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Lexical Questions to Guide the Teaching and Learning of Words

■ **While most teachers of ESOL recognize the importance of vocabulary, many are unfamiliar with vocabulary research and unsure about how to best address word-learning needs. This article presupposes that word learning is a complex task requiring more than formulaic methods. To prepare teachers to address the dynamic and often unwieldy nature of word learning, we propose several central questions designed to help teachers reflect on fundamental issues such as word selection (e.g., *Which words should be targeted?),* word knowledge (e.g., *What does it mean to know a word?),* and word teaching *(e.g., What should be included in the definition, instruction, and practice that I provide?).* Each question is followed by initial answers based on vocabulary research that teachers are encouraged to apply to their own situations. The goal is to enable teachers to apply research findings to the development of their own principled and effective approaches to vocabulary instruction.**

Word learning in any second language is an enormous task. Every new setting brings new demands for specialized words or new meanings and uses for familiar ones. In English, this task is even more daunting, because words that are related are not always evident from their form. For example, *happy*, *delighted*, *cheerful*, and *joyful* are all synonyms but are all spelled completely differently. Likewise, a person who steals things from a house is not a *house thief*, but rather a *burglar,* a word that has no formal similarity to either *house* or *thief*. In other languages, the relationships between these words are often highlighted by some spelling similarities. The learning load is made even higher in English by the fact that English has one of the largest vocabularies of any known language (Schmitt & Marsden, in press).

The lexical learning burden is compounded by the fact that mastering words entails more than just knowing about their meanings alone. For example, learners of the word *neighbor* must be able to recognize and use its pronunciation and spelling. They must know it is a noun, that its plural form is regular (*neighbors),* and that related forms include *neighborly, un-neighborly, neighboring,* and *neighborhood*. They need to know that it is used to refer to both men and women, and that its use is sometimes extended beyond one's home to include some settings (*neighboring nations)* but not others (*neighboring soil*). The outcome is that in learning English, the most difficult challenge is probably mastering a sufficient amount of vocabulary to become functional in the language. Nation and Meara (2002) go so far as to describe this lexical hurdle as a "lexical bar," which students struggle to clear.

The vocabulary-learning challenge is so great in English that many students will not be able to master enough words without help and clear guidance from their teachers. Unfortunately, many teachers do not have clear ideas about how to teach vocabulary, and many are not even aware of the scope of the vocabulary challenge. Many seem to believe that vocabulary is easy to learn and will simply be absorbed during the process of learning all of the other elements and skills of language, such as reading (Coady, 1997). While it is undoubtedly true that some vocabulary will be learned in this manner, the extent of the vocabulary-learning challenge means that this incidental learning is all too often insufficient. Vocabulary learning is a big task and requires a principled, dedicated approach.

Effective vocabulary teaching begins with the recognition of word learning as a complex task requiring more than formulaic methods or static approaches. Hunkins (1989) suggests that questions can help organize and reorganize knowledge to solve perceived difficulties when facing complex problems: "To see a problem is to see something hidden that may yet be accessible" (pp. 31-32). In this article, we propose that teachers use guiding questions to respond to the dynamic and unwieldy nature of word learning, helping them to reflect on the key lexical issues in their own teaching contexts. Some initial general answers to these questions have been provided based on vocabulary research, but all teachers must adapt these answers to their own teaching situations to come up with the solutions that are specifically suitable for them. By facing the word-teaching task through questions rather than assuming there are universal teaching truths, teachers can gather facts and information, tailor their instruction to a given group, and position vocabulary teaching within the bigger picture of language learning (Chuska, 1995).

Questions for the Vocabulary Teacher

1. Vocabulary Size: How Many Words Do My Students Need to Know?

A good first question deals with the scope of the vocabulary challenge in English. Although exact figures are impossible to determine, we do have a good general idea of how much vocabulary is necessary to do things in English. If the goal of your students is to be able to converse in English on general, everyday topics, it seems that about 2,000-3,000 word families should be sufficient (Adolphs & Schmitt, 2003). If the goal is reading, then 3,000 word families should provide the lexical resources to *begin* reading authentic texts (but probably still requiring teacher help), while 5,000 word families would provide the resources to read these materials independently (Nation & Meara, 2002). Five thousand word families can be considered the end of general vocabulary, and once these words are learned, it is probably best to focus on the technical vocabulary students need for their respective fields (Nation, 2001). A good ballpark figure for a wide-ranging vocabulary is 10,000 word families, which should enable students to do whatever they wish to do in the language, including attending an English-medium university (Hazenberg & Hulstijn, 1996). It should be noted that these figures are for word families,i and that each word family contains several words (e.g., the word family for *system* includes *systematic, systematically, systematize, etc.*).

2. Word Selection: Which Words Should Be Targeted and Taught?

Given the above general guidelines, the vocabulary teacher still faces the issue of word selection, as these are still too many words for a classroom teacher to teach. Of course the principle of student need has priority. If your students need to know certain words that are relevant for classroom management (*book, page, pencil*, and *eraser* are obvious words beginning students need to know) or to read a certain passage (e.g., *scalpel* or *forceps* if they are reading about surgeons), then those particular words bear teaching. Likewise, once students have a general vocabulary of 5,000 word families, it makes sense to work on the technical vocabulary of whatever field they are learning. However, beyond these principles, it is difficult to say that any particular word will be more useful than any other word.

The best criteria we have for vocabulary in general is the notion of frequency. In short, more frequent words are more useful than less frequent words. As such, the more frequent a word is, the more it can be argued that it should be explicitly taught. The reason for this is easy to see: Frequent words are frequent simply because they occur a lot in language in a wide variety of situations. This makes them valuable in a broad range of communication tasks in many environments.

When learners know the basic 2000 headwords (as seen in the classic list by Michael West, 1953), they will know 85% of the words "on any page of any book no matter what the subject matter" (Nation & Newton, 1997, p. 238). Instructional time spent on these words is very important at all levels, not only because of their frequency, but also because of their range (the number of different types of texts in which they occur) and their coverage (the capacity of words to replace other words). That is, learners will see these words beyond the classroom and are likely to develop their ability to use them. Thus the benefit to the student is well worth whatever costs are accrued in teaching such high-frequency words (Nation, 2001). Conversely, low-frequency words are generally not used often enough to be worth the cost of teaching, *unless* they are prominent in a particular context, such as a reading passage the students will be reading.

3. Word Knowledge: What Do My Students Need to Know About the Words They Want to Use?

Learning a sufficient number of word families is a challenging task in English, but equally daunting is the amount of information that students need to know to master each word. Consider everything that you understand about the words you know well. You know their meanings, collocations, grammatical features, morphological characteristics, register traits, spelling, pronunciation, associations, and so forth. (For a complete discussion of these and other features of word knowledge, see Nation, 2001.) Though some examples of word knowledge are primarily rule-governed (e.g., the past tense of *walk* is *walked*), most are not. You cannot reliably know the noun form of *imagine* from any generalizable rule (e.g., it could be *imaginement*, or simply *imagine*), and even the rules are not foolproof (the past tense of *go* is *went,* not *goed*). Yet the various kinds of word knowledge must be mastered if our students are to use their words well.

Four kinds of word knowledge will be discussed below. It will be seen at the end of this question that all of these traits can be addressed through practice involving rich context and multiple repetition.

A. Meaning: How can we help students learn the sometimes complex and often polysemous meanings of words? What does it mean to *know* the meaning of a word? Word meanings are not as predictable as we might think. For example, *blackboards* are often green, *silverware* can be made of plastic, and a *worrywart* has nothing to do with warts. In addition, the dictionary definition of the word *paint* is "to cover the surface with paint." But if you knock over the paint bucket, have you painted the floor? Another difficulty with meaning concerns *polysemy* (the multiple meanings of words). For example, a basic word as simple as the word *run* has 67 definitions in the *Random House Webster's College Dictionary* (1992, pp. 1176-1177).

Given the multiple meanings of most words in English, it would seem impossible to teach each one. Explicit teaching and intentional learning can definitely facilitate quicker learning (Zimmerman, 1997; Nation, 2001), but only so many bits of knowledge can be explicitly addressed. This brings up the importance of adding a complement to explicit vocabulary teaching: maximizing exposure to language beyond the classroom. This is important for several reasons. First, it is obvious that not all words can be explicitly taught, and so many will have to be learned incidentally through exposure. Second, neither intentional nor incidental learning can address all of the word-knowledge aspects that are required for full vocabulary use. We can explicitly address lexical features related to word meaning, grammatical characteristics, collocation, register, or intuitions of frequency, but these are likely to be mastered only through extensive exposure to the target word in many different contexts Third, the word-knowledge aspects that can be explicitly taught still need to be consolidated through repeated exposures for them to be permanently acquired. Thus "any vocabulary program needs two strands: an explicit strand to present the teachable word knowledge aspects of high value words and an incidental learning strand where (a) those words are consolidated and more is learned about them, and (b) a multitude of other new words are met" (Schmitt, in press).

B. Collocation: What other words or ideas does this word go together with? We can say, "The woman is blonde" but not "The chicken is blonde." That is, color words are restricted in respect to the words they combine with; *collocation* refers to words that often occur together. Most languages have collocational pairs and collocational appropriateness is an important part of vocabulary competence. Without it, learners produce awkward combinations such as:

> There were large sums of people present.
> They made their homework after school.

Teachers need to raise their awareness of the way certain words occur together and the way native speakers naturally use ready-made chunks of language.

The existence of collocational ties in language is uncontroversial; the real question is how to teach them. Unfortunately, this is an area where pedagogy has not yet caught up with theoretical research. On the negative side, it is clear that, just as with meaning, it is impossible to teach every possible collocation for every word. Furthermore, effective teaching techniques for collocation have not yet been developed and proven. However, the picture is not all gloom. On the positive side, corpus evidence can indicate the most prominent collocations, and it is probably worth making students aware of these. With the price of corpora and concordancing software now becoming much more affordable (e.g., the 100 million-word British National Corpus is available on-line for about £50),[2] increasing numbers of teachers can investigate collocation data for themselves. Even for teachers unable or unwilling to do this, collocation information is finding its way into vocabulary textbooks (e.g., *Focus on Vocabulary*), and some collocation references are now available (*The BBI Combinatory Dictionary of English* and the *LTP Dictionary of Selected Collocations*). A number of collocation exercises are proposed (e.g., Lewis, 2000), but it must be said that little research has been carried out on the effectiveness of such explicit collocation teaching. Perhaps the best rule of thumb we have at the moment is to use vocabulary (and language) exercises that present words in strings rather than individually and to point out the sequential relationships to students. Explicit collocation teaching should include strategy instruction that trains students to notice words that frequently co-occur with target words they are learning. Complementing this explicit approach, it seems essential to maximize student exposure to language, as this is probably the only way that they will truly acquire reliable intuitions for which words collocate with one another.

C. Grammatical Features: What grammatical information might help the student avoid problems when using this word? The idiosyncratic nature of English vocabulary causes difficulties with many grammatical features such as parts of speech (e.g., the nouns *breakfast* and *lunch* can be used as verbs, but not *dinner),* verb transitivity (e.g., we would *talk to* her, but not **interview to* her), and countable/uncountable nouns (e.g., some nouns are countable with one meaning and uncountable with another, as demonstrated by the errant sign that read **Any kind of dopes at the school are prohibited).* Verb transitivity and preposition choice are patterns that are often overlooked by learners and lead to many errors. The grammatical features of vocabulary are problematic to word learners and warrant classroom attention.

As teachers select which grammatical features should be pointed out to students, they are advised to remember that words are not truly learned in isolation or with single exposures. Teachers often learn through experience which features are problematic to learners, and then they help learners identify selected features that may be useful in word use. For example, experience taught the first author that many students make the error **They discriminated me*. Now, when introducing the verb *discriminate,* she briefly points out that this verb is intransitive and is usually followed by the preposition *against* (e.g., *They discriminated against me*). She hopes her students can more accurately produce *discriminate*, but also that they be more aware of the grammatical behavior of this word when they come across it in their listening and reading. Again, however, a great deal of exposure is necessary to build solid intuitions about the many grammatical features teachers do not have time to teach and to reinforce the features that have been taught. Thus, explicit teaching and increased exposure can once again be seen to reinforce each other.

D. Morphological Characteristics: Which members of this word's family should be introduced to students? Derivative formation is more important and less systematic than many teachers realize. Without the ability to use derivatives (i.e., to change a member of a word family to another word class in the family: *selfish—selfishness*), the learner can use a word only in the word class he or she knows, and no other. Conversely, the ability to use all members of a word family with accuracy will greatly increase a learner's fluency. However, to form derivatives, one needs to know how to divide a word into parts, how to identify the meanings of the parts, and how to connect the meaning of the parts and the meaning of the new word. The difficulty of this last step is demonstrated by student errors such as:

> People wear one kind of clothing for work and another kind for socialism.
> There is great bondage between my grandmother and me.

Learners who combine word parts in logical but inaccurate ways (as above) should be commended for their "intelligent guesses" because they reveal partial knowledge of both the root and the affix. In a great number of cases, derivative formation is regular, and students can benefit from using their knowledge of derivatives on unknown words. It thus make sense to teach some of the more common word roots and affixes to students. Unfortunately, however, derivatives are arbitrary in many cases. While teaching word parts and providing opportunities for classroom practice, teachers should also instill a certain amount of caution in their students—to have them check new derivatives they are not sure of, both for word form and meaning.

4. Word Teaching: What Should Be Included in the Definition, Instruction, and Practice That I Provide?

Word learning is incremental and dependent on repeated exposure to target words (Nation, 2001). Therefore, each time learners encounter a word in reading or listening or when they use it in writing or speaking, they can learn something new about the various constraints that govern its use. Opportunities to encounter words in a variety of natural contexts contribute to incremental word learning. Teachers need to consider instruction and practice as part of a long-term ongoing process.

Effective Definition:

Proficient language users know many words without being able to define them, yet teachers often feel responsible for composing spontaneous, comprehensive definitions for every word that puzzles students. In fact, the most effective definitions are often very brief and very clear and are focused on examples, gestures, realia, or pictures if possible. Students will not learn the full precise meaning of a word in the first instance anyway, so it is perfectly acceptable to start the learning process with more concise definitions that cover the key aspects of the word's meaning, but not necessarily all of them. The refinement of meaning can then occur in the many follow-up exposures the learner will have.

Effective Instruction:

The teacher faces many choices when deciding about the type and quantity of instruction for a given word. The choices include a number of factors, such as the type of initial exposure to provide (e.g., pronouncing the word, showing a picture), ways to build upon the partial knowledge learners may already have about the word (e.g., semantic mapping, translating), ways to maximize continuing exposure to the word (e.g., setting up an extensive reading program, using the word in games and examples in the classroom), and the role of learner autonomy (e.g., the use of vocabulary journals/notebooks and study groups).

One of the teacher's primary jobs in the classroom is to provide and optimize the use of a rich context for students as they develop word knowledge. Several tips designed to help teachers create a context rich environment for word learning are:

- Select topics about which students have considerable background information whenever possible.
- Stay within one content area for as long as it is interesting and relevant. Make use of familiar vocabulary, repeated themes, and visual information.
- Provide many clues and use a variety of techniques to make use of the context and relate it to the learners' background knowledge: (e.g., the use of synonyms, realia, examples, pictures, references to the familiar).
- Point out the clues that are available and show students when they are already practicing the effective use of context: (e.g., using knowledge of word parts, checking context to see if guesses about an unknown word's meaning make sense).
- Know your audience; frequently ask for feedback from the learners so you are familiar with their background knowledge and their ability to optimize the context.

Effective Practice:

Word learning is incremental, and it takes multiple exposures to a word to learn it. Thus, opportunities to practice using target words are critical for word learning. Although it is impossible to precisely control the exposure for each of the many words teachers introduce to their students, there are some general tips to help teachers organize their vocabulary practice in a principled way.

- Whenever you introduce a word, make sure to recycle it in subsequent classes. Recycle target words in natural classroom interaction, explanations, sample sentences focused on new target words, and so forth. Use the words as naturally as possible, drawing explicit attention to them only when it seems helpful. The first recycling needs to happen when the word is still fresh in the students' minds, preferably the next class. Generate a list of words you have taught and that you would like to revisit.
- During recyclings, focus on features that can be naturally exploited by the example. Some sentences will allow you to draw attention to various derivatives, while others will introduce register variation or a good example of a collocation.
- Explain the value of independent reading and encourage students to read for pleasure as well as for school (for a discussion for reading and word learning, see Zimmerman, 1997).
- To *use* a word means to hear it, read it, say it, or write it; all types of use should be frequently practiced with target words in the classroom.

By asking themselves guiding questions such as those in this article, teachers can carry on a dialogue with themselves that will result in a greater awareness of the vocabulary task their students face, leading to more principled and more effective vocabulary instruction.

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Endnotes

[1] A word family includes a word (*admire*) with its inflections (*admired, admiring, admires*) and its derivatives (*admiration, admiringly*). Thus each word family includes several members.

[2] BNC is available for purchase at http://www.natcorp.ox.ac.uk/getting/ordering.html. This information was correct as of October 13, 2005.

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