Direct and Rich Vocabulary Instruction

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Research indicates that direct instruction in vocabulary can increase vocabulary learning and comprehension. If instruction is to influence comprehension, it needs to involve a breadth of information about the instructed words and engage active processing by getting students to think about and use the words. This chapter considers how a teacher might set up a vocabulary program whose goal, beyond having students become familiar with definitions of words, is to enhance students’ ability to both comprehend and produce language. The discussion will include how to select which words to teach, how to teach, when to teach, how to deal with context, and how to keep the learning process going.

The basis for this chapter is the assumption that direct instruction is an important component in students’ vocabulary development. This assumption derives from numerous studies, findings that direct instruction in vocabulary can increase vocabulary learning and comprehension. The contrasting viewpoint offers two counterarguments to the need for vocabulary instruction (Nagy & Herman, 1987), the first being that there are too many words to teach for direct instruction to be feasible and the second that words can be learned easily from context during reading.
ARE THERE TOO MANY WORDS TO TEACH?

If one thinks of teaching all the words in the language, then, yes, of course, there are too many to teach through direct instruction. But consider a mature, literate individual’s vocabulary as comprising three tiers. The first tier consists of the most basic words—brother, bed, sky, run, and so on. Words in this tier rarely require instructional attention to their meanings in school. The third tier is made up of words whose frequency of use is quite low and often limited to specific domains. Some examples might be apogee, precipice, peninsula, and ecclesiastical. In general, a rich understanding of these words would not be of high utility for most learners. These words are probably best learned when a specific need arises, such as introducing coagulate during a biology lesson.

The second tier contains words that are of high frequency for mature language users and are found across a variety of domains. Examples include compromise, scrutinize, diligent, and typical. Because of the large role they play in a language user’s repertoire, rich knowledge of words in the second tier can have a powerful impact on verbal functioning. Thus, instruction directed toward tier 2 words can be most productive (Beck & McKeown, 1985).

LEARNING FROM CONTEXT: HOW EASILY?

Words are learned from context, but just how readily that learning takes place is still a question. Contexts are tricky; they are not always laden with appropriate information for deriving a word’s meaning. A good illustration of this comes from a bright little 4-year-old named Rebecca, who was protesting being put to bed one night. She told her mother that she felt “soggy.” Puzzled, her mother asked her what soggy meant, and Rebecca replied, “sad and lonely.” This puzzled Rebecca’s mother even more—until she realized that the context in which Rebecca had often heard the word was “Rebecca, come back and eat your cookies; they’re getting soggy.” Using the context, Rebecca drew some inferences and came up with a meaning for the word.

The effectiveness of context for learning new words has been explored by several studies that have given readers natural text containing unknown words and then tested whether learning of those words has occurred. One such study concluded that context clues do not reveal the meanings of low-frequency words in naturally occurring prose and that the clues appear to be as likely to result in confusion as in the correct identification of word meaning (Schatz & Baldwin, 1986).

Other studies that presented similar tasks to students concluded that readers do use context to learn new words but that learning takes place in small increments (Nagy, Anderson, & Herman, 1987; Swanborn & de Glopper, 1999). So, learning from written contexts does happen, of course, but at a rather low rate; the best estimate is that, of 100 unfamiliar words met in reading, a reader may learn 3–15 of them.

Considering all the words that people read, learning from context at this rate can mean learning hundreds of new words a year in this fashion. However, some people read a great deal and some don’t, and those students who most need boosts in vocabulary are usually the same students who have trouble reading, so they do not read as much (Cunningham & Stanovich, 1998).

Students who encounter difficulty in their reading are also likely to be less successful in deriving meanings from context. One study that gave evidence of difficulties in using context clues presented a series of contexts that provided increasingly stronger clues to a word’s meaning (McKeown, 1985). Contexts as strong as the following were presented, after a series of other clues: “It was hot inside and I knew I would be more comfortable if I could bafe my sweater.” Choices were then presented as to whether bafe meant remove, lose, punch, wear, repair, or turn off. Even after such strong contexts, 25% of the students could not derive correct meanings of words. Yet, consider how information-rich this situation was; students were presented with a series of contexts, choices for the word’s meaning—one of which was always correct—and had the material read to them. The evidence suggests that naturally occurring written contexts are not highly effective learning environments.

Despite counterarguments to the need for vocabulary instruction, the perspective of this chapter is that direct instruction is an effective way for students to acquire vocabulary knowledge. Research over the past two decades offers direction on the kind of vocabulary instruction that is most productive. In early vocabulary research, virtually all studies that presented vocabulary instruction resulted in the students learning words. However, the instruction in these studies focused on associating words with definitions, and the evidence of learning was most often the ability to choose a correct definition or synonym from a number of choices. Higher-order goals that one might associate with vocabulary learning, such as text comprehension, were rarely attained (e.g., Gipe, 1978–1979; Jackson & Dizney, 1963; Pany, Jenkins, & Schreck, 1982; Tuinman & Brady, 1973). Subsequent research has tried to discover the characteristics of instruction that make a difference between remembering word meanings and being able to use the words in comprehension. Toward this end, two research study reviews (Mezynski, 1983; Stahl & Fairbanks, 1986) examined vocabulary instructional experiments that had both succeeded and failed to improve comprehension. In general, both reviews indicate that if instruction is
to influence comprehension it needs to (1) present multiple exposures of the words being taught; (2) involve a breadth of information—not just repeat definitions but present contexts, examples, and the like; and (3) engage active or deep processing by getting students to think about the words and interact with them. Breadth and depth of information enable students to establish networks of connections from the new words being learned to words, experiences, and ideas they already have. These connections then facilitate students’ ability to use a new word in appropriate circumstances and to understand it when they read it or hear it used in new contexts; the word comes to mind very readily.

The rest of this chapter is devoted to consideration of how a teacher might set up a vocabulary program whose goal, beyond simply having students become familiar with definitions of words, is to enhance students’ ability to use—both comprehend and produce—their language. The discussion will include how to select which words to teach, how to teach, when to teach, how to teach use of context, and how to keep the learning going (for a detailed discussion of these topics, see Beck, McKeown, & Kucan, 2002).

HOW TO CHOOSE WHICH WORDS TO TEACH

No formula exists for selecting age-appropriate vocabulary words despite lists that identify “fifth-grade words” or “seventh-grade words”; there are no principles that determine which words students should be learning at different grade levels. For example, that coincidence is an “eighth-grade word” according to a frequency index means only that most students do not know the word until eighth grade. It does not mean that students in the seventh grade or even the fifth grade cannot learn the word or should not be taught it. There are only two things that make a word inappropriate for a certain level. One is not being able to define it in terms known to the students at that grade level. If the words used to define a target word are likely unknown to the students, then the word is too hard. The other consideration is that the words be useful and interesting—ones that students will be able to find uses for in their everyday lives. Of course this is a judgment call, best made by those who know the individual students best.

With the choice so wide open, how might a teacher go about selecting words to teach? The most likely place to start choosing words for instruction is school materials—readers, social studies and science books, language arts texts. A good start is to look for words that will be important for comprehension. For example, for a selection about the night the lights went out in New York City and thousands of people were stuck in subways, good candidates would be blackout and commuters.

In addition, though, the candidates for instruction should include good general words, even if their role in the text is not crucial. An illustration of this is found in a selection appearing in a basal reader (Holt, Rinehart & Winston, 1989) from Fog Magic, a Newbery Award-winning book in which a girl who loves to walk in the fog finds herself transported to a long-ago era (Sauer, 1986). This selection’s conceptual structure, setting, and types of characters are likely familiar to children, and thus, in one sense, there is not any critical vocabulary to teach. However, this story represents a situation found frequently in literature: the rich and effective use of language by a good writer. Words such as the following are used: convenient, hastily, miserable, amazement, treacherous, prosperous, protective, dignity, and graceful. Unfamiliarity with these words might not interfere with comprehension of the story, but it could diminish an appreciation for good writing by lessening the impact of effective language use.

Besides school materials, there are many other sources of words to teach. Classroom and community events, news stories, television programs, and even commercials offer good candidates for instruction. For example, you may have seen the American Egg Board’s commercials about the “incredible edible egg.” Here are two splendid words to introduce to students, incredible and edible. A teacher might start a lesson by asking if students had seen the commercial and then ask if they think eggs are incredible—or edible. The discussion could include explanations of what the words mean and then could consider what students find edible and the kinds of things they think of as incredible.

The use of a television commercial that students have probably seen brings up another point about choosing words. Words do not have to be completely unknown to be good candidates for instruction. For example, students might know the egg commercial by heart and understand the message about eggs being tasty and good for you, but that does not mean that they have a full understanding of the words and the various ways they can be used.

HOW TO TEACH VOCABULARY EFFECTIVELY

In earlier research we created a vocabulary program based on the notion of “rich instruction” (Beck, McCaslin, & McKeown 1980). Our aim was to produce the kind of deep and thorough word knowledge that we hypothesized was needed to affect comprehension. Earlier studies that we examined had focused on the learning of definitions and produced no improvement in comprehension. We hypothesized that, because comprehension is a complex process, a reader may well need knowledge of a different character than mere accuracy of definitions of words in the text to facilitate the process.
The aim of rich instruction was to have students engage in active thinking about word meanings, about how they might use the words in different situations, and about the relationships among words. For example, we would present the verb *console* accompanied by its definition and then ask students to think of a time they had consoled someone. Or in discussing the word *hermit*, we asked students to think of what a hermit might have a nightmare about. Students were asked to compare and contrast words by answering questions such as “Would you *berate* someone who *inspired* you?” “Could a *miser* be a *tyrant*?” Students spent a week on groups of 8–10 words, so they had many interactions with each word. In our research we found that rich instruction led not only to knowledge of word meanings but also to improved comprehension of stories containing those words (Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983; McKeown, Beck, Omanson, & Pople, 1985).

But teaching every word that you want to introduce to students in a rich way is not necessary or practical. Some words in many situations do not require rich knowledge. For example, consider a selection from *Call It Courage*, in which a young Polynesian boy conquers his fear of the sea (Sperry, 1983). Many terms that relate to the sea setting appear in the story, such as barrier reef, sea urchins, outrigger, coral, and bonitos. These words do not play a crucial role in the story; the level of information that is needed about them is available from context, such as that an outrigger is a type of boat and sea urchins are creatures that live in the sea.

The answer to the how-to-teach question is to do whatever seems appropriate depending on the goals of instruction. Rich instruction is particularly important for words that seem necessary for comprehension, or for words that turn up in a wide variety of contexts, or for words that are hard to get across with just a brief explanation. More narrow instruction, such as a simple definition, can be efficacious for words that are easy to explain or words that do not need to be well known, such as the sea-related ones cited above. Giving limited attention to meanings of individual words has the advantage that it enables a teacher to increase the number of words introduced to students.

We now offer some specific examples of activities that exemplify rich instruction. These activities are taken from the vocabulary program created for our research. They are examples of activities that were presented to students after the words and their meanings had been introduced.

An activity called *Overheard Conversations* asked students to apply the words they were learning to situations. The idea was that students were to imagine themselves walking along a street, overhearing bits of conversation, and were asked to think of a vocabulary word that would fit the things they were hearing. Part of the student’s worksheet appears as Figure 2.1. The words to be applied were, respectively, *monotonous, unique, peculiar, and extraordinary.*

1. “This is a drag!”
2. “There’s nothing else like this in the world!”
3. “That was a weird one.”
4. “It’s fantastic! Better than I could have imagined!”

**FIGURE 2.1.** Overheard conversations.

For many of the activities designed for the program, students had to make decisions by comparing and contrasting words or contexts. One such activity asked students to compare descriptions of very similar situations that differed only on the definitional features of the target word. For pairs of situations, the teacher asked students to decide which was the example of the word and which was the nonexample and then explain why. For instance, a student might say “The whole class says the Pledge of Allegiance to the flag” is an example of *chorus*, because *chorus* means to say something all together. Figure 2.2 shows the scenarios that were presented to students for the words *urge, chorus, wall*, and *mention*.

The next example illustrates a very flexible activity called *word lines*. The activity asks students to place situations that contain vocabulary words along a continuum. For the word line represented in Figure 2.3, students considered the amount of energy that different activities would require. But word lines can be created with a wide variety of end points, such as slow–fast, hard–easy, fun–not fun, and so forth. In this seemingly simple activity, students are asked to do some sophisticated thinking; they have to interpret how much energy each situation would take and compare it to the energy needed for others. In introducing the activity, the teacher would explain to
A mother tells her children that they should remember to take their vitamins every morning.

urge

Children tell their mother that they already took their vitamins.

chorus

The whole class says the Pledge of Allegiance to the flag.

well

The class makes plans for a Flag Day assembly.

A child screams after falling down.

mention

A child asks politely for a band-aid after falling down.

Our neighbors once told us that they had lived in Florida.

Our neighbors are always talking about when they lived in Florida.

FIGURE 2.2. Example–nonexample.

students that they were to decide how much energy each situation would take in comparison to the others and place each on the line from “least energy” to “most energy.” The teacher emphasizes that there are no right or wrong answers but that the students should be able to give reasons for their choices.

Another important feature of the word line activity is that it does not have preestablished correct answers. Students rank each activity according to their view of the energy it would take; then students take turns discussing and comparing their rankings. An important factor in rich instruction is the discussion that follows individually completed activities. This gives students a chance to make their thinking explicit, and to defend or revise their ideas—all of which helps students to reinforce and deepen their understanding of the words they are learning.

The sample activities just presented exemplify but do not define rich instruction. Rich instruction is very open-ended; it is not some particular set of activities but rather any activity that gets students to use, think about, and become involved with words. The major concept is to provoke thought. Give students a lot of information about the words, and a variety of information—examples, contexts, pictures, relationships. Then have them engage in interactions—create contexts, compare features of words, explain their reasoning, and discuss meanings and uses.

WHEN TO TEACH

The key to a successful vocabulary program is to use both formal and informal encounters so that attention to vocabulary is happening any time and all the time. First, there are the vocabulary words taught in conjunction with formal lessons. Second, opportunities arise within the classroom routine that can be used for vocabulary learning. Teachers and students interact verbally all day long, beyond formal lessons, as assignments are discussed, classroom management is attended to, and spontaneous conversations arise about some situation at hand. Within this verbal environment abundant opportunities exist for drawing attention to vocabulary. A teacher might use sophisticated words—sometimes stopping to define them—comment on a student’s use of particular words, create or point out new uses for vocabulary learned in class, play with words, or use new words to label familiar situations.

For example, one teacher we observed discussed with her fourth and fifth graders the selection of classroom jobs. She asked students to spend a portion of their morning thinking about the jobs and to indicate which job they wanted, and she asked for alternatives in assigning students to jobs. Sophisticated, likely unfamiliar words were used within the context of a very familiar situation, so understanding their meanings was not crucial to comprehending the teacher’s discourse. Thus there was no need for the teacher to define the words, but they served to enrich the verbal environment, perhaps piqued some interest from students, and even laid a preliminary trail of understanding.

Later in the discussion about classroom jobs, one boy said that the teacher could pick names from a hat if several students wanted the same job. The teacher concurred, saying, “Yes, random selection,” thus supplying a new, sophisticated label for a familiar idea. This is yet another way to bring new words on the scene in a way that is not going to cause comprehension problems and may result in some learning. And it costs virtually nothing in terms of materials or time.

Using opportunities to sprinkle a classroom with vocabulary helps to create a rich verbal environment. The notion of a rich verbal environment in school is especially important for students who do not have a language-rich environment at home. Consider that by first grade there is already a wide gap in the number of words known orally between students from

How much energy does it take to . . .

1. flex your little finger?
2. thrust a heavy door shut?
3. embrace a teddy bear?
4. beckon to someone for five straight hours?
5. seize a feather floating through the air?

Least energy __________________________ Most energy

FIGURE 2.3. Word line.
homes of higher socioeconomic status and those from homes of lower socioeconomic status (Graves, Brunetti, & Slater, 1982).

**WHAT TO EXPECT FROM CONTEXT CLUES**

Teaching students that they should use context to derive word meanings is a traditional part of reading and vocabulary instruction. But, as indicated earlier, using context is not always a reliable way to get information about word meaning. A reader can, in many instances, learn a word's meaning from context, but many contexts are not transparent, that is, fully informative. In some cases no amount of effort will assure getting the correct meaning of a word. Take, for example, this context: “Dan heard voices in the hall downstairs and wondered who had arrived. Then he recognized the lumbering footsteps of Aunt Grace on the stairs.” If you did not know the word *lumbering*, a wide range of meanings would be possible: familiar, lively, heavy, high-heeled. The context just does not have enough clues.

The message here is not that teaching about context clues should not be done. Rather, it is to point out that it should be handled carefully in instruction. Students should not be given the impression that meaning can be readily derived from all contexts. To emphasize the varying reliability of contexts, we have demonstrated that not all contexts are created equal (Beck, McKeown, & Mccaslin, 1983). We examined stories in basal readers for their contexts surrounding new words and classified the contexts as to the degree of assistance they seemed to offer to readers who did not know the words. We developed four classifications to indicate the range of helpfulness of contexts: directive, general, nondirective, and misdirective.

**Directive contexts** were those that seemed likely to lead to a correct inference about a word’s meaning. For example, consider the context “Madelaine watched as Nora grew smaller and smaller and finally vanished. Now she was really alone.” These sentences make it quite clear that *vanish* means disappear; the clues direct a reader to the meaning.

**General contexts** were those that provided enough clues to meaning to place the word in a general category. For example, “Brian said morosely, ‘This miserable town will be the death of us.’” This context makes it easy to infer that *morosely* describes a negative feeling, but its specific features remain undefined; the emotion expressed might be anger, fear, or unhappiness, for example.

**Nondirective contexts** provide little assistance in directing a reader toward any particular meaning for a word. Consider, for example, “Freddie looked over the members of the team she’d been assigned. Each looked more hapless than the next.” From this context the team members could be almost anything—happy, eager, untrained, and so forth. But the context does give some information about the word—it describes something a person can be, but, as to the particular meaning of the word, the context gives little guidance.

**Misdirective contexts** seem to direct a reader to an incorrect meaning for a word. For example, consider the following context: “The climb up the mountain took longer than John and Patrick expected. The cliffs were steeper than Patrick remembered, and they had to walk an extra mile because the path was blocked at one point. It was John’s first experience mountain climbing, and he was exhilarated at the end of the day.” Here the word *exhilarated* is somewhat unexpected—one would more likely think, from the description of the day’s activities, that John would be exhausted or even discouraged, not enlivened.

We tested the effectiveness of the four types of contexts in helping readers derive word meanings (Beck et al., 1983). The contexts consisted of stories from fourth- and sixth-grade basal readers in which we had blacked out the words recommended for attention, and our subjects were all adults. The results were that readers could identify word meanings for each of the categories as follows: directive, 86%; general, 49%; nondirective, 27%; misdirective, 3%. What these results mean is that adults, reading stories for fourth and sixth graders, were able to identify meanings of words already in their vocabularies slightly less than half the time.

One of the texts used in our study was an *Encyclopedia Brown* story, “The Case of the Blueberry Pies” (Sobol, 1976). The story is about a pie-eating contest in which each contestant is to eat two blueberry pies and then run half a mile. The competition seems to be shaping up between Chester, a friend of Encyclopedia Brown’s who had won the year before, and the Thompson twins, who are the local bad guys. As Encyclopedia and his friend Sally arrive at the contest, they notice that only one twin has entered. Following the pie-eating section, the race boils down, as expected, to Chester and the one twin. Chester approaches the finish line, but is passed by the twin, who wins the race. As the twin takes his victory lap, the exchange below occurs between Sally and Encyclopedia. The blanks indicate the words we asked subjects to determine from context and thus illustrate the variability of contexts for deriving word meanings.

“He sure has beautiful teeth,” said Sally ________ ingly.

“Look at him _________. You’d think he was on television doing a toothpaste ________.”

Encyclopedia stared bitterly at the twin’s white-toothed smile.

“He’ll be smiling on the other side of his face soon,” said the boy detective. “Chester is the ________ ful winner.”

The words to be determined are, in order, *grudgingly, strut, commercial,* and *rightful.* (And Encyclopedia figures out that Chester was the rightful winner because the twin’s smile revealed that he had not eaten any blue-
HOW TO KEEP IT GOING

In a successful vocabulary program, words do not appear as part of a classroom exercise and then drop from sight. Many of the words that have been introduced return again and again, both to refresh students’ memories about words encountered earlier and to enrich knowledge of those words by relating them to new contexts or to more recently taught words. For example, if students have learned *gregarious*, a teacher might introduce *hermit* by asking, “Would a hermit be gregarious?”

One way to assure that vocabulary learning is ongoing is to have students keep a record of words they have learned. This record can be in the form of personal word journals in which students record new words and what they have learned about them. Or there can be a more public record in a classroom, such as a bulletin board that is designated as a word wall, exhibiting words and their definitions that have been worked with in class.

Another important aspect of keeping it going is to motivate students to take their learning beyond the classroom. The more that students discover how words are used and where they crop up outside of class, the greater the chance that they will really use the words in their own speaking and writing, and come to own them.

In our vocabulary research, we used a device called the Word Wizard Chart to encourage students to take their learning with them. We challenged students to find the words they had been taught outside of class—in books, newspapers, on the radio or television, on billboards, by hearing their parents use them, or they could simply use the words in their own conversation or writing. When students brought in an explanation of how the word was used, they earned points that were recorded on a large chart in the classroom. Every few weeks, the teacher tallied the points earned, and students were given certificates for achieving certain categories such as Word Wizard, Word Whirlwind, Word Wildcat, Word Worker, or Word Watcher.

The use of the Word Wizard Chart turned out to be a very powerful technique in the vocabulary program. The students responded to its challenge with great enthusiasm; it was not an unusual day if every child in the class came in with a Word Wizard entry!

Even beyond reinforcing words that have been learned, “keeping it going” means promoting word awareness, getting students to notice new words in the environment and to be aware of their uses. This kind of noticing and interest in learning more words opens the pores for independent vocabulary learning. Of course, the ultimate goal of any effective instruction is to put the learners in a position to take on responsibility for their own learning.

One more ingredient in a successful vocabulary program is the teacher...
as an active, enthusiastic vocabulary learner. The teacher should be a partner in word awareness and discovering new words and new uses for words. The teacher can tempt students with words by giving them a new word to find out about or dropping clues to a word’s meaning in creative ways. For example, if a student is dawdling in getting out her work, a teacher might say, “I think you’re procrastinating.” The student may respond with a puzzled look; the teacher might then pursue by asking her if she is procrastinating, or ask other students if they think she is procrastinating or if they ever procrastinate. Students quickly catch on to the game and are likely to start hypothesizing a meaning for the word or situations in which it seems to apply. Frequent impromptu attention to vocabulary can help instill in students a feeling of the power of words and the value of knowing words.

IN CONCLUSION

Direct instruction in vocabulary can be an effective way to enrich students’ language abilities. To make instruction most effective, it should focus on words that students are likely to meet often and that are useful to them. Both formal and informal opportunities should be used to create vocabulary learning that engages students’ thinking and offers a variety of ways to apply the words learned. Words introduced to students should remain part of the vocabulary program so that students continue to reinforce and enrich their understanding of them. Attention given to context clues can be most beneficial if variations in contexts are discussed and students are exposed to models of how to integrate information from context to derive word meanings. Focusing attention on vocabulary in the ways described can establish a way of thinking about words that leads to a lively and productive verbal environment in the classroom.

REFERENCES


