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Effective Vocabulary Instruction

BY LETISHA PENA

Kevin and Jack are in the same classroom. The teacher has just assigned an article to read. Kevin enjoys reading and is capable of reading at grade level; however, Jack struggles with reading and is below grade level. Both students have different experiences reading the same text: when Kevin reads, he applies strategies to help him identify words and comprehend the text, yet Jack struggles because he does not apply those same strategies.

Kevin reads the article with ease. He can use a variety of strategies to help him understand the passage. If Kevin comes to a word he is not familiar with, he uses the context around the word to help him identify its meaning or breaks the word apart to see if its root or word parts can help him with the word. Then, he rereads his paragraph to fully understand the passage. His classmate, Jack, battles with reading the passage. He becomes easily frustrated when he has to read the assigned material in school because he lacks knowledge of certain words. Unlike Kevin, Jack doesn't use a variety of strategies to help him understand the passage. He skips the words and continues to read the passage. After several paragraphs, he is frustrated and can make no meaning of the text.

Both Kevin and Jack show the disparity between students' vocabulary skills. Vocabulary has a direct effect on reading, writing, and developing knowledge (Akhavan, 2007). Teachers face a difficult task; they need to meet the different needs of students like Kevin and Jack at different places in their vocabulary development. An effective vocabulary program can help all students raise their vocabulary, which in turn can help increase reading comprehension.

A Word About Words

Students face an immense learning task when it comes to increasing word knowledge. Researchers have struggled to agree on which ways are best to promote students' vocabularies. To understand the task that lies ahead, teachers must consider three things. What does it mean to know a word, how many words are in school print, and how many words do students learn?

Students can face a great challenge when it comes to word knowledge because words can be interpreted in a variety of ways. A variety of researchers have contemplated the various levels of knowing a word. Students need prior knowledge to understand words that are read in context. The different dimensions of prior knowledge may become a difficulty for students to understand their meanings in the right context (Jenkins & Dixon, 1983).

The knowledge of one's morphology, the meaning that is gained through affixes, can also play a role in knowing a word (Nagy, Diakidoy, & Anderson, 1993). Furthermore, students can move from not knowing a word, to being somewhat familiar with it, to a deeper and rich knowledge of it, to use in a variety of terminologies (Carey, 1978; Beck, McKeown, & Kucan, 2002). Learning words may be a complicated task for some because of these various levels of understanding.

Anderson and Nagy (1992) and Zeno, et al. (1995) have conducted studies to find out the frequency of words and words printed in school English. Their results show that there is an estimate of 180,000 word families. Anderson and Nagy (1992) calculated the average number of words learned by students. In their study, they found that students learn 2,000 to 3,000 new words per year. Some researchers (Smith, 1941; Templin, 1957) have reported the growth of vocabulary to be up to 5,000 words per year.

In another study that used data from Nagy and Anderson's 1984 study, Nagy and Herman (1987) recalculated their findings and found that third graders' reading vocabularies average about 10,000 words and that 12th graders' reading vocabularies

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average about 40,000 words. The researchers concluded, therefore, that school children learn about 3,000 words each year.

The amount of vocabulary knowledge a child acquires also depends on his or her socioeconomic status (SES). Dramatic differences in vocabulary exist between toddlers and high school students (Beck, McKeown, & Kucan, 2002). Hart and Risley (1995) found that children of working class families knew 50% less than families of professional families. Authors' results showed children from the most prosperous homes had five times as much vocabulary than the lowest-income homes. The major difference between both groups was the amount of conversation that went on in each home. Hart and Risley's (1995) study included how the difference in vocabulary affected the children's later success in school. The vocabulary knowledge they attained by the age of 3 was strongly connected with scores at age 9 and 10 (Cunningham, 2009; Hart & Risley, 2003).

Researchers have conducted other studies to show the differences in socioeconomic status (SES) and ability. A study by Graves, Brunetti, and Slater (1982) and another by Graves and Slater (1987) show that "first-grade children from higher SES groups knew about twice as many words as lower SES children" (pg. 1, as cited in Beck, McKeown, & Kucan, 2002). Biemiller and Slonim (2001) found that large differences in root word vocabulary had occurred by grade 2. Children in the lower SES group had 2,000 words fewer than the average student. In addition to SES playing a role in vocabulary acquisition, studies reveal that advanced third graders had vocabularies about equal to lowest-performing 12th graders and advanced high school seniors knew about four times more than their lower-performing classmates (Smith, 1941).

Not all researchers agree that low SES has a negative impact on vocabulary. Biemiller and Slonim's (2001) research revealed that during elementary school years the less advantaged children added root word vocabulary quicker than their advantaged peers during grades 2 through 5. Effective vocabulary instruction must be meticulous so that teachers can help bridge the gap among students.

Growing up in poverty can severely limit the vocabulary that children learn before starting school and can also affect their school achievement. These disadvantages make it more challenging to attain

an adequate vocabulary. As educators, we have no control over changing a student's SES. However, teachers do have the ability to make certain that they give students effective strategies to help them advance their vocabulary.

Vocabulary Knowledge and Reading Comprehension

The connection between word knowledge and reading comprehension has been clear for many years. Davis (1944) stated:

It is clear that word knowledge plays a very important part in reading comprehension and that any program of remedial teaching designed to improve the ability of students to understand what they read must include provision for vocabulary building. When one combines the evidence that word knowledge is so important an element in reading with the fact that the development of an individual's vocabulary is in large measure dependent on his interests and his background experience, the relatively low correlations between reading tests in different subject-matter fields are understandable. (p.191)

It is essential for students to build their vocabularies. As their vocabulary builds, so does their ability to comprehend text. Similarly, as their comprehension skills improve, so does their ability to learn new words from context (Block & Mangieri, 2006).

Matthew Effects

The relationship between vocabulary and reading comprehension tells us as educators that we must implement effective strategies that will help improve both areas. The Matthew Effects, discussed by Stanovich (1986) reveals that the rich get richer and the poor get poorer. The children who are strong readers with a high vocabulary will learn more word meanings and, therefore, read more. Consequently, the child who lacks a solid vocabulary will read less, will read more slowly, and will read without enjoyment. The less able students have a slower development of vocabulary knowledge, which hinders further growth in their reading abilities. Effective instructional strategies must be in place so that teachers can successfully reach all learners.

Effective Vocabulary Instruction

Educators know it is impossible to teach students every word. If we want to help students develop large vocabularies, we must provide them with a variety of opportunities to do so. A comprehensive program for vocabulary instruction is needed to meet the needs of all learners. These learners include the students who come in with a small vocabulary, English Language Learners (ELLs), the average students, and the gifted students who already have a rich and exquisite vocabulary but who can still add to their depth of knowledge.

Graves (2006) presented a program that applies effective strategies to help increase vocabulary. Three main components of his program are as follows:

- Providing rich and varied language experiences
- Teaching individual words
- Teaching word-learning strategies

For these strategies to be effective, teachers must teach vocabulary throughout the day, weaving it into their curricula so that students are always engaged in vocabulary learning (Cunningham, 2009).

Providing Rich and Varied Language Experiences

Students can increase their vocabulary through a variety of language experiences. A teacher can provide a rich discussion that allows students to hear language spoken in an array of settings and, in turn, participate in genuine discussion (Graves, 2006). Students can gain vocabulary through listening and speaking experiences, which is why it is important for teachers to make a deliberate effort to include challenging words while interacting with students. Teachers do not teach the words; they are simply using them in discussions with students.

Likewise, vocabulary growth can be gained through the use of wide reading. Wide reading is when students read independently for a sustained period of time. There is evidence proving that a significant amount of students' vocabulary growth comes from the amount of time spent reading (Anderson & Nagy, 1992; Stavonich, 1986; Nagy, Herman, & Anderson, 1985). The more students read, the larger their vocabularies will be (A.E. Cunningham & Stanovich, 1998; Graves & Watts-Taffe, 2002; Stahl, 1998).

Wide reading is crucial because most words are learned from context. Teachers should have a strong desire to develop independent readers, and the starting point for encouraging wide reading is a well-established classroom library. This is composed of books teachers know well, books that are at various levels, and books that have an appropriate number of challenging words (Graves, 2006; Cunningham, 2009).

In addition, students need to engage in reading outside of school to continue building their vocabularies. Unfortunately, due to various circumstances students do not read outside of school; therefore, teachers should have in-class independent reading time. Some call it DEAR (Drop Everything and Read), SSR (Sustained Silent Reading), or USSR (Uninterrupted Sustained Silent Reading). Activities as such can help those students who do not read outside of the classroom (Graves, 2006; Marzano, 2004; Cunningham, 2009).

Teaching Individual Word Meaning

Due to the students' individual differences in vocabulary knowledge, we cannot solely rely on wide reading for growth in vocabulary. Students can benefit from learning words explicitly. As educators, we lead by example. We must model to students how important words are. Students have a better chance of learning a word if they are exposed to them multiple times (Jenkins and Dixon, 1983; Beck, McKeown, & Kucan, 2002). Direct instruction is critical, for it helps increase vocabulary for disadvantaged students; a variety of researchers have found different direct instruction strategies for teaching words. Levin et al. (1983) found a keyword method to help students learn vocabulary. It is a mnemonic strategy involving interactive visual images. The student connects new information with a specific image to help in later recall (Konopak & Williams, 1988).

Another method, Anchored Instruction, is a technique used that utilizes the word in context, the words meaning, and some aspect of decoding and spelling. Its benefits include that it is precise and detailed, the teacher knows exactly what the expectations are for the students to learn, and it includes a lot of deeper thinking from the child (Juel & Deffes, 2004; Graves, 2006).

The last method, Rich Instruction, is intended to give students deep and lasting understanding of

word knowledge. This strategy has been thoroughly examined in a variety of publications by Beck and McKeown and their colleagues (Beck et al., 1982; Beck et al., 2002). This strategy is used to teach a selection of words; here are some parameters for the use of Rich Instruction:

- Begin with a student-friendly definition
- Have students work with the word more than once.
- Provide the word in more than one context.
- Engage the students in a variety of activities to understand the variety of meanings the word can have.
- Have students create uses for the words.
- Encourage students to use the word outside of class.

Students can acquire a myriad of words using these direct instructional strategies. Teachers need to spend a great deal of time teaching words. As educators, we know every minute of our school day is valuable. With that in mind, we need to teach students these vocabulary strategies so that, eventually, they can start using them independently (Graves, 2006).

Teaching Word-Learning Strategies

Teaching students word-learning strategies is crucial because we eventually want students to become independent word learners. Three of the most effective strategies are using context, teaching morphology, and using the dictionary effectively (Blachowicz & Fisher, 2010).

Context Clues

Researchers generally agree that most words are learned through context (Graves, 2006; Hart & Risley, 1995; Nagy, Hermann & Anderson, 1985; Sternberg, 1983). As stated earlier, the average student learns about 3,000 words per year (Nagy & Anderson, 1984). Students cannot possibly learn that amount merely through direct instruction. The only reasonable answer seems to be some type of incidental learning from context (Nagy, Herman, and Anderson, 1985). Context clues are words or phrases in a passage that help students determine the meaning of an unfamiliar word.

As teachers, we want to help students sharpen their abilities to use context clues. If a student comes to a

word he or she does not understand, the student can get an idea of the meaning by looking at the rest of the passage for clues. Cunningham (2009) included an example of the word *incredulously* in context. "Her dad listened incredulously. 'I find what you are telling me really hard to believe,' he admitted when she had finished explaining how the accident had happened" (p. 83). This passage is a great example of how one can determine the meaning of the word by looking at the clues provided. On the contrary, some clues are not always reliable. Some words cannot be easily defined through context (Beck, McKeown, & Kucan, 2002; Nagy, Herman, & Anderson, 1985). Graves (2006) uses a four-step strategy to assist with inferring word meanings from context (see table 1). The teachers should first model the four-step strategy, assist students with guided practice, and finally have the students use it independently. Nagy, Herman, & Anderson's (1985) study implies that the most effective way to produce a large vocabulary growth is through wide reading, which is usually neglected.

Table 1. Four Step Strategy using Context Clues

Four-Step Strategy (Inferring word meanings from context)
2 Play and Question Read carefully. Frequently ask yourself, "Does this make sense?"
3 Slow Advance Notice when you don't know the meaning of a word and slow down. Read that sentence at least once more, looking for clues.
4 Stop and Rewind If necessary, go back and reread the preceding sentence, looking for clues that help you figure out what the word might mean.
5 Play and Question When you figure out what the word might mean, substitute your guess in for the difficult word and see if it makes sense. If it does, keep on reading. If it doesn't, stop and rewind, and try again.
Source: <i>The Vocabulary Book: Learning & Instruction</i> (Graves, 2006)

Morphology

Teaching morphology, specifically affixes, is the second key strategy. An affix is “a bound (nonword) morpheme that changes the meaning or function of a root or stem to which it is attached” (Harris & Hodges, 1995, p. 5). Affixes that come before a root word are called prefixes and change the meaning of the word; affixes that come after a root word are called suffixes. There are two forms of suffixes, inflectional suffixes and derivational suffixes. Inflectional suffixes change the root words form but they do not alter the meaning like derivational suffixes do (Edwards et al., 2004).

Teachers can instruct students on how to actively use affixes to determine all or part of the unfamiliar word. If we limit the amount of affixes to teach and guide students to apply affix knowledge to unfamiliar words, it can drastically increase the amount of one's vocabulary (White, Sowell, and Yanagihara, 1989). The most common affixes are listed in table 2 and 3. They are ranked by frequency and are used in more than 3,000 words. Considerable amount of research has been done that proves teaching affixes has a significant impact on vocabulary growth (Graves, 2006; White, Sowell, and Yanagihara, 1989; Baumann et al., 2002).

Table 2. The most common prefixes in printed school English for grades 3-9

Rank	Prefix	Number of different words with the prefix*	Percentage
1	un-	782	26
2	re-	401	14
3	in-, im-, ir-, il-, 'not'	3113	11
4	dis-	216	7
5	en-, em-	132	4
6	non-	126	4
7	om-, im-, 'in or into'	105	4
8	over- 'too much'	98	3
9	mis-	83	3
10	sub-	80	3
11	pre-	79	3
12	inter-	77	3
13	fore-	76	3
14	de-	71	2
15	trans-	47	2
16	super-	43	1
17	semi-	39	1
18	snti-	33	1
19	mid-	33	1
20	under- 'too little'	25	1
	All others	100 (estimated)	3
Total		2,959	100

*From John B. Carroll, Peter Davies, and Barry Richman, *The American Heritage Word Frequency Book*, MA: Houghton Mifflin, 1971

Using a Dictionary

A dictionary serves as an important resource in the classroom when used effectively. Before using the dictionary, a student should have some knowledge of the word. If they do not, then the dictionary is unlikely to help. Teachers must ensure that students are using dictionaries appropriate for their grade level. The teacher should model basic dictionary skills and explain the format of a dictionary.

Students can use dictionaries to follow up on new and interesting words. Graves (2006) suggested guidelines to help students use them. He stated the following:

- When reading a definition, be sure to read all of it, not just part of it.
- Remember that many words have more than one meaning.

Table 3. English suffixes ranked by frequency of occurrence

Rank	Suffix	Number of occurrences in sample	Percentage
1	-s, -es	673	31
2	-ed	435	20
3	-ing	303	14
4	-ly	144	7
5	-er, -or (agentive)	95	4
6	-ion, -tion, -ation, -ition	76	4
7	-ible, -able	33	2
8	-al, -lal	30	1
9	-y	27	1
10	-ness	26	1
11	-ity, -ty	23	1
12	-ment	21	1
13	-ic	18	1
14	-out, -eous, -ious	18	1
15	-en	15	1
16	-er (comparative)	15	1
17	-ive, -ative, -itive	15	1
18	-ful	14	1
19	-less	14	1
20	-est	12	1
	All others	<u>160</u>	7
Total		2,167	100*

The sample consisted of the 2,167 suffixed words appearing on 60 randomly selected pages in John B. Carroll, Peter Davies, and Barry Richman, *The American Heritage Word Frequency Book*, MA: Houghton Mifflin, 1971.

*The total actually exceeds 100% due to rounding upward on items in ranks 13-20.

- Be sure to check all the definitions the dictionary gives for a word, not just one of them.
- Decide which definition makes sense in the passage in which the student found the word.
- Often the dictionary works best when the student already has some idea of a word's meaning. This makes the dictionary particularly useful for checking on a word you want to use in your writing. (p. 112)

The teacher can create a poster to reinforce these guidelines. This can serve as a tool to help students become independent learners.

The teacher should model the steps in identifying an unknown word. First, students should look for clues in context; then, use their affix knowledge if they are still having difficulty. Once they have partial knowledge of the word, they can use the dictionary for deeper meaning.

Conclusion

As educators, we know that dramatic differences exist in vocabulary development. In order to see gains in vocabulary growth, a teacher must be thorough in his or her teaching. Students will always have different levels of word knowledge, and the rate at which students learn words will always be different. However, a teacher who understands these differences can create an effective program that can benefit all learners. Students will learn to appreciate words and become independent learners through these effective strategies. Most importantly, students will comprehend a variety of reading material, which, in turn, increases their vocabulary knowledge. These vocabulary strategies can benefit students like Jack who get easily frustrated while reading.

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