects of knowing a word do I want to measure? This question involves considering whether you want to test if learners know the form and meaning of the word or whether you want to see if they can use the word. Knowing the meaning of the word can also involve seeing if they know how it relates to other words.

Once teachers are clear about what needs to be tested and what is reasonable to test, then choosing the best test item becomes clearer. Making test items requires time and effort, so it is worth checking the items with a colleague or trying them out with one learner before using them with the class.

Task 7.6 The learners have just worked through a unit on pollution. You want to test if they understand the term *pollution*.

- 1 Write a short description of two of the aspects of the term you want to test. Look at Table 1.4 in Chapter 1 to see a list of nine aspects of knowing a word.
- 2 Explain why you want to test each of the two particular aspects.
- 3 Design two test items.
- 4 Explain why you chose these two item types.

* * *

Summary

Learners need to know substantial numbers of words before they can comfortably work with unsimplified texts. The vocabulary goal is at least 9000 word families for advanced learners. There are several measures of vocabulary size (the Vocabulary Levels Test, the Vocabulary Size Test, and the Picture Vocabulary Size Test) and teachers can use these to see where their learners are now and how far they have to go.

When teachers make their own vocabulary tests, they need to give thought to what they want to test and how difficult they want the test to be.

What should a teacher do after reading this chapter?

- 1 You should decide which vocabulary test is most suitable to measure your learners' vocabulary size (the Vocabulary Levels Test, the Vocabulary Size Test, or the Picture Vocabulary Size Test). You need to choose a test that does not contain large numbers of unknown words for them.
- 2 You should get one or two of the learners in your class to sit this test while you sit next to them to see if they have any problems with the test.

- 3 If the test is suitable for your learners, get the class to sit the test so you can see how many words they know, and what level of vocabulary they should be focusing on now.
- 4 Decide on two or three vocabulary test items that you will use regularly to test learners' knowledge of the vocabulary that comes up in class.

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Further reading

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CHAPTER EIGHT

INVESTIGATING VOCABULARY

PREREADING QUESTIONS

Think about how you prepared for the vocabulary teaching in a recent lesson.

- How did you choose what vocabulary to focus on?
- How did you decide if the vocabulary in the text was suitable for your learners?
- What did you need to find out about the vocabulary to be ready to deal with in class?

Introduction

The goal of this chapter is to show teachers how they can use collections of text (called *corpora*) and computer programmes to examine the vocabulary load of texts, to create vocabulary lists for special purposes, and to gather information on individual words. Before looking at corpora and programmes, it is necessary to distinguish various meanings of the term *word*.

What is a word?

The term *word* is used in many different ways. If we are told to write a thousand words on a particular topic, *word* has a different meaning from when someone asks “How many words do you know?”. There are many ways of counting single words – as tokens, word types or word families. The way we choose to count them depends on why we are counting them.

* Tokens

If we want to count how many words there are in a spoken or written text, we can count in several ways. One way is simply to count every word form that is there and even if the same word form occurs more than once, it is still counted. So, counted in this way, the sentence *It is not easy to say it correctly* contains eight words, even though two of them are the same word form, it. Words which are counted in this way are called *tokens*, and sometimes *running words*. To answer questions like: “How long does my assignment have to be?”, “How many words are there on a page or in a line?”, “How long is this book?”, “How fast can you read?”, “How many words does the average person speak per minute?”, our unit of

counting will be the token. Token counts are also used along with word type or word family counts to answer questions like: “How big a vocabulary do you need to read this book?”, “How big a vocabulary do you need to read newspapers?”.

The word processing programme MS-Word can count tokens. Just look at the bottom left-hand corner of the screen to see how many tokens there are in your text or in your highlighted part of the text.

Task 8.1 Type a list of words like *can't*, *UV40*, *68*, *sixty-eight* and find out what MS-Word counts as tokens. Run the same list through the Frequency programme on Tom Cobb's website <http://www.lex tutor.ca>. Do MS-Word and Frequency use different criteria to decide what is counted as a word? What are the differences?

* Word types

We can count the words in the sentence *It is not easy to say it correctly* in another way. When the same word occurs again, we do not count it again. So, this sentence of eight tokens consists of seven different words or *types*. We count words in this way to answer questions like: “How large was Shakespeare's vocabulary?”, “How many words do you need to know to read this book?”, “How many words does this dictionary contain?”.

There are numerous problems in counting types. Perhaps the most serious problem is that the same type may have more than one meaning. For example, *well* can mean healthy, good, a place to draw water from, an exclamation and so on. However, computers count all the uses of *well* as the same type.

Using the word type as a unit of counting when estimating vocabulary size ignores language users' ability to recognise that different types like *mend* and *mends* differ in predictable ways, and that for counting for recognition purposes the *mend* – *mends* distinction is not a sensible one to make. The argument is that learners of English very quickly gain some kind of control of the inflectional and regular derivational affix systems of the language. This control then makes dealing with most inflected forms very straightforward and does not involve any further significant vocabulary learning to deal with these forms.

There is a counterargument. Moon (1987: 89–95) argues that differences in form can signal different senses of a word (see also Sinclair (1991), Chapter 4). These formal differences can include syntax (noun/verb; countable/uncountable), collocation, and derivatives (*lamely* is associated with lame excuses rather than physical lameness). *Swinging* has a separate entry from *swing* in the *COBUILD Dictionary* because of its use in phrases like *swinging London*. When counting someone's spoken or written productive vocabulary size, it is better to count types because language production in speaking and writing requires much more detailed knowledge than receptive use in listening and reading.

* **Word families**

A word family consists of a headword, its inflected forms and closely related derived forms. These include affixes like *-ly*, *-ness* and *un-*. Here is an example of a word family.

absent

absented

absenting

absents

absentee

absentees

absenteeism

absently

The headword of the family is *absent*. Note that this can be a noun or a verb. The family members include the inflected forms with the suffixes *-ed*, *-ing*, and *-s*, and the derived words with the suffixes *-ee*, *-ism*, and *-ly*.

The major justification for counting words in word families is that for receptive use of the language, as in listening and reading, learners are able to interpret the meaning of members of the family if they are familiar with the major inflectional and derivational affixes. For example, it seems sensible to assume that someone who knows *sensible* will not have great difficulty in interpreting *sensibly*; someone who knows *confident* will not have difficulty understanding *unconfident*.

There is a range of family sizes from the lemma (a headword and its inflected forms) to a family containing inflected forms and a large number of derived forms.

Let us now look at how using computers to look at how tokens, types and families can help with the teaching and learning of vocabulary.

Understanding the statistical nature of vocabulary

Learners should focus on vocabulary that will give them the greatest reward or benefit for the amount of learning that they have to do. 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.

There is a very simple way to see, in terms of usefulness, that all words are not created equal. Take a text of about 1000 words and run it through a computer programme that counts how often each word occurs in the text. The Frequency programme on Tom Cobb's website does this (<http://www.lex tutor.ca/freq/>). Here is a sample of part of its output. The text is about developing fluency, is 1000 tokens long and contains 360 word types.

Table 8.1 Output from the Frequency programme

Word	Rank	Freq	%Freq	Cum %Freq
THE	1	89	8.90	8.90
OF	2	53	5.30	14.20
IN	3	39	3.90	18.10
AND	4	28	2.80	20.90
TO	5	28	2.80	23.70
FLUENCY	6	20	2.00	25.70
IS	7	20	2.00	27.70
A	8	19	1.90	29.60
AS	9	15	1.50	31.10
BY	10	15	1.50	32.60
...				
WHERE	354	1	0.10	99.40
WHETHER	355	1	0.10	99.50
WHICH	356	1	0.10	99.60
WHILE	357	1	0.10	99.70

(to be continued)

(continued)

Word	Rank	Freq	%Freq	Cum %Freq
WHOLE	358	1	0.10	99.80
YEARS	359	1	0.10	99.90
YOU	360	1	0.10	100.00

The different words in the text (types) are listed on the left (column 1). They are ranked in order of Frequency (column 2). That is, the word that occurs most often in the text, *the*, is listed first. In the “Frequency” column of Table 8.1 we can see how often each word occurred in the text. So, *the* occurred 89 times in the 1000 word text. That is, *the* had 89 tokens. Notice as you look down the “Frequency” column, how quickly the number of tokens drops. The ninth item on the list (*as*) has a frequency almost six times smaller than that of *the*. The end of the list is given in Table 8.1. 216 of the 360 different words occurred only once, and a few of these are shown in the list. If we looked at the whole frequency list we could see the following features:

- A small number of words occur very frequently. These make up a large proportion of the text. The “Cumulative percentage” column in Table 8.1 shows us the percentage coverage of the text. Notice that the top nine words cover around 30% of the tokens in the text. Most of the very high frequency words are function words. That is, they are words like *the*, *of*, *in*, *to*, *a* and *by* which are more important for the grammar of the text than the message of the text. However, there are only about 175 of these in English and most of the high frequency words of English are not function words but content words (nouns, verbs, adjectives and adverbs).
- Many of the different words in the text occur only once. These account for only a small proportion of the tokens in the text. There are a lot of low

frequency word types compared to high frequency word types.

Task 8.2 Run a text of about 1000 words through the Frequency programme. Get data to support the two features listed above.

The two observations described above are very important for understanding the nature of vocabulary teaching and learning. We can change these observations into guidelines for teaching and learning.

- 1 Learners should learn the high frequency words of the language first. These words occur so often that they deserve a lot of attention from the teacher and the learners. This attention will be repaid by the numerous opportunities to meet and use these words.
- 2 The mid- and low frequency words of the language do not deserve classroom time, except when they are part of an academic vocabulary or a relevant technical vocabulary. Teachers should focus on training learners in using strategies to deal with these words, such as guessing from context, and using word cards, word parts and a dictionary. Learners should learn low frequency words after they know the high and mid-frequency words. Teachers should not spend time teaching these words because there are so many of them and they give little return for the teaching effort.

Using the Frequency programme (or similar programmes) reveals important ideas about the nature of vocabulary and how it should be sequenced in a teaching and learning programme.

Analysing texts to see their vocabulary difficulty

If teachers are aware of the vocabulary size of their learners (see Chapter 7), it is possible to analyse texts to see if they are of a suitable level of difficulty and to see what the difficult words in

the text are likely to be. This analysis involves using a computer programme that compares a text with a set of word lists. The aim of the comparison is to see what proportion of the text is covered by words that the learners already know, and what words are in the text but not in the word lists. These words are likely to be unknown words for the learners. If there are too many of these, more than 5 unknown words per 100, the text will be too difficult. Here is part of the output from such a programme when an economics text was run through the AntWordProfiler programme. The AntWordProfiler programme is freely downloadable from <http://www.laurenceanthony.net/software/antwordprofiler/>. The programme comes with word lists and any text put into the programme can be analysed using those lists. The web-based Vocabulary Profiler on Tom Cobb's website (<http://www.lex tutor.ca>) also does a similar job.

Table 8.2 Text coverage of an economics text by high frequency words using the AntWordProfiler programme

Word list	Tokens (%)	Cumulative percentage
First 1000 words of English	78.31	78.31
Second 1000 words of English	5.57	83.88
Academic Word List	9.40	93.28
Not in any of the three lists above	6.72	100.00

If the learners only knew the 1000 most frequent words of English, they would be familiar with 78.31% of the tokens in the text. This means over 20% of the words or at least two words in every ten-word line of the text would be unknown to them. This text would be far too

difficult for such learners. If they knew 2000 words of English then 83.88% of the words in the text would be familiar to them. This does not mean that they would get around 84% comprehension of the text. It just means that 84% of the words would be familiar words. In order to get reasonable unassisted comprehension of a text, learners need to be familiar with 95% to 98% of the tokens in a text. Among the words classified as those not in any of the three lists, there are likely to be words such as proper nouns that learners do not need to know before reading the text. In the economics text, these made up about 1% of the tokens. There may also be a few words that learners already know but which are not in the first 1000 or second 1000 lists or that are explained in the text, such as *isoquant* and *duopoly*.

The data in Table 8.2 shows how important it is for learners to know the 570 words of the Academic Word List. This gives 9.4% coverage of the economics text. Knowing these words takes learners from around 84% coverage (one unknown word in 6) to over 93% coverage (one unknown word in 14).

Table 8.3 presents the data in more detail from running the Ant-WordProfiler programme over the economics text. In Table 8.3 the "Families" column counts words as including closely related members.

As in Table 8.2, the lists used were the first 1000 and second 1000 word families of the General Service List (West 1953) and the 570 word families in the Academic Word List (Coxhead 2000). The General Service List represents the common high frequency words of the language and the Academic Word List represents formal academic vocabulary.

Table 8.3 Output from the AntWordProfiler programme

Word list	Tokens/%	Types/%	Families
First 1000 words of English	231,812/78.31	2639/29.38	949
Second 1000 words of English	16,488/5.57	1246/13.87	624
Academic Word List	27,829/9.40	1468/16.35	529
Not in any of the three lists above	19,905/6.72	3628/40.40	
Total	296,034	8981	

The data includes tokens, types and families. Each of these includes raw figures and percentages. So, the first 1000 word families of the General Service List accounted for 231,812 tokens or 78.31% of the 296,034 tokens in the text. These 231,812 tokens consisted of 2639 types and these types consisted of 949 families.

Task 8.3 Answer these questions to check that you can interpret Table 8.3.

- 1 What percentage of running words (tokens) in the text is covered by the Academic Word List?
- 2 What percentage of the running words in the text is not covered by the three lists?
- 3 What is the total number of word types in the text?
- 4 How many word types are not in the three lists?
- 5 Does the number of tokens, types and families in the text in each of the three lists get smaller as you go from list one to list two and list three?
- 6 If a learner knew the first 2000 words of English, what percentage of the running words (tokens) in the text would be known to her?
- 7 Do all of the first 2000 word families of English occur in

the text? How many occur?

- 8 *There are 570 word families in the Academic Word List. What percentage of the word families in the Academic Word List occurs in the text?*
- 9 *What percentage of words in the text does not occur in the lists? What is the ratio of known to unknown words if only the three lists are known words?*

Task 8.4

Answer these questions in small groups. Justify your answers with data from the Table 8.4 and Table 8.5 from Sutarsyah, Nation and Kennedy (1994). Their study involved two corpora. One was an economics textbook and the other was a collection of 150 academic texts, each around 2000 words long on a variety of topics and from a variety of academic disciplines. (The Academic Word List has now replaced the University Word List.)

- 1 *Which corpus has the biggest vocabulary?*
- 2 *Which corpus uses the first 2000 words more?*
- 3 *Which corpus uses more of the University Word List?*
- 4 *Which corpus would be the hardest to read by someone who knew only the first 2000 words and the University Word List?*
- 5 *Which corpus provides more repetitions of the high frequency words?*
- 6 *Write eight generalisations about the data in Tables 8.4 and 8.5 under the four headings below. Begin each sentence with: "A single text on a single topic will ..." or "A collection of different texts will ...".*
 - *amount of vocabulary*
 - *repetition of vocabulary*
 - *density of unknown words*
 - *use of high frequency vocabulary*

Table 8.4 Text size and vocabulary size of two corpora

Corpus	Tokens	Types	Families
Economics text	295,294	9469	5438
General academic corpus	311,768	21,399	12,744

Table 8.5 Number of word families and percentage of coverage of the economics text and the general academic corpus by the General Service List and the University Word List

Word level	Word families in the economics text	Coverage of the economics text	Word families in the general academic corpus	Coverage of the general academic corpus
1 st 1000	1029	77.72%	1095	74.11%
2 nd 1000	548	4.78%	796	4.32%
University Word List	636	8.73%	811	8.41%
Others	3225	8.77%	10,042	13.16%
Total	5438	100%	12,744	100%

We have spent some time looking at the output from the AntWord-Profiler programme. We have done this because this programme is very useful for calculating the vocabulary load of texts and for developing word lists to use for teaching and syllabus design.

The AntWordProfiler programme and the simpler web-based versions can:

- check that an examination paper does not contain vocabulary that learners might not know
- find the difficult vocabulary in a text to be used for intensive reading

- check a sample of a possible set text to see if it is at the right level for the learners
- make a special purposes word list, such as a list of newspaper vocabulary or a list of the vocabulary of children's books
- help learners understand the nature of vocabulary frequency and distribution so that this knowledge can guide their vocabulary learning.

The web-based versions of programmes like AntWordProfiler are available at the following addresses:

- <http://language.tiu.ac.jp/flc/>
- http://www.er.uqam.ca/nobel/r21270/texttools/web_vp.html
- <http://www.edict.com.hk/textanalyser/>.

It is thus worthwhile understanding how the programme works and how to use it. It also helps teachers to understand the nature of vocabulary frequency and distribution and to also understand the research that has been carried out using the programme.

AntWordProfiler and similar programmes can also be used to analyse texts that learners produce. Learners' compositions can be run through the programme to see if they are making use of vocabulary that they know. For example, if tests show that learners have a good knowledge of the vocabulary in the Academic Word List, are they making use of this vocabulary when they write academic assignments?

Using AntWordProfiler in this way has been called calculating a Lexical Frequency Profile (Laufer & Nation 1995). The best way to do this is to use word types. The Lexical Frequency Profile (LFP) is calculated as follows. Let us imagine a composition of an intermediate learner which consists of 200 word types. Among the 200, 150 belong to the first 1000 most frequent words, 20 to the second 1000, 20 to the Academic Word List and 10 are not in any

list. To calculate the LFP, we convert these numbers (the number of word types at each frequency level) into percentages out of the total of 200 word types. The LFP of the composition is therefore 75% – 10% – 10% – 5%.

Research on the Lexical Frequency Profile (Nation 2007) has shown that:

- the LFP needs to be calculated on texts at least 300 tokens long.
- the LFP is similar in two pieces of writing in the same genre written by the same person within a few days of each other.
- learners at different proficiency levels differ in the percentage of words beyond 2000 and second language learners differ from native speakers in the same way. The higher the proficiency, the greater the percentage of words beyond 2000.
- the LFP can be used to measure change over a period of at least seven months using the “Beyond 2000” measure (Laufer 1994). The “Beyond 2000” measure looks at vocabulary not in the first 2000 words of English.
- the vocabulary knowledge measured by the LFP develops more slowly than the receptive vocabulary measured by the Vocabulary Levels Test and the productive vocabulary measured by the Productive Levels Test (Laufer 1998; Laufer & Paribakht 1998).

Gathering information on individual words

Doing a computer search of texts is a very useful way of getting detailed information about the forms, senses, collocates, grammar, and examples of use of individual words. Most simply, this is done by using a computer programme which makes a concordance. A concordance is a collection of examples of use of a word. Because a concordance provides a lot of examples, it can give information that a dictionary or a grammar book cannot provide.

Here is an example of part of a concordance for the word *contrary*. Each example contains only one line of text and this results in words at the beginning or end being cut.

Table 8.6 Part of a concordance for the word *contrary*

Concordance

- | | | | |
|----|---|------------------|----------------------------|
| 1 | n nineteen thirteen as in any way dated. | On the contrary, | it would've seemed a ver |
| 2 | em fitter in terms of erm life expectancy. | On the contrary | peacocks don't live long |
| 3 | at all my offspring would inherit half of it. | On the contrary, | half my offspring will inh |
| 4 | ne party has privileges over the, another. | On the contrary, | if the aene can pay for it |
| 5 | vilization, and social order on an illusion. | On the contrary, | Freud says, basing it o |
| 6 | brighten the seraph. Surely, it will never, | On the contrary | be suffered to degener |
| 7 | n of what a chemist is saying . Physics, | On the contrary, | depends very much on |
| 8 | hicle for introducing western technology. | On the contrary, | it drawsattention to the |
| 9 | "whereas this hath all the disadvantages | On the contrary, | and such a subject as t |
| 10 | was no military participation of any sort. | On the contrary, | there was attempts to t |
| 11 | g and support their own erm cause, and | On the contrary | we have many |
| 12 | yes or it's zero based budgeting. They,B | On the contrary, | the police authority have |
| 13 | He hadn't done anything good, it was | On the contrary, | But it wasn't his deeds t |
| 14 | yes or it's zero based budgeting. They, | On the contrary, | the police authority have |
| 15 | s. He hadn't done anything good, it was | On the contrary, | But it wasn't his deeds t |

The best known programmes that include a concordancer are:

- WordSmith Tools (http://www.oup.com/elt/catalogue/guidance_articles/ws_form?cc=global or <http://www.lexically.net/wordsmith/>)
- AntConc (<http://www.laurenceanthony.net/software.html>)
- MonoConc Pro (<http://www.athel.com/mono.html>).

There are also useful freeware programmes, such as (<http://www.edict.com.hk/pub/concapp/>) and ([http://www.niederlandistik.fu-](http://www.niederlandistik.fu-berlin.de/~niederlandistik/concapp/)

berlin.de/textstat/software-en.html). In addition, there are websites that allow concordancing on an existing corpus.

Looking at the examples of use that a corpus provides allows researchers, teachers and students to get useful information about how a particular word is used. For example, a concordance on *subtract* using the 3,600,000 token Academic corpus and the two Wellington corpora shows that *subtract* occurred in the forms *subtract* (15), *subtracted* (17, always the past participle), *subtracting* (28), *subtraction(s)* (20) and *subtractive* (2). Thirty of the 82 examples were followed by *from* with the greatest proportion occurring with *subtracting*. *Subtractive* is used as a technical term in language studies.

Using a concordancer is also a useful way to find out the differences between two words. What are the differences between *consist* and *comprise*, *moreover* and *furthermore*, and *word* and *vocabulary*? Concordancers can provide useful information about word groups such as *put up with*, *hard time* and *by and large*. Getting learners to use concordances has also been shown to help learning (Cobb 1997).

Apart from concordancers, there are other sources of information, such as dictionaries and other users of the language.

Task 8.5 Choose one word from the text below to focus on during intensive reading of the text.

1 Gather information about this word by:

- looking carefully at the use of the word in the text
- looking it up in a learners' dictionary
- doing a concordance search of a corpus
- comparing the word with its translation in another language, preferably the learners' first language.

You can use Table 1.4 to organise the information.

- 2 *What needs to be focused on for this word? Look at Table 1.4 to see a list of focuses.*
- 3 *How will you focus on it?*

Providers

This type of person is usually social, easily making connections with strangers and including newcomers into groups at parties. They dislike conflict and will go out of their way to bring harmony to groups they are in. People usually see them as warm and loyal acquaintances. On the other hand, they can put too much importance on their social status. Famous providers include people like Desmond Tutu, Mariah Carey, and Hugh Jackman.

(from Fast Track 2, page 40)

* * *

Summary

In this chapter we looked at the different meanings for the term *word*, distinguishing tokens, types and word families. We then looked at using computer programmes (particularly AntWordProfiler, Frequency and concordancers) and corpora to gather information about vocabulary in general and about particular words.

It is useful teachers can use computer and web-based resources to find out about vocabulary and to look critically at the vocabulary in the texts that their learners use and produce. Such resources enable teachers to make frequency lists, compare texts with lists, and produce concordances. The data from these resources allows much more informed teaching of vocabulary. We will look at the use of this data in the following chapters.

What should a teacher do after reading this chapter?

1 It is useful if your learners understand that some words are more useful than other words and that it is much more effective to learn

words roughly in order of frequency. You could introduce them to this idea by getting them to run a short text through Tom Cobb's web-based Frequency programme (<http://www.lextutor.ca/freq/>) and talking about the results, mentioning high frequency, mid-frequency and low frequency words. It may also be useful to introduce them to Paul Nation and Averil Coxhead's websites.

2 Use the concordancer on Tom Cobb's website to search for information about words you find difficult to teach. When you become good at doing this, download AntConc from Laurence Anthony's website and build your own relevant corpus to go with it.

3 If you want to prepare vocabulary-controlled material for your learners, use VocabProfiler on Tom Cobb's website. When you are comfortable with that, try downloading AntWordProfiler and using that.

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Further reading

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CHAPTER NINE

COMMON QUESTIONS ABOUT VOCABULARY

PREREADING QUESTIONS

Think about these questions that are often asked about vocabulary.

- Should translation be used to teach and learn vocabulary?
- Should words be learned in context?
- What should a teacher do about collocations?
- Do the relationships between words in a content-based unit of work help learning?
- How big a vocabulary do you need?
- How should words be taught?
- Is an English through the curriculum course a good environment for learning vocabulary?
- Should teachers give learners lists of words to learn?
- Should learners use monolingual or bilingual dictionaries?
- What are the most effective improvements that a teacher could make to a course in English as a foreign language?

Introduction

This chapter provides responses to questions that are commonly asked about vocabulary. They have arisen during talks and classes and have sometimes come through e-mail enquiries. We have provided further reading to follow up the issues in more detail.

1 Should translation be used to teach and learn vocabulary?

There are many arguments supporting the use of the learner's first language as a way of conveying the meanings of words. Firstly, there is plenty of research evidence to show that using the first language is an effective way compared to other ways like using second language definitions or pictures. Secondly, there is also research evidence that, in the early stages of language learning, the words from the first language and the second language are stored together. Thirdly, research on children learning from definitions shows that the best definitions are short, simple and clear. The more complicated a definition, the more likely it is to be misinterpreted. First language translations meet these criteria well. Fourthly, all ways of conveying the meanings of words to learners are necessarily indirect. They involve the translation of the concept of the word into something that can be communicated. The concept may be translated into a pictorial form, a gesture or demonstration, a real object, a first language word or a second language definition.

From this perspective, different kinds of translation are not better or worse than each other. For a particular word, a certain kind of

translation may be better than another. *Fork*, for example, may be best conveyed using a diagram; *table* may be best conveyed using an object; and *person* may be best conveyed using a first language translation. Translation into the first language is simply one of a range of options which are available to convey meaning.

There are circumstances when translation into the first language could be a poor choice. When learners do not share the same first language or the teacher does not speak the learners' first language, the first language translation will not work. If the second language is rarely used outside the classroom, the teacher may wish to maximise the use of the second language by not using the first language at all. This is not a very strong argument, as translation using the first language is very quick and the time saved doing this could be used in practising English. In addition, exclusion of the first language from the classroom may convey negative messages about attitudes to the first language.

So, the findings of research and the analysis of the nature of conveying word meaning provide strong support for the use of the first language as a way of explaining the meanings of words to the learners.

Further reading

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2 Should words be learned in context?

Words should be met in context and target vocabulary needs to be met often in a variety of contexts. Usually, meeting a word in context provides an opportunity for *incidental learning*. This means learning where the main focus of attention is not on vocabulary learning but on understanding a piece of reading or what is being listened to. In research which compares incidental learning with deliberate learning, the result is always the same, that is, deliberate learning results in stronger learning, and more learning in shorter time. However, this does not mean that learners and teachers should focus only on deliberate learning and ignore incidental learning. What it means is that there should be an appropriate balance of both kinds of learning. Very roughly, about one quarter of the time should be given to deliberate learning and about three quarters of the time to incidental learning. Put another way, one quarter of the time in a course should involve language-focused learning; one quarter should involve meaning-focused input; one quarter should involve meaning-focused output; and one-quarter fluency development. The three strands of meaning-focused input, meaning-focused output and fluency development all provide opportunities for learning words in context.

The most important strategy helping incidental learning is guessing from context. Meeting words in context provides opportunities for developing knowledge of the form, meaning and use of words. Meeting words in a variety of contexts enriches and strengthens learning.

Because the knowledge gained from each piece of incidental learning is small and fragile, it is important that there are large

quantities of meaning-focused input and fluency development to make these small increases add up to large increases (Nagy, Herman & Anderson 1985). Nation and Wang (1999) recommend that learners should read at least one graded reader every two weeks to get sufficient repetitions in sufficient time to achieve cumulative learning. Stahl and Nagy (2006) tentatively suggest that native speakers of English need to be reading around 1,000,000 running words a year to get vocabulary growth of around 2000 words a year.

The most efficient kind of deliberate learning is learning using cards. This involves making small cards about 3cm by 5cm and putting a second language word or phrase on one side and the first language translation on the other. A pack of about 50 cards should be carried around and, when there is a few minutes' free time, the learner should go through the cards looking at the second language word or phrase and trying to recall the translation. There is a lot of research on this technique (see Nation (2013a: 437–478)) and it is a very effective means of learning. However, if this was the only learning done, it would be insufficient. Using word cards has a very useful role to play in a language course but this strategy has to be combined with plenty of opportunities for incidental learning through meeting words in context.

There have been some experiments which compare the deliberate learning of isolated words and the deliberate learning of words in a context sentence. Surprisingly, the provision of a context sentence does not give a strong learning advantage. The most systematic study of this was the research done by Webb (2008). He used many different kinds of tests to examine the learning and found that both learning isolated words and learning with a context sentence helped learn the meaning, but there were also small advantages for

grammar knowledge related to a word for learning with a context sentence compared with learning isolated words.

There is clearly nothing wrong with learning isolated words on word cards, and where it seems sensible to include a phrase or sentence then this is worth doing.

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- Webb, S. (2008). The effects of context on incidental vocabulary learning. *Reading in a Foreign Language*, 20, 232–245.

3 What should a teacher do about collocations?

Like most questions about language, deciding on what a word is is not as simple as it first seems. In fact, one of the big issues in the teaching and learning of vocabulary is to what degree the learning of vocabulary is the learning of single words or the storage of multi-word units like *thank you*, *as good as gold* and *by and large*.

A group of words that often occur together is called a collocation. From the viewpoint of understanding the meanings of word groups, there are three major kinds of collocations – core idioms, figuratives and literals (Grant & Bauer 2004).

Core idioms are collocations where the meaning of the whole unit cannot be related to the meaning of its parts. There are surprisingly few of these in English – around 100 (Grant & Nation 2006). The most frequent ones are in Table 9.1 below.

Table 9.1 The frequency of common core idioms

Core idiom	Frequency per 100 million running words
as well (as)	30,466
of course	29,690
by and large	487
so and so	327
such and such	196
out of hand	141
take the piss	137
and what have you	136
serve somebody right	101
take somebody to task	92
red herring	87
(be) beside yourself	72
out and out	72
take the mickey	71
at loggerheads	63
pull somebody's leg	60

It is clearly sensible to regard core idioms as being like words as they need to be learned as whole units. Many of them can

be changed in small ways, so in that way they are not frozen unchangeable units, for example, *taking the mickey*, *taking the mick*, *taking the Michael*, *the mick is being taken* and so on.

Figuratives are collocations whose meaning can be understood by applying an interpretation strategy, namely looking at how the meaning of the parts relates to the meaning of the whole, and looking at how the literal meaning relates to the figurative meaning. There are many figuratives in English. Here are some examples:

toe the line

watch the clock

hit the sack

hit the nail on the head.

Users of the language invent new figuratives and generally have little difficulty in understanding figuratives they have not met before. Non-native speakers of the language may have difficulty in using figuratives correctly. The learning of figuratives is greatly helped by finding out where the figurative came from (Boers et al 2006). For example, *toe the line* comes from military usage where soldiers have to line up.

The third group, literals, is by far the largest group of collocations. Here are some frequent ones:

don't mind

hang on

this afternoon

next door

in particular

what's happening

really nice.

Martinez and Schmitt (2012) provide one of the most useful lists of literals that require a little more effort to understand their meaning. Literals can be easily understood because the meaning of the whole unit is clearly related to the meaning of the parts. There may be some difficulty, however, if the way something is said in the second language differs from the way it is said in the first language. Here are some examples where it is likely that the typical first language collocation will differ from the way it is expressed in English: *in the old days*, *on the other hand*, *hang on*, *each other*.

At one extreme, some argue all vocabulary learning (and indeed grammar learning) involves learning collocations. That is, the learning and teaching unit should be collocations rather than single words. At the other extreme, some argue that except for some core idioms, collocations can be analysed and their construction follows normal grammatical rules (Liu 2010), so the most sensible learning unit is the single word.

In most debates of this kind, it is best to work out a good balance of these positions, learning single words but also giving attention to the many common collocations, especially those made of very common words.

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4 Do the relationships between words in a content-based unit of work help learning?

There are several pieces of research showing the negative effects of teaching at the same time several unknown words that are members of a lexical set (Higa 1963; Ishii 2015; Tinkham 1997; Waring 1997). The lexical sets causing difficulty in these studies were near synonyms, opposites, and words like articles of clothing or names of fruit that could be grouped under a heading like *clothing* or *fruit*. Learning several unknown words in such sets made learning 50% to 100% more difficult (Nation 2000) compared to learning several unrelated words. That is, many more repetitions were needed to learn the interfering sets and learners tended to cross-associate (mix up) the words in the sets.

However, in his 1997 study, Tinkham looked at a different kind of relationship among words. The set of meanings in his experiment were *frog*, *green*, *pond*, *croak*, *slimy* and *hop*. He found that words in this kind of story relationship were easier to learn than unrelated words and were much easier to learn than words in the sets of names of fruit and articles of clothing.

If we look at the typical relationship of words in a unit of work, we find that there are many potentially interfering sets of words. For example, a science unit on respiration contains the names of parts of the respiratory system – *bronchus*, *bronchioles*, *diaphragm*, *trachea*, *ribs*, *lung*, and *alveolus*. Learning these together is like

learning the names of articles of clothing at the same time – it will be hard to remember which is which. The same unit contains the terms *inhalation* and *exhalation*. These are opposites and are likely to interfere with each other. Closely related terms like *conduction*, *convention*, and *radiation* which are like near synonyms are also likely to interfere with each other.

The teacher can look for the following signs of interference between words.

- 1 *Cross-association*. The most obvious sign is cross-association. For example, a learner thinks that an *alveolus* is called the *trachea*, and that the *trachea* is called the *alveolus*. If words have a formal similarity *bronchiole/bronchus*, or *cytoplasm/protoplasm*, then the cross-association may be even stronger.
- 2 *Failure to remember the words*. The effect of interference is difficulty in learning. Sometimes this is shown in cross-association, but most often it is shown in confusion and lack of learning. Interference is only one possible cause of lack of learning, but it is one that the teacher can do something about.
- 3 *Lack of fluency of access*. Learning may occur in spite of the extra difficulty caused by interference but learners may hesitate before producing or comprehending the word because they have to sort out the interference each time the word is used.

* How can interference be avoided or reduced?

Separate the interfering items

If two items are likely to interfere with each other, then one should be learned first and when it has been firmly established, then the other item can be learned. The gap between the two bits of learning needs to be quite long, probably several weeks, because the first piece of learning needs to be well established or it will be upset by the later learning. This way of avoiding

interference is generally not practical when English is taught through the curriculum, because the technical terms in a lesson are needed in that lesson and generally not before. A possible way is to give most attention to one of the words (the most useful one) and come back to the other later.

Use mnemonic tricks to distinguish the items

The most obvious mnemonic technique is to use word part analysis to distinguish related items. This is easily done with a pair like *inhalation* and *exhalation* where *in-* means “in”, and *ex-* means “out” or “away”. A second possibility is to relate one of the words to a known word pointing out the historical connection between the two words in a simple way. A cell *wall* has obvious similarities to the *wall* of a house; *nucleus* has a connection with *nuclear*. A third way is to use the keyword technique which uses a first language word which sounds like the first part of the second language word to be learned.

Emphasise the syntagmatic relationship

There are at least two ways of describing the parts of an object or a system. One way is to emphasise the parts, such as the parts of a cell or the parts of the respiratory system. This treats the parts like items in a list. This list-like relationship is one that encourages interference and thus makes learning more difficult. A more helpful way is to view the parts as parts of a process: *How does a cell perform its functions? What happens during respiration?* This relates the parts in a syntagmatic way, that is, they are part of a sentence or a story, rather than part of a list. Their place and function in the process is emphasised rather than their presence in a list.

When looking at the vocabulary in a lesson, the teacher needs

to decide if the relationships among the words in a set are likely to be interfering or not. If the relationships are those of near synonyms, opposites, or members of a set that could have a headword, then the teacher needs to consider how to reduce the likelihood of interference.

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5 How big a vocabulary do you need?

There are several ways of answering this question for a non-native speaker of English. One way is to work out how many words there are in English. As we have seen in Chapter 2, an important factor influencing this is what is included in a word family. Using Bauer and Nation's (1993) Level 6 definition of a word family and excluding proper nouns, there are well over 100,000 words in *Webster's Third New International Dictionary* (Goulden, Nation & Read 1990; Dupuy 1974). However, even a very well educated native speaker does not know all of the words in English so this is not a sensible goal.

Another way is to work out how many words a native speaker knows. The estimates for an eighteen-year-old student beginning university would range from around 16,000 to 18,000 words if Bauer and Nation's (1993) Level 6 definition of a word family is used. The rule of thumb for estimating a young native speaker's vocabulary size is to take their age minus two multiplied by 1000. So, a seven-year-old native speaker would know around 5000 words (7 minus 2 times 1000). A thirteen-year-old native speaker of English would know around 11,000 words (Coxhead, Nation & Sim 2015). During their early life, native speakers increase their vocabulary size by around 1000 words a year.

But non-native speakers don't have to have the same vocabulary size as native speakers; they just need to be able to do what native speakers do. So, the third way of working out how big a vocabulary non-native speakers need is to see how many words they need to do certain tasks like reading a novel or a newspaper, taking part in a conversation, successfully doing academic study, or watching a movie. There are two ways of working this out. One way is to analyse the language involved in doing various tasks and see what vocabulary is needed and the second way is to test non-native speakers who can do these tasks. We will look at each of these in turn.

*** How many words do you need to do certain tasks?**

Answering this question involves making lists of thousands of word families and putting them in an order which as closely as possible represents the order in which someone might normally learn them. Once again, what a word family includes has a very important effect on the result. A set of twenty-four 1000 word family lists can be found at <http://www.victoria.ac.nz/lals/staff/paul-nation.aspx>. The lists use Level 6 of Bauer and Nation (1993) and are ordered according to the range and frequency of occurrence of the families

in the 100,000,000 token British National Corpus. These lists can be used with the AntWordProfiler programme which compares texts with the lists. A web-based analysis programme can be found at <http://www.lex tutor.ca/vp/bnc/>. An account of the making of the lists and the results from using them can be found in Nation (2006).

When seeing how much vocabulary a learner needs to read a novel, for example, the following three assumptions are made.

- 1 The level of word family used properly represents what a word family is for the particular target language users.
- 2 98% coverage of the running words in a text is needed for unassisted comprehension of a text (Hu & Nation 2000; Carver 1994).
- 3 Proper nouns can be considered either as known items or as items that do not require previous knowledge. Some very common names of countries, nationalities, languages and cities are actually included in the fourteen 1000 word family lists.

Table 9.2 gives the results of analysing a variety of tasks.

Table 9.2 Vocabulary sizes (word families) needed to reach 98% coverage of a variety of text types.

Novels	Newspapers	Children's movies	Conversations
9000 words	8000 words	7000 words	7000 words

We can see that for most texts a vocabulary size of around 7000 to 9000 word families is needed to reach 98% coverage.

Table 9.3 shows the rapidly decreasing returns in coverage for even a reasonably difficult text like the novel *Lord Jim*. Each word list contains 1000 word families. At the later levels each new 1000 word families provide only a very small amount of text coverage.

Table 9.3 Text coverage and cumulative coverage for each 1000 word family level for the novel *Lord Jim*.

Word list	Tokens/%	Cumulative per cent	Example words
one	106,332/80.30	80.30	the, of, a
two	8952/6.76	87.06	ship, sea, voice
three	4954/3.74	90.80	captain, silence, tone
four	2355/1.78	92.58	deck, fate, native
five	1611/1.22	93.80	profound, fort, mist
six	1239/0.94	94.74	canoe, steamer, forehead
seven	1030/0.78	95.52	courtyard, murmur, overboard
eight	584/0.44	95.96	attentive, bamboo, caste
nine	604/0.46	96.42	skipper, fury, scorn
ten	500/0.38	96.80	creek, abject, awe
eleven	430/0.32	97.12	squall, bulkhead, crimson
twelve	315/0.24	97.36	schooner, abyss, astern
thirteen	343/0.26	97.62	sombre, knoll, repose
fourteen	231/0.17	97.79	stockade, confound, balustrade
proper	1472/1.11	98.90	Jim, Stein, Cornelius
exclam.	139/0.10	99.00	hmm, eh, er
outside	1324/1.00	100.00	rajah, infernal, bally
Total length 132,415 tokens			

* How many words do successful non-native speakers know?

We have looked at what vocabulary size might be needed to cope with various kinds of texts. The other way is to test non-native speakers to see how much vocabulary they know. The Vocabulary Size Test has been developed to do this. Early results suggest that non-native speakers in a pre-university English proficiency course who are near the level needed to begin study in an English medium university know around 4000 word families. Non-native speakers can successfully cope with second year study at an English medium university with around 5000 word families, and non-native speaking PhD students with around 9000 words.

If we try to combine these results from testing with the text coverage results, we can draw the following tentative conclusions.

- 1 For advanced largely unassisted receptive use of English, a vocabulary of around 7000–9000 word families is needed.
- 2 Learners with a vocabulary of less than 4000 words are likely to struggle in coping with unsimplified English texts.

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6 How should words be taught?

The first question to ask is “Is the word worth teaching?”. By “teaching” here we do not mean quickly giving the meaning of the word, but spending at least a few minutes focusing on the word. Spending time like this is justified for high frequency, academic and technical words, but not for mid- and low frequency words.

If there is a chance to prepare for the teaching, it is useful to look at the learning burden of the word using the categories and questions in Table 1.4. What is involved in knowing a word? This helps decide where the difficulties might lie in the word for a particular group of learners. A similar way to do this is to ask “If the learners carried over all the patterns from their first language for this word, what errors would they make?” These patterns are patterns of pronunciation, spelling, word meaning, grammar, collocation and constraints on use.

When teaching a word, it is a good idea to give attention to about three or four of the aspects from Table 1.4. For example, when teaching *contrary* it is worth focusing on its meaning, its collocations (*on the contrary*, *a contrary opinion*) and that it is a rather formal word. Also focusing on its parts (*contra-*) would help learners remember it. Spending time on a word by giving attention to several aspects of the word is called “rich instruction”. Rich instruction makes sure that there will be a reasonably strong

memory of the word so that it can be further enriched when it is met later.

There are some useful guidelines that can make the teaching of a word more effective.

- 1 Focus on a few explicit aspects of the word. Learning a word is a cumulative process. One session of teaching is not enough to establish all that needs to be known about a word. So, it is not necessary to make the first teaching of a word complicated and complete. It is best to focus on a few clear bits of information about the word, knowing that this will be strengthened and enriched by later meetings.
- 2 Get the learners actively involved. Get them to break the word into parts themselves, use their first language knowledge to predict possible collocations for the word, answer some questions involving the word, and gather information about the word from a dictionary.
- 3 Don't contrast the word with its opposite, or teach it along with words of a similar or related meaning. Teaching opposites, near synonyms, and members of the same lexical set together causes interference and makes learning 50% to 100% more difficult.
- 4 If the word is met in context, get the learners to go through the steps for guessing the word from the context first. After they have guessed the word, teach more about it. In this way learners have practised a useful strategy and the teacher has taught a useful word.
- 5 If possible, teach the meaning of the word using translation into the first language. This may not be the exact meaning of the word but it is usually a very good start. There is plenty of research to show that using the first language is an effective way to convey the meaning of words.
- 6 Use analogy and word part analysis to show how the new word fits into familiar patterns. For example, reconstruction is made up of *re-construct* and *-ion*.

It is good to have a class secretary who keeps a list of what words

are taught and when. Teachers can use this list in the future to revise and add to the teaching of these words. This revision can involve putting a list of previously taught words on the board and getting learners to pronounce them, to work in groups breaking the words into parts or listing their collocates (the words that typically go with them), and to answer questions about them.

Further reading

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7 Is an English through the curriculum course a good environment for learning vocabulary?

Learning English through the curriculum differs from an ordinary English as a second language course in that there is usually an extended exploration of a narrowed topic area and a focus on the technical vocabulary of the area. The same is true of theme-based teaching.

We will look at the arguments for and against English through the curriculum from a vocabulary perspective and then consider some guidelines for optimising vocabulary learning.

*** Arguments in favour of English through the curriculum**

- 1 An English through the curriculum course provides good opportunities for the thoughtful processing of vocabulary. It does this through a variety of activities that apply the content of the course and through discovery learning. For example, in a science course there are experiments to discover scientific principles and tasks to show how these principles apply in daily life. These activities require retrieval of the target vocabulary and set up good conditions for varied use of the vocabulary, that is, using it in ways that the learners have not used it before.
- 2 Through the continued exploration of the same topic, an English through the curriculum course allows the learners to build up a lot of knowledge about the topic and the vocabulary involved. This means that there are ideal conditions for message-focused learning through meaning-focused input, meaning-focused output and fluency development. Put another way, an English through the curriculum course allows most of the tasks in the course to be experience tasks where learners bring a lot of experience to what they do.
- 3 Some English through the curriculum courses draw on knowledge that has already been at least partly established through study in the learners' first language. This then makes learning through the second language easier because there is already a good degree of content knowledge. This allows most of the focus to be on the new language items that need to be learned.
- 4 Staying within a narrow content area allows for a smaller vocabulary load and more repetition of the vocabulary associated with the topic.

*** Arguments against English through the curriculum**

- 1 Because an English through the curriculum course is focused on a specialised area, there is a focus on the technical vocabulary of that area rather than the more generally useful high frequency vocabulary and academic vocabulary. That is, an English through the curriculum course

may develop proficiency within a particular subject area but may neglect items that are very useful outside that area.

- 2 The focus on content matter can mean that there is not enough *deliberate* focus on the language of that area (Langman 2003). That is, the focus on ideas overwhelms the focus on language. In a well-balanced language course about one quarter of the time should be spent on the language-focused learning strand. This learning strand of a course is a very effective one and is a way of speeding up learning. If the focus is too completely on the subject matter, this language focus can be neglected.
- 3 The meaning relationships between the vocabulary in a unit of work tend to be those that make vocabulary learning more difficult. That is, by presenting opposites, near synonyms or members of the same lexical set together, the course increases the chances of cross-association between the vocabulary items.

We have now looked at the positive and negative arguments for English through the curriculum. The argument of motivation has not been discussed because it can go either way in an English through the curriculum course. On balance, the arguments weigh in favour of English through the curriculum as an environment for vocabulary learning. These arguments can be made even stronger by following a few guidelines for running an English through the curriculum course.

*** Setting up the best conditions for vocabulary learning in an English through the curriculum course**

These guidelines cover both the planning and presentation of an English through the curriculum course.

- 1 Vocabulary learning will be enhanced if there is not too large a variety of topics in the course and the topics are strongly related to each other. Having a wide variety of topics results in a very diverse vocabulary

- that is not repeated during the course. This results in a very heavy vocabulary load and poor conditions for learning.
- 2 If it is possible to do some work on the subject matter using the learners' first language, either before or during the course, then the learning load is made lighter and there is more chance to give attention to the language. When everything is unknown – the language, the ideas and the discourse – then the learning is difficult.
 - 3 An English through the curriculum course should include some deliberate focus on language features. This can involve the deliberate learning of vocabulary, teaching of vocabulary strategies (guessing from context, using word cards, using word parts, dictionary use) and teaching of vocabulary as for example in intensive reading. Teaching vocabulary can be done in the context of content matter lessons and there can also be a small amount of time given solely to vocabulary and vocabulary strategies.
 - 4 Emphasising the process and application of the ideas in the subject matter is more likely to set up helpful relationships between the vocabulary in a unit of work. Approaching the ideas as a static set of items to be described is more likely to set up interfering relationships between the target words (Nation 2000).

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8 Should teachers give learners lists of words to learn?

There are several aspects of this question to consider. Firstly, lists

of words, like the first 1000 words of English or the Academic Word List (Coxhead 2000), can represent important learning goals. It is always good if learners know what they need to learn and if they have some control over when and how this learning is done. Lists of a manageable size can thus be useful for learners to see what they need to learn and to measure how much they have already learned.

Secondly, motivated independent learners may want to take control of their own learning and access to a list of items can allow them to plan their own learning.

Thirdly, learning items written in lists is not a good strategy for deliberate vocabulary learning. It is much better to use a flash card app or to have each word written on one side of a word card with its meaning (usually its first language translation) on the other side so that the learners cannot see the meaning without turning the card over. In addition, having words in lists means that learners cannot change the order of the words whereas cards allow them to move individual cards to different places in the pack. This prevents serial learning where one item triggers the memory of the next. If the list is ordered alphabetically, then the words next to each other in the list may share some formal similarity and thus could more easily get mixed up or interfere with each other.

If teachers use lists as sources for deliberate learning, it is important that they give the learners some training in how to deliberately learn words. The ideal conditions for deliberate learning are when:

- learners have to retrieve the meaning of the word when looking at the word form – this is helped by using small cards where the word is on one side and its meaning on the other
- learners are able to change the order of the words so that those

- requiring more learning are put at the top of the pack and those that are better known are put lower in the pack or in a different pack
- teachers space the learning sessions so that there is a reasonable amount of time between each learning session – a good schedule is to begin with sessions an hour or two apart and then move to a day or so apart and then several days and then months
- learners have words in each pack that are not related in form or meaning – this avoids interference
- learners use memory tricks like saying the word aloud, analysing word parts, or using associations and visualisation where necessary.

Word lists are useful resources for planning, revising and testing. If used wisely they can improve learning in a course.

References

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Further reading

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9 Should learners use monolingual or bilingual dictionaries?

A monolingual dictionary is one where the words and the meanings are in the same language. A bilingual dictionary is one where the words in the dictionary have their meanings in another language. So in an English–Spanish bilingual dictionary the English words are defined using Spanish equivalents.

In a monolingual dictionary, definitions of words typically involve

complex grammar. The classic definition construction, for example, “A lemma is a set of words which all share the same stem form and which differ from each other by their inflections” involves a main clause and a relative clause. Sometimes this relative clause may be a reduced relative clause. In contrast, a first language synonym may be a single, easily understood word, for example in an English–Indonesian dictionary, *hair – rambut*.

Monolingual dictionaries can be used by any learner of English who has enough vocabulary to be able to understand the definitions. There are benefits for publishers in publishing monolingual dictionaries because they can be sold to learners of any language background. On the other hand, bilingual dictionaries have a much more limited market. They can only be used by learners who understand the language used to give the definitions. For example, an English–Thai bilingual dictionary is of use only to speakers of Thai.

Because monolingual dictionaries can have large sales, a lot of investment can be put into developing the dictionary. The established monolingual dictionaries contain a wealth of useful information. There are several first class monolingual dictionaries for learners of English. These include the *Australian Learners’ Dictionary*, the *Longman Dictionary of Contemporary English*, the *Oxford Advanced Learners’ Dictionary*, the *Macmillan Essential Dictionary for Advanced Learners*, *Cambridge Advanced Learners’ Dictionary* and the *COBUILD English Dictionary for Advanced Learners*. Reviews of these dictionaries can be found in Kirkness (2004), Rizo-Rodriguez (2004) and Tribble (2003). Bilingual dictionaries can vary a lot in quality, but there are also some excellent bilingual dictionaries.

One advantage for learners using monolingual dictionaries is

that they can get comprehensible input from reading the English definitions. However, they must understand the definitions in order for this to happen. The *Longman Dictionary of Contemporary English* uses a defining vocabulary of 2000 words. This means that in order to use the dictionary, a learner must know at least 2000 words of English. Other learners' dictionaries do not use a controlled vocabulary but try to give the meanings of words using a more frequent vocabulary than the words being defined. As a result, for learners with a vocabulary of less than 2000 words, bilingual dictionaries are the most suitable. For learners with a vocabulary of more than 2000 words, a monolingual dictionary can be a good resource.

There is a compromise – bilingualised dictionaries. Bilingualised dictionaries are monolingual dictionaries with first language translations provided in addition to monolingual definitions. Research on bilingualised dictionaries (Laufer & Hadar 1997) demonstrates their effectiveness. With the increasing availability of electronic dictionaries, it is becoming more economical to produce bilingual and bilingualised dictionaries.

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10 What are the most effective improvements that a teacher could make to a course in English as a foreign language?

The most effective change by far would be to include an extensive reading programme within the course. The research on extensive reading shows that a well-run extensive reading programme is likely to increase learners' language proficiency by at least 50% (Elley & Mangubhai 1981). In the beginning the extensive reading programme should involve reading in class time, but after learners become familiar with the activity and enjoy doing it, it can be set as homework. There is a free guide to setting up an extensive reading programme written in a range of languages on the Extensive Reading Foundation website (<http://erfoundation.org/wordpress/guides/>). Basically it involves making books at the right level available for the learners to read and letting the learners to quietly get on with the reading. Each learner reads a different book, preferably a graded reader, which contains only a small number of unfamiliar words. The learners should read at least for a total of 30 to 40 minutes per week. They should not have to do book reports but should keep a brief record of what books they have read. As their reading improves, they should move up through the levels of graded readers.

Including an extensive reading programme in a course will make a very big difference to learners' achievement and also to their attitude to learning English.

The second most effective change is to add a fluency development programme covering each of the four skills of listening, speaking, reading and writing. The main activities involved would be

quicklistens for listening (see Sonia Millett's website <https://www.victoria.ac.nz/lals/about/staff/sonia-millett>), 4/3/2 for speaking, a speed reading course and easy extensive reading for reading, and 10-minute writing for writing. All of these activities are described in this book. Adding a fluency development course allows learners to make the best use of what they already know.

The third most effective change would be to add meaning-focused problem-solving activities for listening and speaking. These activities have been described in Chapter 5 of this book. Most courses in English as a foreign language already contain plenty of deliberate attention to language features such as vocabulary and grammar. Giving more attention to spoken language use will make sure that learners develop skills in language use.

References

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Further reading

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Appendices

APPENDIX 1: A GUIDE TO THE VOCABULARY LEVELS TESTS

There is a close connection between vocabulary size, coverage of the vocabulary in a text, and the learner's ease in coping with the language of the text. The most frequent 2000 word families of English provide 80% to 95% coverage of a text depending on what kind of text it is. The 570 word families of the Academic Word List can provide an additional 4% coverage of newspapers and 8.5% to 12% coverage of an academic text. Building on the most frequent 2000 words of English, the 3rd 1000 most frequent words can provide around 4.3% coverage, with the coverage of each successive 1000 words continuing to drop.

The boundary between high frequency words and mid-frequency words is best made after the 3000 word level, although learners with academic goals should also include the Academic Word List in their learning. The high frequency words deserve repeated attention from the teacher, the learners and the course book. The mid-frequency words do not deserve much teaching time, although learners should continue learning them after they have control of the high frequency words. The teacher's focus with the low frequency words should be to provide training in the strategies for coping with and learning these words. These strategies include guessing from context, learning from word cards, using word parts, and dictionary use.

To understand how the Vocabulary Levels Test was made, it

is necessary to imagine a frequency list of the word families of English ranked from the most frequent word *the* to the least frequent words. This list is then divided up into levels of 1000 words. So the first level contains the 1000 most frequent word families, the second level contains the second most frequent 1000 word families and so on.

Because of the different treatments that teachers should give to high and low frequency words, it is very important to know learners' present level of vocabulary knowledge. The Vocabulary Levels Test is one way of finding this out. There are two recent versions – the Updated Vocabulary Levels Test (Webb, Sasao & Ballance 2017) and the New Vocabulary Levels Test (McLean & Kramer 2015). As well as giving information about knowledge of each of the 1000 levels, the Vocabulary Levels Test can also give a measure of total vocabulary size for learners of English as a foreign language who know much less than 5000 words.

The Updated Vocabulary Levels Test uses a matching test format and tests each of the first five 1000 levels of English. It tests 30 words at each level. To find a learner's total vocabulary size, multiply the total score on the five 1000 word levels by 33.34.

The New Vocabulary Levels Test uses a multiple-choice format, and tests the first five 1000 levels of English and the Academic Word List level. It tests 24 words at each of the five 1000 word levels, and 30 words from the Academic Word List. To find a learner's total vocabulary size, multiply the total score on the five 1000 word levels by 41.67.

Both the Updated Vocabulary Levels Test and the New Vocabulary Levels Test are available from Paul Nation's website. The Updated

Vocabulary Levels Test is also available from Stuart Webb's website (<https://www.edu.uwo.ca/faculty-profiles/stuart-webb.html>). This website also contains a web-based version of the test.

There are old versions of the Vocabulary Levels Test (Nation 1983; Schmitt, Schmitt & Clapham 2001). These are based on old word lists and the newer versions of the Vocabulary Levels Test are based on better word lists (the BNC/COCA word lists on Paul Nation's website). Teachers and researchers should use the Updated Vocabulary Levels Test or the New Vocabulary Levels Test instead of the older ones.

Understanding the Updated Vocabulary Levels Test

Before reading this section, look at the Updated Vocabulary Levels Test on Stuart Webb's website.

Task 1

Answer these questions about the Updated Vocabulary Levels Test.

- How many sections does the test have?
- How many words are tested in each section?
- How do you answer the test?
- What would be the quickest way of marking the test?
- If the test made use of the learners' first language, what part of each block of items would be written in the learners' first language?

There are two similar versions of the Updated Vocabulary Levels Test, Version A and Version B. Each one was made in the following way.

- 1 Five levels were chosen for testing – the 1st 1000 word level, the 2nd 1000 word level, the 3rd 1000 word level, the 4th 1000 word level, and the 5th 1000 word level. The 1000 and 2000

word levels are available in bilingual versions on Paul Nation's website for the following languages – Thai, Vietnamese, Mandarin (simplified and traditional), Korean, Japanese, Indonesian and Tongan. There are no reliability statistics available for these bilingual versions.

2. A representative sample of 60 words was taken from each of the five levels. Because the words were a representative sample, a learner's score at each level represents the proportion of all the words known at that level. So, if a learner scores 15 out of 30 on the 2nd 1000 word level, that means that 50% or 500 out of 1000 words are known at that level.
3. The 60 words at each level were grouped into blocks of six words according to part of speech.
4. The words in each block were then checked to make sure that they were not similar in form or related in meaning. This was done so that the distractors in each block were not distracting. That is, if the learners had partial knowledge of a word, they should be able to choose the correct answer. The aim of the Vocabulary Levels Test is to get as accurate as possible a record of what the learners know, and even of the words that they have not yet fully learned.
5. Three words in each block of six were randomly chosen as the words to be tested. The other three in the block were the distractors.
6. The definitions made use of words that were more frequent than the words being tested.
7. The two versions of the test were checked for reliability and validity (Webb, Sasao, & Ballance 2017).

When learners do the Vocabulary Levels Test they should be helped to become familiar with the item type and the time allowed for the test should not be limited. When scoring the test, the scores for

each level and the total score should be recorded. The scores for each level are essential for interpreting the results of the test.

Interpreting the Updated Vocabulary Levels Test

We have seen how the Vocabulary Levels Test was made and how it can be scored. We will now look at what these scores mean.

What is an adequate score at any particular level? When can we say that a learner knows enough of the words at a certain level and can now focus on the next level? Answering these questions is a matter of the teacher's judgement. To make this judgement it is necessary to look at the score for each level in terms of the total words known and not known at that level.

Task 2 Practise interpreting results of the Vocabulary Levels Test by answering the questions in the table for the three levels: 2nd 1000 word level, and the 3rd 1000 word level. The answers for the 1st 1000 word level are provided.

Question	1 st 1000 word level	2 nd 1000 word level	3 rd 1000 word level
1 If a learner scores 15 out of 30			
a How many words in total are known at this level?	500		
b How many are not known?	500		
c Would you be happy with this degree of knowledge at this level?	No, too many unknown words		
2 If a learner scores 21 out of 30			

(to be continued)

(continued)

Question	1 st 1000 word level	2 nd 1000 word level	3 rd 1000 word level
a How many words in total are known at this level?	700		
b How many are not known?	300		
c Would you be happy with this degree of knowledge at this level?	No, too many at this high frequency level		
3 If a learner scores 24 out of 30			
a How many words in total are known at this level?	800		
b How many are not known?	200		
c Would you be happy with this degree of knowledge at this level?	No, too many at this high frequency level		
4 If a learner scores 27 out of 30			
a How many words in total are known at this level?	900		
b How many are not known?	100		
c Would you be happy with this degree of knowledge at this level?	Yes, not too many to pick up while working on the next level		

Understanding the New Vocabulary Levels Test

Before reading this section, look at the New Vocabulary Levels Test on Paul Nation's website at <https://www.victoria.ac.nz/>__

data/assets/pdf_file/0004/1713190/McLean-Kramer-The_New_Vocabulary_Levels_Test.pdf

Task 3 Answer these questions about the New Vocabulary Levels Test.

- How many sections does the test have?
- How many words are tested in each section?
- How do you answer the test?
- What would be the quickest way of marking the test?
- If the test made use of the learners' first language, what part of each block of items would be written in the learners' first language?

Task 4 Practise interpreting results of the New Vocabulary Levels Test by answering the questions in the table for the 2nd 1000 and 3rd 1000 levels. The answers for the 1st 1000 word level are provided.

Question	1 st 1000 word level	2 nd 1000 word level	3 rd 1000 word level
1 If a learner scores 15 out of 24			
a How many words in total are known at this level?	625		
b How many are not known?	375		
c Would you be happy with this degree of knowledge at this level?	No, too many unknown words		
2 If a learner scores 21 out of 24			
a How many words in total are known at this level?	875		
b How many are not known?	125		

(to be continued)

(continued)

Question	1 st 1000 word level	2 nd 1000 word level	3 rd 1000 word level
c Would you be happy with this degree of knowledge at this level?	No, still too many at this high frequency level		

Remember that the Academic Word List Level represents 570 words and is tested using 30 items. Complete the following table for the Academic word List level in the New Vocabulary Levels Test.

1 If a learner scores 15 out of 30	
a How many words in total are known at this level?	
b How many are not known?	
c Would you be happy with this degree of knowledge at this level?	
2 If a learner scores 24 out of 30	
a How many words in total are known at this level?	
b How many are not known?	
c Would you be happy with this degree of knowledge at this level?	

Applying the results

The learners should gain a satisfactory score on the 1st 1000 level before they work on the words at the 2nd 1000 word level or other vocabulary. If the learners plan to study in English in upper

secondary school, university or a technical institute, they should study the vocabulary in the Academic Word List, after they gain a satisfactory score at the 2nd 1000 word level. If they do not have academic goals they should learn the 3rd 1000 words.

Once teachers understand the Vocabulary Levels Test, they need to be able to plan a programme based on the results of the test.

* Techniques for high frequency vocabulary

Meaning-focused techniques

These include:

- reading graded readers
- listening to stories and student talks
- pair and group activities, such as split information activities, opinion-based tasks, where the target vocabulary is in the written input of the activity.

Language-focused study

These include:

- intensive reading
- vocabulary learning strategies for low frequency words
- individualised vocabulary exercises, such as matching activities, collocation exercises and guided cloze
- teaching of new vocabulary related to texts, topics, themes and tasks
- peer vocabulary teaching activities
- fluency tasks to develop ready access to known vocabulary.

* Strategies for mid-frequency vocabulary

Strategies include:

- guessing from context using textual clues
- learning second language/first language word pairs out of context from vocabulary cards, and using mnemonic techniques, such as the keyword method

- using the most frequent prefixes and perhaps roots to help remember vocabulary, incorporating the meaning of the word part in the definition of the word, for example “an expedition goes out to look at new lands”
- using a dictionary.

Task 5

Look at the table of results for six learners who sat the Updated Vocabulary Levels Test. Practise applying these results by answering the questions below for each learner.

- *What programme of vocabulary expansion would you advise the learner?*
- *What questions would you ask the learner before you made a decision about the programme?*
- *What level needs most of the learner’s attention?*

Let us look at an example. Learner C’s result was 22 at the 2000 word level. This means that learner C knows 733 words and does not know 267 words at this level. Some more work at this level would be useful, perhaps graded reading. After that if learner C wants to do academic study, they should be working on the vocabulary of the Academic Word List.

Learner	1000	2000	3000	4000	5000	Total
A	14	11	0	0	0	25
B	23	12	7	0	1	43
C	30	22	12	10	8	82
D	30	30	29	26	20	135

Further reading

McLean, S., & Kramer, B. (2015). The creation of a New Vocabulary Levels Test. *Shiken*, 19(2), 1–11.

Nation, I. S. P. (1983). Testing and teaching vocabulary. *Guidelines*, 5(1), 12–25.

Schmitt, N., Schmitt, D., & Clapham, C. (2001). Developing and exploring the behaviour of two new versions of the Vocabulary Levels Test. *Language Testing*, 18(1), 55–88.

Webb, S., Sasao, Y., & Ballance, O. (2017). The Updated Vocabulary Levels Test. *ITL International Journal of Applied Linguistics*, 168(1), 33–69.

APPENDIX 2: GLOSSARY

Corpus (*plural corpora*): A corpus is a collection of texts. In order for the collection to be representative of certain language features, a corpus is normally large with millions of words included. That said, for teaching and learning purposes, teachers can build their own corpora of learner texts and either use them to search for patterns or compare them to a large native speaker corpus.

Concordance: A concordance lists all the examples of an individual word with its immediate context in a corpus. Concordancing is very useful for teachers and learners to see how a word of interest is used in authentic texts. This is now often done by a computer programme (a concordancer) which automatically constructs a concordance of a given word.

Five levels of vocabulary: For teaching and learning purposes, we distinguish five levels of vocabulary based on their frequency of occurrence. The first 3000 most frequently occurring words are called *High Frequency Vocabulary*. These words make up from 85% to 95% of the words on any page in a text. The next 6000 most frequent words are called *Mid-Frequency Vocabulary*. Mid-frequency vocabulary make up around 9% of the words in a text. Words beyond the 9000 high and mid-frequency words belong to *Low Frequency Vocabulary*. The overwhelming majority of words are low frequency words which do not need to be taught unless they are needed. In addition to the three frequency levels described above, we single out two additional types of vocabulary: *Academic Vocabulary* and *Technical Vocabulary*. Academic vocabulary

are words that appear often in all disciplines of academic use. Coxhead's Academic Word List contains 570 of these words, which make up almost 10% of academic texts. *Technical Vocabulary* are words used in a specialised area and are usually not so commonly used outside that area. Most academic words and technical words fall into the mid-frequency category.

Incidental and deliberate learning: When vocabulary is learned intentionally and consciously, it is deliberate learning. On the other hand, when words are picked up naturally during reading or listening without the learner's awareness, it is incidental learning.

Levels of Processing/depth of processing: How elaborate and explicit we handle the learning of vocabulary goes along a continuum from shallow to deep. The more meaningful and elaborate the processing is, the longer-lasting, and stronger the memory traces will become (Craik & Lockhart 1972). Shallow processing such as writing a word again and again will not result in long-lasting memory. Deep processing strategies such as making a new word meaningful and relating it to various contexts of use will result in longer retention of the word.

Linked skills/theme-based learning: This is a teaching and learning activity that helps develop fluency and increase the amount of recurrence of words within a theme-based unit of teaching which covers the same topic across the four skills of listening, speaking, reading and writing. For example, within a theme-based unit of teaching, the learners can read and study a topic, listen to a lecture about it, talk about it, solve problems and write about it.

Spaced repetition: Words are not learned at the first sight. Many repetitions are needed before a word is stored in our minds. We

can repeat a new word as many times as it takes at one go in order to remember it (massed repetition); or we can leave certain time between each repetition (spaced repetition). Research has shown that spaced repetition results in better long-term retention than massed repetition.

The four strands: In teaching and learning a foreign language, efforts and attention should be directed at four equally important strands of language learning: meaning-focused input, meaning-focused output, language-focused learning, and fluency development.

Token, type, lemma, and word family: In counting words, we need to decide the unit for counting. A *token* is each and every appearance of a word. The number of tokens of a piece of text is the total number of words. Word *type* refers to every different word in a text. The type-token ratio of a text indicates its word density. A *lemma* is a set of words which all share the same stem form but differ from each other by their inflections. A *word family* is made up of a headword (the stem), its inflections and its derivations. In this book, when we refer to someone's vocabulary size, we mean the number of word families a person knows.

Zipf's law: Zipf's law is a vocabulary distribution pattern named after the American psycholinguist George Kingsley Zipf (1902–1950). Zipf's law states that the rank-frequency distribution is an inverse relation, that is, the most frequent word occurs about twice as often as the second most frequent word, three times as often as the third most frequent word, etc. An awareness of Zipf's law will guide the teacher and learner of vocabulary in terms of a meaningful deployment of attention to the high-frequency words.

APPENDIX 3: LIST OF WEBSITES MENTIONED IN THE BOOK

Vocabulary lists

<https://www.victoria.ac.nz/lals/about/staff/paul-nation#vocab-lists>

Vocabulary tests

Bilingual 1000- and 2000-level tests <http://www.victoria.ac.nz/lals/staff/paul-nation.aspx>

Updated Vocabulary Levels Test (Webb, Sasao & Ballance 2017)
https://vuw.qualtrics.com/jfe/form/SV_6Wrb5aUvXjIAs6h?Q_JFE=qdg

Paul Nation's Vocabulary Size Test <https://my.vocabularysize.com/>

Picture Vocabulary Size Test <http://www.laurenceanthony.net/software/pvst/>

Word profilers

<http://www.laurenceanthony.net/software/antwordprofiler/>

<http://language.tiu.ac.jp/flc/>

http://www.er.uqam.ca/nobel/r21270/texttools/web_vp.html

<http://www.edict.com.hk/textanalyser/>

<http://www.lextutor.ca/vp/bnc/>

Concordancers

WordSmith Tools http://www.oup.com/elt/catalogue/guidance_articles/ws_form?cc=global or <http://www.lexically.net/wordsmith/>

AntConc <http://www.laurenceanthony.net/software.html>

MonoConc Pro <http://www.athel.com/mono.html>

<http://www.edict.com.hk/pub/concapp/>

<http://www.niederlandistik.fu-berlin.de/textstat/software-en.html>

Extensive Reading Foundation <http://www.erfoundation.org/>

Laurence Anthony's website <http://www.laurenceanthony.net/>

Tom Cobb's website <http://www.lex tutor.ca>

Averil Coxhead's website <https://www.victoria.ac.nz/lals/about/staff/averil-coxhead>

Sonia Millett's website <https://www.victoria.ac.nz/lals/about/staff/sonia-millett>

Paul Nation's website <https://www.victoria.ac.nz/lals/about/staff/paul-nation>

Stuart Webb's website <https://www.edu.uwo.ca/faculty-profiles/stuart-webb.html>

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本书作者保罗·内申教授和顾永琦教授依据国内外词汇学习理论，对英语词汇教学中的一些关键问题进行阐释，不仅厘清了词汇教学中的常见错误认识，还提供了大量课堂活动案例，是专为中小学英语教师及立志从教的英语专业高年级学生打造的一本实践性词汇教学用书。



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