7

LANGUAGE FOCUS

Teaching Academic Vocabulary, Collocations, and Pre-Fabs

This chapter discusses:

- Academic vocabulary learning in every lesson
- The importance of vocabulary in writing and other skills
- Vocabulary learning and retention
- Cross-curricular strategies and techniques for vocabulary teaching and learning
- Techniques for building up learners' vocabulary base
- Teaching and learning dictionary uses

> The fact is that while without grammar very little can be conveyed, without vocabulary *nothing* can be conveyed.
>
> *D.A. Wilkins (1972, p. 111, emphasis in the original)*

Introduction: Academic Vocabulary Learning in Every Lesson

Teaching and learning in the academy is simply not possible without academic language and vocabulary. Academic language is the language that is spoken in education at every level. Conversational interactions and spoken social exchanges employ conversational discourse and vocabulary that are substantially different and much narrower than academic language. Much research has demonstrated that conversational vocabulary consists of approximately 2,000 frequent words, while academic vocabulary and the language of textbooks can be as large as 20,000 to 85,000 words (Nagy, 2005; Nagy & Anderson, 1984; Nation, 2013). Unfortunately, merely reading textbooks is not sufficient for learners to develop a substantial range of academic words. Research on vocabulary in L2 textbooks

has demonstrated that they do not recycle vocabulary (varied and rich vocabulary is highly valued in English-language writing). Vocabulary recycling is left almost exclusively up to the teacher and classroom instruction.

Typically, learners from better educated L1 families have a greater exposure to academic language, reading, and vocabulary essential in schooling than those who live with L2 families or in L2 communities. L2 learners from all walks of life and different family backgrounds need to build up a vocabulary range to enable them to succeed in attaining their educational objectives.

Substantial and well-developed academic vocabulary is required for success in education and schooling, college and university studies, as well as for the work world and careers (Zwiers, 2014). Academic vocabulary shortfalls and limitations may lead to life-long consequences and unfortunate outcomes in terms of learners' academic success, opportunities, and potentials. In classroom instruction and throughout the curriculum, teaching academic vocabulary persistently and deliberately can make a great deal of difference for learners' vocabulary growth and the development of the foundational vocabulary base for reading and writing. In many cases, vocabulary can focus on general academic words and expressions and those that are specific to a discipline or subject area. An effective teaching of vocabulary entails a great deal of persistence and effort.

Important academic vocabulary and expressions for reading and writing need to be emphasized, repeated, and practiced, practiced, practiced in every lesson, even if for small amounts of class time, such as between 5 and 20 minutes (more on this later in the chapter). For example, academic vocabulary often refers to abstract and complex concepts that require explanations to be understood, e.g., *metaphor, proof, democracy*, or *monarchy*. While many L1 learners may already be familiar with some meanings of these words or the meanings of many abstract academic words, in the case of L2 learners, such concepts have to be explained, and the words learned with persistence and repetition. A broad and solid base in academic vocabulary is essential for learning math (e.g., *equation, proportion, percent, formula*), natural and social sciences (e.g., *weather, climate, society, government*), and for reading and writing (e.g., *thesis, topic, analogy, coherence*).

In the contexts of specific lessons, curriculum, and studies of the subject matter, teaching and learning of academic vocabulary can be accomplished with great success (Nation & Webb, 2011; Zwiers, 2008). A substantial range of academic vocabulary can be attained by identifying, teaching, and explaining subject-specific vocabulary and by providing students plentiful opportunities for understanding, learning, and using it in subject-specific and more general academic contexts (Ferris & Roberts, 2001).

Vocabulary growth and gains plateau over time unless teachers and/or learners themselves actively and persistently work to increase the vocabulary range (Laufer, 1998; Laufer & Paribakht, 1998; Schmitt & Meara, 1997).

Academic vocabulary teaching and learning throughout topics, lessons, and as much curriculum as possible can provide students opportunities for much needed exposure, regular practice, repetition, and more practice. For instance, unfamiliar and abstract words, such as *measure, influence*, or *significance*, can be presented and discussed prior to the teaching of the actual contexts and materials in which they occur. With additional and multiple exposures, students can practice academic vocabulary when it is encountered in content and become familiar over time (Rott, 1999).

The remainder of this chapter is devoted to a number of academic vocabulary teaching strategies and techniques. These can take various forms in the classroom with great effect and in the contexts of instruction in practically any subject: in the teaching of any language skill or academic content. The strategies and techniques discussed here can, for example, be presented in the form of typical academic writing tasks, short reviews, or smaller pieces of reading and writing that students have to perform in the classroom or outside it. Writing activities are invaluable when it comes to learning new academic words and expressions. Short quizzes, academic papers, and exercises, all can serve the same purpose throughout each lesson and the curriculum for teaching.

The Importance of Vocabulary in Writing (and Other Language Skills)

A large number of investigations carried out on the essential skills needed to produce school and academic writing have been based on large and small data sets. By and large, these consist of studies with foci on the vocabulary found in practically all types of academic prose and thus typically also expected in student writing, as well (Hinkel, 2003).

Many analyses of school and academic writing at various levels of instruction have demonstrated that student prose is expected to adhere to fairly regular conventions in the uses of vocabulary and collocations (words that often co-occur together in discourse as in *strong tea* or *a bar of soap*, but not *a piece of soap*) (Coxhead, 2008; Hinkel, 2011, 2014; Laufer& Waldman, 2011). Additional studies have also shown that instruction in the vocabulary of academic prose leads to substantial improvements in the quality of student text (Graves, August, & Mancilla-Martinez, 2012; Johnson, Acevedo, & Mercado, 2013; Laufer & Nation, 1995). For instance, Keith Folse's (2004) overview of vocabulary teaching in conjunction with all language skills, including writing, emphasizes that L2 production requires extensive and intensive vocabulary teaching. In other publications, the positive effect of the increased vocabulary range on L2 writing is also well documented (Folse, 2006; Laufer & Nation, 1999; Lee & Muncie, 2006).

Along these lines, other studies have also elucidated the value for the uses of formulaic expressions in L2 writing (e.g., *the author states that, this paper discusses and analyzes xxx, on the whole, generally speaking*). Although such investigations

have been comparatively fewer than the studies of vocabulary, researchers and methodologists have found that these can be very useful and productive in L2 academic writing (Cowie, 1992; Howarth, 1998; Lewis, 2000; Read, 2000; Wray, 2002, 2004). Research on academic text and discourse has established clearly that large portions of academic prose consists of prefabricated constructions, many of which can operate according to the slot-and-filler principle (which assigns a lexical string appropriate in a grammatical construction) (Jones & Haywood, 2004; Nattinger & DeCarrico, 1992), as long as the resulting construction is comprehensible and relatively free of errors. L2 writing quality can benefit greatly by the usage of both preconstructed expressions (also called prefabs), such as those above, and discrete words and phrases in their texts.

The findings of the research on the amount of vocabulary accessible to native and nonnative speakers are presented in Table 7.1 as a point of reference. The importance of a solid base in academic vocabulary in production of L2 writing is also discussed in detail in chapters 3 and 4.

The data in Table 7.1 demonstrate unambiguously that academic L2 vocabulary has to be taught and learned, and there is not a moment to lose. That is, the vocabulary range of junior high school students may be similar to that of highly educated nonnative speakers of English, such as post-doctoral students in English-speaking countries (Nation & Waring, 1997; Waring & Nation, 2004). It seems clear, though, that the types of accessible word families of school-age learners is not likely to be the same as that of post-doctoral non-native speakers. In general terms, the vocabulary needed for teaching adults—and particularly so for teaching academic L2 writing—is not similar to that suited for teaching school age learners.

TABLE 7.1 Vocabulary Sizes*

Native Speakers of English	*Number of Word Families*
Average native speaker	17,000
First-year college students	16,679
Older adults	21, 252
Educated native speakers	30,000 (approximately)
Junior high school students	9,684
An average novel for teenager	5,000 words (not word families) approximately
Non-Native Speakers of English	
Graduate/post-doctoral nonnative students (receptive vocabulary only)	8,000–9,000 (approximately)

*Based on the data provided in the following publications: D'Anna, Zechmeister, and Hall, (1991), Nation (2006), Goulden, Nation, and Read (1990), Zechmeister, D'Anna, Hall, Paus, and Smith (1993), and Zechmeister, Chronis, Cull, D'Anna, and Healy (1995).

Action Point

Make a trip to a local public library or a large bookstore and locate the section with books for junior high students (sometimes called "juvenile books" or "juvenile literature"). What topics do these books address?

Choose, say, 5 or 6 books on such academic topics as scientific explorations, biographies of scientists or famous authors, or nature. How is the text written? How long are the chapters? What is the size of the font? In short, note the physical characteristics and the content presentation in these books.

If you were teaching a vocabulary or a reading course for L2 university students or scholars, would these books be appropriate? In what ways would they be and in what ways wouldn't they? Can these books or reading materials be modified to make them more suitable? How would you go about identifying suitable reading materials for academically bound adult learners with limited vocabulary ranges?

A vast body of published research on learning vocabulary and collocations and its connections to the quality of L2 writing as demonstrated on writing tests and assessments can be summarized simply.

- High and significant correlations have been repeatedly established between vocabulary size and practically all rater assessments of writing quality, writing performance in college/university courses, and with general language proficiency scores (Bachman & Palmer, 1996; Bors & Stokes, 1999; Laufer & Nation, 1995).
- Raters of writing are consistently influenced by the lexical range and richness even when they are not expected or instructed to focus on vocabulary (Educational Testing Service, 2004).

One of the fundamentals of all teaching is that when vocabulary is taught, it does not mean that it is learned.

With vocabulary teaching, it is also important to remember that, in many cases, word complexity and the complexity of its meaning do not necessarily follow the progression from easy to learn to difficult to learn. The reasons may simply lie in the fact that the teacher has a somewhat limited impact on student vocabulary learning.

When a lesson is completed, words can be forgotten, confused with other words, or their meanings can become conflated with meanings of other words. When a vocabulary unit or set is finished, it does not mean that students have learned all the words that it includes or that they have become proficient vocabulary users (Waring and Nation, 2004).

The Teacher's Job

When it comes to vocabulary teaching, the teachers' job consists of the following six components:

- Determining the most effective and efficient ways of vocabulary teaching and learning, based on the learning objectives and learners' goals (see chapter 5)
- Identifying vocabulary and collocations that are most needed in language building and learning, as well as in writing
- Planning the progression and sequencing of instructional materials, that is, vocabulary and collocations to increase vocabulary range and promote retention
- Teaching learners how to learn vocabulary effectively and efficiently. A word needs to be encountered between 10 and 16 times in order for it to be learned (more on this below)
- Providing opportunities for contextualized vocabulary uses and increasing writing (and reading) fluency
- Assessing learners' progress and adjusting instruction and sequencing as needed, that is, refining and modifying teaching to best meet learners' needs

Vocabulary Learning and Retention

In learning another language, a development of a solid vocabulary base cannot be overestimated. Learning vocabulary can take place in the context of attaining practically any L2 skill, from listening and speaking to reading and writing. In learning to write in L2, the range of vocabulary plays a crucial role: ideas cannot be expressed without the means to express them.

In many cases of vocabulary teaching, a word or a phrase are introduced in the classroom, their meanings and contextual uses are explained with a little bit of practice, and then these items can be relegated to further activities and assignments. Frequently, in subsequent vocabulary work, these new items are not revisited or revisited insufficiently, and then they are often abandoned. Much research on vocabulary learning has demonstrated, however, that anywhere between 10 and 16 exposures to a new word can produce a significant gain in vocabulary growth (Laufer 1997, 1998; Nation, 1990, 2008, 2013; Schmitt 2004). In fact, the more exposures, the better.

The key to vocabulary learning is not actually learning words and word families. The key to expanding one's vocabulary range is vocabulary retention.

Talking Shop

Some world-renowned authorities on L2 vocabulary teaching, such as Paul Nation (2008), say that teaching incremental vocabulary items and collocations in the classroom is a waste of time. In fact, one of the most important of the teachers' jobs is to teach students strategies for learning vocabulary and collocations effectively. Experience has shown, however, that teachers usually do not subscribe to this position, despite a great number of research findings.

What do you think the reasons may be for Nation's standpoint? Do you agree with his outlook? Discuss your views with your colleagues and see what their experiences and opinions are.

As was mentioned in chapter 6, to understand spoken or written texts, most learners need to comprehend 95% of the running words, and no less than 90%. Vocabulary retention requires intensive and extensive practice. In the early stages, vocabulary learning is easy because early learning includes highly frequent words, but less frequent words (e.g., academic vocabulary) are harder to learn, and they need to be purposefully taught and learned. Initial vocabulary learning often leads to increases in receptive vocabulary (words and phrases are recognized and understood in reading and listening), but not necessarily in productive vocabulary and active usage in writing or speaking (Lee, 2003).

To begin with, vocabulary learning can include such basic practice as pronouncing the words, reading aloud, word and sentence dictation, and spelling (Nation, 2013). Spelling exercises and practice can be particularly valuable for learners whose L1 alphabets and orthography are derived from the writing systems other than those adopted in English or many other European languages (Birch, 2011, 2013).

A large **receptive** vocabulary does not necessarily result in a better free active vocabulary in writing. The growth of productive vocabulary in writing occurs slowly and in the process of writing practice.

Action Point

Take a look at any standardized test or test preparation materials and books for academic language (e.g., the TOEFL, SAT, ACT, or GRE). These are easy to locate in any bookstore or language teaching program. The importance of vocabulary teaching and learning—at least for the purposes of tests and assessments—becomes very clear.

Write down around 60–70 words and expressions that are tested in these materials even if for preparation and practice. Then count those that have concrete meaning or abstract meanings. Which words and expressions are tested more often? Why do you think one type of vocabulary is found more frequently in the tests of academic language? What goals do these tests set out to meet?

And now the million-dollar question: do standardized tests or test preparation materials actually address learners' receptive or productive vocabulary? How can you tell?

Cross-Curricular Strategies and Techniques for Vocabulary Teaching and Learning

In general terms, the purpose of vocabulary learning strategies is to enable learners to complete a range of language learning steps and tasks and achieve their learning objectives. Effective and ineffective learning strategies are of particular importance when learners work with large amounts of vocabulary. The vocabulary learning strategies and techniques discussed here are not only applicable to learning specific types or sets of words and expressions, but they represent generally productive or less productive components of vocabulary learning. Although in many cases learners are able to figure out which learning technique is more effective than the other, they often do not have sufficient training to understand the reasons, revise a learning strategy, or to select another that is more effective.

> In general terms, the purpose of teaching the distinctions between more or less effective and efficient vocabulary learning strategies and techniques is to enable learners to become autonomous in their language learning.

Despite the fact that a great deal of research has been carried out on efficient and inefficient vocabulary learning strategies, a few of those that work less than well have endured. Since language learners rarely, if ever, undertake to familiarize

themselves with research, one of the most important teachers' tasks is to help students to become more effective in their vocabulary learning. As has been noted, vocabulary teaching and learning can take place in the context of any class, course, or curriculum.

The most important factor in building up a substantial vocabulary base that is essential for producing reasonably competent L2 academic writing is consistency and persistence in effective studies. It is also important to keep in mind that, like most academic undertakings, effective vocabulary learning and deploying of efficient strategies and techniques takes time and practice (and practice). Vocabulary learning and using is a language skill, and most advanced skill development is a deliberate process that requires setting incremental goals and focused attention.

Talking Shop

In the traditional teaching of L2 and FL, curricula and instruction are separated into incremental language skills, such as speaking, reading, or writing. The reasons for this approach to teaching are primarily historical, but they have endured also due to the perceived expedience (good value for the time) of separate lessons and courses. It is clear that, in this chapter and throughout this book, the perspective on language teaching curriculum and the gradual process of language learning differs from the traditional one (a secret note: the author of this book is a nonnative user of English).

What do you think the advantages and disadvantages may be for separating language curriculum and teaching by skill or intertwining various language skills in instruction? In your own experience as a language learner or teacher, which approach can lead to greater and more efficient language gains? What possible difference might emerge between learners' or teachers' views? Discuss your perspective with your colleagues and see what their experiences are.

Ineffective Vocabulary Learning Techniques

Some of the common, but less than useful, strategies are discussed below simply because these are ubiquitous in various locations and among various types of learners. For example, students who are particularly diligent and motivated may choose unsimplified L2 texts when they believe that, over time, this technique can bring them closer to achieving their goal of reading complex prose.

A large number of studies have been demonstrated that the vocabulary threshold, that is, the lowest vocabulary range that is needed for reasonable comprehension, is one of the crucial aspects in L2 vocabulary learning (and reading).

This is particularly relevant in curriculum and course design, as well as in establishing students' learning objectives (discussed in chapter 6). Some research reports have identified the vocabulary threshold needed for comprehension (but not necessarily written production) of authentic academic texts as around 7,000 word families (Hu & Nation, 2000; Laufer & Ravenhorst-Kalovski, 2010). That is, by the end of their preparatory studies, L2 learners should attempt to achieve this overall vocabulary learning objective.

However, vocabulary learning is an incremental and iterative (repeated) process, and learners' threshold of comprehension, for example, at the beginning or intermediate levels can be expected to differ considerably. For instance, as noted earlier, Hu and Nation (2000) state that no comprehension takes place when learners understand only 80% of the text and that some a small number of learners may need only 90% to 95%. The majority, however, require even higher vocabulary ranges, where the number of familiar words in a passage is close to 98% (Nation, 2013). The essential vocabulary sizes that differ from level to level are known as vocabulary thresholds.

The two most common ineffective vocabulary learning techniques:

- Reading or listening (both are receptive skills) above "the threshold level" of comprehension is the most common of all poor strategies.
- Guessing the meaning of words from context where the number of familiar words is smaller than 4 out every 5. This is the second most common poor strategy. Some researchers have shown that successful text comprehension is possible in contexts with 19 known words out of every 20 (Laufer, 1989; Nation & Waring, 1997).

The idea that guessing the meaning of words from context has arisen from a body of research on children who are learning to read in L1 English in English-speaking environments. By far, the vast majority of words in reading in one's native language is learned in extensive reading (or reading for enjoyment) and numerous and repeated exposures to vocabulary in the course of education and schooling, rather than by means of direct and explicit teaching. However, in the 1990s, some researchers extrapolated these findings on children learning to read in their L1 to L2 learners and L2 vocabulary learning (Coady, 1997). Because of its intuitive attractiveness to teachers who are native speakers of English or other languages and who themselves acquired large vocabularies in this way, the myth on how L2 vocabulary can be learned has failed to disappear.

A very large number of investigations on the effectiveness of guessing unknown L2 vocabulary in context have demonstrated repeatedly that accurate or even proximate guessing of meaning in reading is hardly ever possible (Laufer, 1997; Laufer & Ravenhorst-Kalovski, 2010; Hu & Nation, 2000; Nation, 1990, 2013). The reasons lie in the fact that most L2 learners may not know not just one or two words in the context of several dozen or hundreds; they probably do not know

too many words in any context. Thus, with so many unfamiliar words, accurate or proximate guessing of word meaning can be very difficult (Birch, 2013). In fact, as various studies noted here have demonstrated, expecting learners to make successful guesses may be simply unrealistic.

Action Point

The Guessing Game: Four short sentences are presented below. The words in these sentences that are likely to be unfamiliar to most learners have been omitted. Take a few guesses and see if you can fill in the gaps relatively accurately:

The xxxx xxxxxxx in Los Angeles promises xxxxx xxxxxxxx xxxxxxxxxx the year. A xxxxxxxxxxxxxxxx in the weather of the xxxxxx is the xxxx-xxxxxxxxx high xxxxxxxx area of the north xxxxxxx Ocean. This xxxxxxxx center moves xxxxxxxxx in summer, holding xxxxxxxxxxx well to the north, and as a result the xxxx receives little xxxxxxxxxxxxx during that period. Winter xxxxxx bring xxxxxxxxxx, xxxxxxxxxxxxxxxxxxxxx. (Retrieved and adapted from www.wrcc.dri.edu/narratives/CALIFORNIA.htm, on March 15, 2014)

You are likely to guess that the text is about the weather in Los Angeles because of the words *weather* and *Los Angeles* and summer and winter. However, it is not possible to guess from the text what it actually says about the summer and the winter weather.

Turn the page to see the complete text with gaps filled in. How many words were you able, in fact, to guess correctly? How many did you miss? What do you think about the efficiency and effectiveness of learning L2 vocabulary in context? What do your colleagues think?

Effective Teaching Techniques

In course curriculum and instruction, there is a distinction between receptive vocabulary that is needed for listening and reading comprehension and productive vocabulary that learners can employ in producing language, that is, speaking and writing. Productive language and vocabulary usage is much more difficult to attain because all facets of word knowledge have to be deployed: recall, orthography and spelling or sounds, word form(s), structural variables (e.g., affixes or prepositions), and appropriate meanings in context. On the other hand, receptive word knowledge can be a great deal less demanding when only a recognition of the form and its attendant meanings are relevant and salient (Nation, 2008, 2013).

As most teachers and learners know from experience, in L2 learning, receptive language and vocabulary are more developed and practiced in virtually all cases.

Another important consideration is that L2 receptive vocabulary almost always remains larger than the productive, and special efforts are often needed to "push" receptive word knowledge into productive uses. Such additional efforts can take the form of more frequent repetition and exposure, and explicitly requiring learners to use vocabulary in writing (and speaking), which Swain (1995, 2005) calls comprehensible output. A good deal of work and pre-teaching is almost always needed for productive language tasks, such as writing.

Receptive vocabulary can be successfully "pushed" into written production in limited and purposeful sets that are well thought-out. For example, vocabulary associated with a particular topic, such as weather, climate, finance, a historical event, or Harry Potter's magic, can be pushed in producing writing.

- To increase the range of vocabulary in writing (productive), explicitly and directly activating receptive vocabulary is requisite.
- Focusing on (and rewarding!) word uses in written production and vocabulary richness are essential to expanding productive vocabulary size.
- Language production (speaking and writing), as opposed to reception, leads to better vocabulary learning over time (Laufer & Nation, 1995, 1999).

In teaching and learning, it important to remember that it can be work- and time-consuming to push vocabulary uses from receptive to productive. Motivating learners in this rather difficult practice is of the essence.

A course curriculum and lesson plans need to incorporate a number of components that can lead to persistent, consistent, and deliberate vocabulary learning. Writing practice provides one of the best techniques for activating receptive vocabulary in productive usage. In learning EFL, where opportunities for language production occur almost exclusively in the classroom, "pushing" vocabulary from receptive to productive is bound to be more difficult than in ESL/L2 contexts.

Answer to the Guessing Game on p. xxx:

The arid climate in Los Angeles promises scant humidity throughout the year. A dominating factor in the weather of the region is the semi-permanent high pressure area of the north Pacific Ocean. This pressure center moves northward in summer, holding storm tracks well to the north, and as a result the area receives little precipitation during that period. Winter storms bring widespread, moderate precipitation.

Techniques for Building Up Learners' Vocabulary Base

The basic steps in any and all vocabulary teaching:

1. Identifying the words students need to know (e.g., University Word List or Academic Word List—numerous websites on the Internet contain the two lists)
2. Helping students memorize and retain these words (e.g., teaching vocabulary learning strategies).
3. Practicing words (and subsequently word families) in different and meaningful ways.

As has been mentioned, one of the teacher's tasks is to select vocabulary for student learning. It seems clear at the outset that beginning learners should not start with complex or difficult words, but simple ones that are highly useful and frequent.

- Vocabulary teaching begins with the most frequent words and moves to those that are less frequent.

  Students should be able to make lists of valuable, frequent, and productive words and put them on flash cards. Examples with these words, phrases, and synonyms can be added to the lists and flash cards (a Note on Flash Cards is included at the end of this chapter).
- Spaced repetition is the mother of all remembering/vocabulary retention. Review, review, review the words learned. For example, effective vocabulary reviews can take place at regular intervals, such as one, two, three, and seven days apart. Vocabulary practice and review is the essential foundation of vocabulary learning and remembering.

Spaced repetition is the single most important technique in all vocabulary teaching.

- Words with concrete meanings are easier to learn than abstract concepts. For this reason, words with concrete meanings are easier to teach.

  Academic vocabulary is largely abstract and polysemous (words with multiple meanings), and it often refers to complex concepts. Another constraint is that abstract words can have more culturally bound meanings than those that refer to concrete objects. For example, such words as *homework*, *chapter*, or *income* can be demonstrated or explained relatively easily. On the other hand, the words *evidence*, *factor*, or *method* would require learners to have a bit of language proficiency to understand the explanations and use the words appropriately in context.
- Online and electronic dictionaries are easy ways to access a dictionary or a thesaurus. Many online dictionaries are available on the Internet, and looking

up a word online takes a fraction of the time of doing it the old-fashioned way by looking up words in large dictionary volumes.

To provide learners opportunities for reviewing high-frequency vocabulary and spaced repetition, several productive and simple techniques can be highly useful. A few suggestions and examples of easily implemented and simple practice opportunities:

- A spelling quiz or a short dictation (5–10 minutes) of words or phrases learned a few days ago or yesterday
- Writing a short definition of or giving a couple of sentence examples with a word or phrase
- Short oral questions with a word that require oral responses
- Pair work that requires learners to exchange their flash cards and test one another
- Identifying parts of words and constructing new words with prefixes and suffixes. In the long run, this is probably one of the most useful exercises and practice opportunities because it requires learners to review the meanings of a number of word parts. An example can be found in the "Action Point" below.

The key consideration in learning practice is to give learners an opportunity to encounter and use the vocabulary that they would not otherwise have in their spoken casual and informal interactions.

Action Point

A sample of student activity on new word-building, prefixes, suffixes, and derivations is found below. A headword (or a prefix or a suffix) is presented to students, and then they have a few minutes to make a list of simple or derived words with the headword or affix. Students can compete to see who comes up with the longest list and work in small groups of 2–4.

For example:

VARY (the headword)	
invariable	invariably
variability	variable
variables	variably
variance	variant
variants	variation
variations	varied
varies	varying

What factor(s) do you think make the headword *vary* productive and useful for learners? Can you come up with additional words that can have numerous, practical, and commonly used derivatives? A few additional possibilities: *analysis, create, self, head, formula.* Prepare a list of headwords that can useful to you in your own teaching and for your students.

Additional important areas in teaching students how to expand their vocabulary deal with collocations and lexical (set and relatively inflexible) phrases, small clusters of academic nouns and verbs with similar meanings, high-frequency academic (and largely Greco-Latin) prefixes, and dictionary strategies. These will be presented in turn.

Teaching Collocations and Lexical Phrases

Collocations (and lexical phrases) are combinations of two or more words that tend to be found together in text and discourse (e.g., *hard rain, pouring rain, heavy rain*, but not *big rain* or *strong rain*).

In academic language building, learning frequent collocations, such as those in the earlier examples, is of the essence. Numerous studies have demonstrated conclusively that even in the cases of learners with a substantial vocabulary base, L2 writing may appear inaccurate and unidiomatic when collocations are inappropriately or infrequently employed (Hinkel, 2002a, 2002b; Howarth, 1998; Lewis, 2000; Pawley & Syder, 1983; Peters, 1983).

Collocations can include words in combinations with any types of other words (e.g., nouns, verbs, prepositions, and prepositional phrases). A few examples can be found with the noun *cause* and the verb *cause,* for instance.

Cause (noun)—*an underlying cause, a root cause, (for/with) a good cause, a cause for concern, a common cause,* or *a lost cause*
Cause (verb)—*cause problems, cause inconvenience*

Typically, collocations consist of two elements: a pivot word which is the main/focal word in the collocation and its accompanying word(s) (one or more; e.g., *change jobs, change direction, change course,* or *change gears*) (Shin & Nation, 2008). Collocations can be lexical (those that deal with meaning), as in the above examples, or grammatical.

Most lexical collocations fall in the following types of word combinations:

- verbs and nouns (e.g., *change the subject, change sides, change one's mind*)
- adjectives and nouns (e.g., *heavy traffic, strong influence, severe shortage, mild weather*)
- nouns and nouns (sometimes conjoined by a preposition) (e.g., *building design, trade agreement, guest of honor, bar of soap*)

- verb and adverb/preposition (e.g., *vaguely remember, strongly advocate, add significantly, greatly appreciate, accurately assess*)

Collocations and lexical phrases cannot be assembled from their component words: they have evolved in the language historically and are somewhat arbitrary. All language users, L1 and L2 alike, have to learn them, instead of being able to derive them.

Many learners are simply unaware that collocations and lexical phrases are highly prevalent in many languages, including English. For this reason, collocations are often glossed over and remain unnoticed. Thus, the first step in teaching these language features is to increase students' awareness and bring their attention to such phrases. Unfortunately, in much language and vocabulary teaching, collocations are not strongly emphasized.

For many learners, it is easier to work with collocations as whole phrases (as in, for example, one long word) rather than trying to assemble phrases from their component parts.

An effective technique for teaching learners to notice collocations is bring their attention to phrases and sets of words that occur frequently in reading. Collocations are so numerous that it is probably impossible to address all of them, but learners need to know that a book's worth page of text can include approximately between 20 and 50 of these.

To train students to notice collocations, the teacher can start by bringing learners' attention to pivot words and those that accompany (go with) them. Explicitly teaching and noting the most frequent phrases, such as *for example*, *on the other hand,* or *for this reason* may save a bit of time and effort in the long run.

As the next step, demonstrating typical combinations of pivot words and their accompaniments, using columns, tables, and appropriate substitutions can further highlight collocation frequency and provide models for students to use in their own vocabulary notebooks (an example can be found in the "Action Point" below). Quizzes on collocations can be simple and easy. Students are presented with a pivot word and are asked to supply collocates (accompanying words); these can be fruitful and highly productive.

Action Point

An example of student practice or a quiz on collocations is presented below. A pivot word is presented in the left column, and students have to come up with as many collocates

(accompanying words) as they can during a particular amount of time, say, 5–10 minutes. Students can compete to see who comes up with the longest list and work in small groups of 2–4.

The pivot words can be as basic as *make, do, have, give*, or *take* for beginners, and more advanced, such as *assume, assign, achieve, conclude, consist, consult, define, denote, increase, decrease, presume, verify* (from the University Word List), for more proficient learners.

For example:

make (pivot word)	possible collocates: an appointment, an argument, an arrangement, an attempt, a cake, an excuse, a friend or friends, a joke, a phone call, a prediction, a speech, a suggestion
take (pivot word)	possible collocates: action, advantage (of), a bath, a break, care (of), a chance or chances, charge, a class, an exam, (a lot of) effort, heart, the lead, note, notes, an opportunity, a phone call, someone's suggestion(s)
achieve (pivot word)	possible collocates: goal, objective, result, success, aim, ambition, target, standards, level, (one's) potential, success, recognition, greatness, be difficult to, be easy to, be impossible to, be possible to

Construct your own practice activities for students and do them for the experience. Keep in mind that collocates can come before and after the pivot words. Productive pivots words can be found in any collocation dictionary. Some examples: *advice, fight, influence, issue, plan, relate, relationship,* or *role*. Can you come up with additional common pivot words? Prepare a list of pivot words that can useful to you in your own teaching and for your students.

A few suggestions for collocation practice and activities can be:

- News reports and restatement of information from the Business section of a newspaper (e.g., "And now we bring you the latest from the stock market")
- Business plans or presentations to "the board of directors" or a company president
- Poster sessions with formal explanations for fellow professionals, "stock holders," or potential "investors"

Useful collocation dictionaries that can provide comprehensive collections of pivot words and collocates:

- McIntosh, C., Francis, B., & Poole, R. (Eds.). (2009). *Oxford collocations dictionary for students of English* (2nd ed.). Oxford, UK: Oxford University Press.
- Rundell, M., & Fox, G. (Eds.). (2010). *Macmillan collocations dictionary for learners of English*. Oxford: Macmillan.
- Lea, D. (2002). *Oxford collocations dictionary for students of English*. Oxford: Oxford University Press.
- Benson, M., Benson, E., & Ilson, R. (2010). *The BBI combinatory dictionary of English: A guide to word combinations* (3rd ed.). Amsterdam: John Benjamins.
- *Longman Collocations Dictionary and Thesaurus.* (2010). Edinburgh: Pearson Education.

Talking Shop

J. R. Firth is often quoted having said "you know a word by the company it keeps" (Firth, 1957, p. 179). However, more recently, a number of researchers have noted that one of the reasons that students may not be aware of collocations is that many of their teachers may not be. That is, instructors typically focus much of their attention on word-based vocabulary or grammatical constructions, but far less so on collocations.

Do you agree that the teaching of collocations is often neglected because teachers are not aware of their importance in language usage? Why or why not? What do you think the reasons may be for the slight of collocations in teaching? Discuss your views with your colleagues and see what their experiences and opinions are.

Vocabulary Substitution Clusters for Academic Writing

Many studies have reported that the language employed to construct academic writing is highly formulaic (Cowie, 1992; Schmitt, 2004; Wray, 2002). By and large, formulaic constructions are not assembled from their component parts—that is, they are not compositional (see the discussion on collocations earlier in this chapter), but in most cases, they are idiomatic. Proficient writers, L1 and L2 alike, learn the formulaic language that dominates in formal academic prose through repeated uses (see the section on spaced repetition above) (Pawley & Syder, 1983; Wray, 1999).

From the perspective of language teaching, this provides additional support and evidence that collocations and other types of language elements used repeatedly can be easier and more fruitfully learned as whole units. Harold E. Palmer, a

British linguist and pioneer in the field of English language learning and teaching, originally made this observation in 1933 (as it applied to collocations):

> "successions of words which (for various reasons) . . . must or should be learnt, or is best, or most conveniently learnt as an integral whole or independent entity, rather than by the process of placing together their component parts"
>
> (Palmer, 1933, p.8).

In the context of teaching academic writing, it is important for learners to know well a number of common formulaic expressions that can ease the task of producing formal academic text (a more extensive discussion of this follows in chapter 8).

For example, the following formulaic expressions for constructing thesis and topic statements can make writing one up a relatively uncomplicated job:

The purpose of this essay/paper/analysis/overview is to xxx
(e.g., *take a look at/examine/discuss yyy.*)
The main emphasis/focus/goal/purpose of the/this essay/paper/project is to xxx
(e.g., *analyze/provide an overview/discussion of xxx.*)
This paper discusses/examines/investigates xxx.
This paper claims/shows that xxx is / is not yyy.

Thus, it stands to reason that learning a few additional academic nouns and verbs to use as substitutions in such formulaic expressions can greatly increase the range of options available to any L2 writer. For example, as substitutes for the nouns used in the earlier set of possible thesis statements, *essay, paper, analysis,* and *overview*—additional nouns that are similar in meaning can be learned and used as needed: *article, discussion*, or *exposition*. Such academic reporting verbs as *discusses, examines,* or *investigates* can find additional replacements: *argues, demonstrates, explains, reviews*, or *addresses*.

Learning a small number of close synonyms is the father of vocabulary growth and academic text construction in practically all cases of formal and academic L2 writing.

Additional benefits of learning close synonyms in vocabulary clusters is that they can make L2 writers' vocabulary ranges appear larger and more academic than they actually are. They can also provide learners with tools needed for constructing lexically cohesive text. It is not possible to establish lexical cohesion in

one's prose without having lexical substitutions available to be deployed as needed (Hinkel, 2001).

- Close synonyms (it is important for the synonyms to be close) are also the easiest way to recycle and review vocabulary in writing and to develop a cohesive text (for example: *business—enterprise—company—corporation* or *result in—bring about—create—lead to*).
- As much as possible, vocabulary should be taught in small groups of near-synonyms (not more than 3–5 at a time; e.g., *growth—increase, gain, advancement* or *factor—aspect, facet, consideration*). The reason that the number of near synonyms has to be relatively small is to avoid words, their forms, and meanings interfering with one another and becoming confusing (Nation, 2008).

Talking Shop

When you write formal or academic text, do you make a special effort to vary your vocabulary and make sure that you avoid repeating words? Do you try to impress the reader by means of using varied and rich vocabulary? Do you believe that other writers also try to vary their vocabulary in formal prose? Why do you think this is?

What could be cultural or social reasons that vocabulary is expected to be varied in such texts as literature, news media, or academic prose? What are the social values associated with extensive vocabulary ranges and usage?

Teaching and Learning a Few Essential Prefixes and Suffixes

The greatest difference between prefixes and suffixes is that prefixes appear before a word (or root/stem) and change its meaning (e.g., *pre-position* or *in-convenient*). Suffixes that are added to the end of an existing word (or root/stem) can form a new word (e.g., *help-ful* or *help-less*) or change the inflection (e.g., singular or plural).

Much research has been devoted to whether prefixes and suffixes are worth learning in light of how numerous they are in English and how constrained (inconsistent, lexicalized, and idiomatic) their applications may be to deriving and learning vocabulary. Since at least the 1920s, vocabulary researchers and teaching methodologists undertook a large body of studies to determine which prefixes and suffixes are more productive and efficient for learning and which are less so (Corson, 1985; Nagy & Anderson, 1984; Nation, 1990).

TABLE 7.2 Most Frequent and Highly Productive Prefixes and Suffixes (in declining order)

Prefix	*Meaning*	*Suffix*	*Meaning*
un-	not	*-able*	able (to be)
re-	again	*-ation, -tion, -ion*	state or quality
in-, im-, il-, ir-	not	*-er*	one who (nouns only)
dis-	away, from	*-ish*	relating to, characteristic
en-, em-	in	*-less*	without, not
non-	not	*-ness*	state, quality, condition
over-	above	*-ful*	full of
mis-	not	*-ism*	state or quality
sub-	under	*-ist*	one who performs an action
pre-	before	*-age*	action or process

(Based on Nation [1990, 2013] and White, Sowell, and Yanagihara [1989])

To make the job of learning prefixes and suffixes easier and more beneficial, the best strategy is to teach those that occur in high frequencies. To this end, teaching and helping students remember the meaning of the practically countless Greco-Latinate words in academic language is to focus on the most frequent and useful 15–20 English prefixes and suffixes. The list of 10 most frequent prefixes and 10 most frequent suffixes that have distinct meanings is presented in Table 7.2.

As with all vocabulary teaching, the task of learning the essential prefixes and suffixes falls to the learners themselves. The most efficient way to learn them is to put these on flash cards together with a few words in which these affixes can be found. For example, pairs or small groups of students receive (or make) about 30 or 40 small cards, with a prefix, a word, or a suffix. An additional twist can be added when the students are asked to make as many words as they can by combining the affixes and new words that are not found on the cards.

Action Point

For as long as second language researchers have tried to identify productive and unproductive prefixes and suffixes, they have debated the advantages and disadvantages of undertaking a big and somewhat tedious job of leaning them from the point of view of a cost and benefit analysis. The amount of work entailed in memorizing, identifying in context, and using word parts is substantial.

As a short exercise (no more than 5 minutes), try your hand in reversing this process and locating as many parts in the following academic words as you can (in random order):

unconstitutional, conceptualization, environmentalist, reformulation, misinterpretation, reinvention, inappropriately, institutionalizing, abnormal, normalization, demonstrative, reconstitutive, unparalleled, disproportionately, hypothetically, implementation, predictability, probability, statistician

Compare your word parsing and analysis with those of your colleagues. Can you figure out the meaning of each word from the meanings of its parts? What do you think makes the meanings of complex words more or less easy to figure out from the meanings of the parts?

Teaching and Learning Dictionary Uses

For most L2 learners and writers, dictionaries are absolutely essential. One of the common misconceptions is that bilingual dictionaries are inherently inferior to monolingual (English-English) dictionaries that are prepared for L1 users or highly advanced L2 learners. However, in order to use monolingual dictionaries successfully, learners already have to have a substantial vocabulary base to understand word definitions and usage examples. For most beginning or intermediate learners, monolingual dictionaries may not be very useful for this very reason (Nation, 2008).

In this case, using a bilingual dictionary is likely to be more effective, provided that it is well prepared and contains accurate definitions and examples. For high-intermediate learners, looking up words in both bilingual and monolingual dictionaries may also be beneficial because the latter contain valuable information about grammar and collocations that the former do not (Laufer & Hadar, 1997; Laufer & Kimmel, 1997).

In good quality dictionaries, the examples—even when they are inauthentic—are chosen or constructed with deliberation and care to demonstrate contextual meanings of the word and its grammatical forms. Examples of authentic texts and uses supplied in corpus-based dictionaries can be confusing and linguistically complex for most learners to analyze and use productively as models in their own writing.

When used to understand a reading, monolingual dictionaries can be very fruitful for advanced learners because this can lead to additional exposures to vocabulary and learning. When a dictionary is needed for speaking or writing, bilingual dictionaries are likely to be more productive because they require less guessing of word definitions.

One of the important characteristics of a good dictionary is that it provides such essential information as pronunciation, word part structure, grammatical attributes of a word, numerous examples, derived forms (e.g., *short—shortly—shortage—shortness*), pointers to other related words, and collocations. Derived

forms and related words is helpful for learning to identify frequent prefixes and suffixes without going too far afield. In general, few learners' dictionaries include information on word origins (etymology), but online dictionaries usually do.

To show learners how to use an English-English dictionary to their best advantage, a copy of a dictionary entry can be enlarged to make it easier to notice details. An example of the entry for the verb *occur* can be profitable to present and explain because it is frequently found in academic and news media language (adapted from *Webster's New World College Dictionary* (2014)). Such a demonstration can be turned into a lesson to benefit other aspects of the curriculum.

Useful instructional information that learners need to notice and use to their best advantage can be found in square brackets. A couple of examples are illustrated below in Examples (1) and (2). Both verbs, *define* and *establish*, appear on the University Word List (see above).

Example (1):

---

de-fine /pronunciation symbols/ [dih-fahyn] Show IPA
verb (used with object) [very important grammar information for writing]
de-fined, de-fin-ing

1. [the first and most frequent meaning] to state or set forth the meaning of (a word, phrase, etc.) [these can be used as replacements/synonyms]: *They disagreed on how to define "liberal."* [The teacher or students can provide additional examples of phrases and sentences with this meaning (e.g., *Now we need to define a triangle/the course/the issue*).]
2. [the second most common meaning] to explain or identify the nature or essential qualities of; *describe* [an important synonym] [possible replacements for the second meaning]: *to define judicial functions*
3. to fix or lay down clearly and definitely; specify distinctly: *to define one's responsibilities.* **Synonyms**: state, name, *describe, detail* [the latter two words are important synonyms that can be used as replacements], enumerate

[The next two and infrequent meanings are not particularly valuable for learners. It is not worth spending a great deal of time on these.]

4. to determine or fix the boundaries or extent of: *to define property with stakes*
5. to make clear the outline or form of: *The roof was boldly defined against the sky.*
   verb (used without object), de-fined, de-fin-ing [a rare form that is probably not worth the time]
6. to set forth the meaning of a word, phrase, etc.; construct a definition [a derived noun form *defin(e) + ition*]

Related forms: [Examples of phrases and sentences for these derived words and forms can be provided and discussed. Discussions and examples of related and derived word forms can be very useful and productive for learners in practically all types of instruction, **provided that the related words are frequent**.]

de·fin·a·ble, *adjective*
de·fin·a·bil·i·ty, *noun*
de·fin·a·bly, *adverb*
de·fine·ment, *noun*
de·fin·er, *noun*

Example (2):

---

es-tab-lish /pronunciation symbols/ [ih-stab-lish] Show IPA
verb (used with object) [very important grammar information for writing]

1. [the first and most frequent meaning—several excellent substitutions can be found here] to found, institute, build, or bring into being on a firm or stable basis: *to establish a university; to establish a medical practice*
2. [the second most common meaning; however, in this case, it is not as valuable as the first] to install or settle in a position, place, business, etc.: *to establish one's child in business*

[The next three meanings are context-specific, and the teacher may need to explain these judiciously, if at all.]

3. to show to be valid or true; prove: *to establish the facts of the matter*
4. to cause to be accepted or recognized: *to establish a custom*; *She established herself as a leading surgeon*
5. to bring about permanently: *to establish order*

Related forms: [These derived forms are mostly rare, and learners are not likely to encounter or use them in L2 writing. For this reason, they are not particularly valuable for learning.]

es·tab·lish·a·ble, *adjective*
es·tab·lish·er, *noun*
re·es·tab·lish, verb *(used with object)*
su·per·es·tab·lish, verb *(used with object)*

Synonyms
1. form, organize. See **fix**. 3. verify, substantiate. 6. decree.

Antonyms [Research has demonstrated that antonyms can be very confusing for learners and focusing on them is probably counter-productive.]
1. abolish. 3. disprove.

When working to construct vocabulary clusters for contextual substitutions and replacements (see an earlier section on Vocabulary Clusters), learners need to keep in mind the following rule typically adopted in dictionary-making:

> Within a dictionary entry, the closer a definition word with a similar meaning is located to the main word (as in meaning (1)), the closer the meanings of the two words usually are.

This is an important consideration in building up vocabulary clusters for substitutions/replacements. When a substitution word is not very similar to the meaning of the main word, unsuitable substitutions and replacements can make the text virtually incomprehensible. For example, the meaning of *occur* is closer to that of (1) *happen* than (2) *to be met with or found*, or (3) *to suggest itself in thought*, which has a narrow meaning that is largely idiomatic.

Vocabulary Teaching Techniques in Contexts of Other Language Skills

A very useful technique is pre-teaching the most valuable and/or high frequency words in a reading or listening selection or for a specific writing task, context, or topic. Important considerations when pre-teaching words that occur in text and context:

- Limit the number of words to be pre-taught to about 10. Pre-teaching too many words often results in form and meaning confusions.
- Pre-teaching creates an opportunity for encountering these words more frequently.

Short and frequent writing practice is probably one of the best ways to learn vocabulary and review it. As has been noted, producing short pieces of writing on a regular schedule can be a great way to recycle and review vocabulary learned in the past month, the past week, and the past two days.

- Writing practice and exercises need to focus on a specific topic, context, or theme that allows students as much practice as possible with targeted, specific, and topic-centered vocabulary. For example, when the topic of reading and vocabulary learning is *pets*, *global warming*, or *the story of my city*, the writing practice should address these topics, as well.
- Daily or weekly reading logs are the easiest way of practicing in writing the academic vocabulary learned in reading. Reading logs do not need to be graded, and checking them may be sufficient.

A Note on Flash Cards

L2 vocabulary teaching and learning represent probably one of the oldest human undertakings. Travelers, merchants, job seekers, professionals, tradesmen, students,

soldiers, sailors, marriage partners, family relations, missionaries, writers, painters, adventurers, retirees, and many other various types of individuals have undertaken to identify and implement the most effective and efficient means of learning vocabulary in a language other than their mother tongue.

Learning vocabulary in another language has been a human activity probably for a few thousand years. For this reason, the amount of work, published or unpublished, on learning L2 vocabulary is truly vast. Since L2 vocabulary—that is, words and expressions—is discrete and can be learned piecemeal, the collective and experiential knowledge on the best ways of learning vocabulary is far more established and developed than on learning, for example, how to read, write, or be polite in another language. In contemporary times, when various technological and electronic means of L2 vocabulary learning have proliferated, one most important technique has endured through the recent decades: flash cards.

> Research has demonstrated that flash cards represent the single most efficient way of increasing vocabulary range.

Here are a few reasons that flash cards have remained the mainstay of learning words and expressions in another language:

- Flash cards are easy to carry around, use for review, mix, and supplement.
- Polysemous words that have many meanings can be easy to account for when using flash cards: e.g., *reflect*—1. *to cast back (heat, light)*; 2. *ponder, think*; 3. *show*
- The use of flash cards also leads to independent learning and promotes learner autonomy.
- Since all the words the students have to know cannot be taught, students have to be taught how to become independent learners and be held accountable for their own learning.

More recently, research has demonstrated that using with flash cards can lead to effective L2 vocabulary learning, improvements in visual word recognition and orthography, and increases in reading speed (Culyer, 1988; Schmitt & Schmitt, 1995; Tan & Nicholson, 1997). Additional uses of flash cards can be found in learning basic sentence constructions, prepositions, and relatively inflexible expressions, such as phrasal verbs (e.g., *give up, give in, look up to, look for*).

Another important advantage of working with flash cards is that learners can develop their own customized progressions of word difficulty within flash card sets. That is, due to the great flexibility of using flash cards, the decisions of which vocabulary items are more or less difficult is left exclusively to the learner and the progression of word and meaning complexity can be highly adaptable and customizable for the individual.

Chapter Summary

Teaching and learning in the academy is simply not possible without academic language and vocabulary, but, unfortunately, merely reading textbooks is not sufficient for learners to develop a substantial range of academic words. Vocabulary has to be extensively and intensively taught, and it has to be a prominent part of a language curriculum. A course curriculum and lesson plans need to incorporate a number of components that can lead to persistent, consistent, and deliberate vocabulary learning. Spaced repetition is the single most important technique in all vocabulary teaching and writing practice provides one of the best techniques for activating receptive vocabulary in productive usage.

Numerous studies have demonstrated conclusively that even in the cases of learners with a substantial vocabulary base, L2 writing may appear inaccurate and unidiomatic when collocations are inappropriately or infrequently employed. The first step in teaching these language features is to increase students' awareness and bring their attention to such phrases. Learning a variety of close synonyms also makes vocabulary learning more efficient and has the additional benefit of making L2 writers' vocabulary ranges appear larger and more academic than they actually are. Close synonyms can also provide learners with tools needed for constructing lexically cohesive text. In addition to teaching collocations and close synonyms, teachers can help students by teaching high frequency prefixes and suffixes, as well as techniques for using the dictionary and flash cards. Research has demonstrated that flash cards represent the single most efficient way of increasing vocabulary range.

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