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Content Area Readers: Helping Middle-Level Students Become Word Aware (and Enjoy It!)

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Abstract: For many years, practitioners have heard that middle level teachers are teachers of reading. As the standards movement gains strength, it is even more crucial that teachers explicitly teach key vocabulary that makes their students "insiders" when it comes to understanding the content areas. This article reminds the reader of the principles for vocabulary development, followed by "high utility" strategies that works well for early adolescents. Middle level students are ripe for word work with a proper balance of choice and challenge.

Keywords: middle level, vocabulary, strategies, reading comprehension, differentiation of instruction, definitions

Middle-level students are transitional. The term "typical middle schooler" is automatically an oxymoron, for there is no such thing.

The "no quick fix" notion put forth by Allington and Walmsley (1995) years ago still needs to be attended to. The No Child Left Behind legislation has channeled a great deal of money and energy into literacy learning in the early grades, but whatever "fixes" have occurred have not been quick. The present emphasis on middle-level literacy (Cassidy and Cassidy 2008) certainly holds promise. Yet we need to bear in mind the fundamental concept that both reading will and skill are necessary for academic success. Somehow a balance needs to be struck between cognitive and affective camps. Because of current testing pressures, the areas of social studies and science are at times being deemphasized. This article will make a case for the importance of meaning vocabulary study to help rekindle interest and competency in the content areas.

Brief History

Following is a rather sobering excerpt from a ninth-grade text from which students are expected to extract meaning.

> The major differences between the algae and the fungi are that the fungi are achlorophylous and therefore heterotrophic, while the algae all contain chlorophyll and are autotrophic.

For many years, practitioners have heard pronouncements to the effect that all teachers are teachers of reading; that is, it is not good enough to have content specialists who know all about autotrophic algae. A mature adult can read the above passage, but many would have difficulty retelling or explaining what the author was trying to convey. In West Chester University in Pennsylvania, all teacher-education candidates take one course titled "Reading in the Content Areas." Many do not take it eagerly or cheerfully, but it is required. To compound the problem, Pennsylvania has no specific middle-level endorsement. The secondary chairs are particularly concerned about the encroachment of "education" courses into their domain. I teach a master's level course titled "Vocabulary and Comprehension: Assessment and Instruction." Several sections are offered each semester because this course is required for elementary education majors. The other programs handle their own teaching of reading, with mixed success. "Vocabulary" is covered in one of the chapters of the content-area text. That means that the middle-level and high school subject-area teachers get about three hours of instruction in the hows and whys of teaching academic vocabulary. It seems to me that this is not nearly enough. We know a great deal about effective vocabulary instruction, but we

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have difficulty putting best practice into action (Bromley 2007; Flanigan and Greenwood 2007).

Principles for Academic Vocabulary Instruction

In reviewing the literature, a number of important tenets repeatedly bubbled up. We surely know enough about best practice! Yet, there is often a great divide between what teachers know to be best practice and what they actually do when they are faced with curricular mandates and ambitious timelines. Do they have the support, time, training, and encouragement to put the following principles into place?

- Student choice is to be honored. When selecting vocabulary to be studied, teachers need to enfranchise their students (Allen 2007; Haggard 1986).
- Rote memorization of definitions is a bankrupt proposition (Stahl and Nagy 2006). Assigning exercises is a far cry from teaching words thoroughly and thoughtfully. The dictionary often obfuscates understanding. Case in point: a seventh grader encounters the word "sinister" in naturally occurring context and asks the teacher for help. The teacher says "look it up." The child looks in the dictionary and finds "presaging evil, **ominous**." The child knows the word evil, dutifully looks up ominous, and then turns his attention to presaging. He cannot find presage, and says the word in his head as pre-sagging. He reasons that the word has to do with premature aging; something that a face lift would be needed to rectify.
- Students need multiple exposures to new words in order to fully understand them (Blachowicz and Fisher 2006; Stahl and Nagy 2006). Adams (1990) found that students had a minimal chance of retaining a new word after a single exposure in a naturally occurring context.
- Academic vocabulary needs to be articulated among teachers. This is particularly necessary for middle-level interdisciplinary teams. Important words in science and social studies can be reserved for teaching purposes, but are made public for reinforcement purposes (Bromley 2007).
- Students need practice in using context clues (Greenwood and Flanigan 2007). Targeted instruction in high-utility structural analysis is also effective (Bromley 2007).
- Students should also actively make connections between the new and the known—both inter- and intracontent areas. Group work and lots of student talk should be incorporated into word-learning lessons.
- Teachers need to set aside the time to actively teach critically important terms, being ever mindful of time-cost issues (Nagy 1988). A balance needs to be struck between immersion and direct instruction.

Specific Strategies That Work

The following section enumerates several high-utility strategies that middle-level or high school teams or individual teachers can apply. Teachers of academic vocabulary can gradually build a bank of word-learning strategies or structures, but it is better to learn a few strategies well and to be patient. Flanigan and Greenwood (2007) provided a model that matched students, strategies, and words in vocabulary instruction. Many examples help teachers select words for instruction. Flanigan and Greenwood provide several tables (and narrative information as well) that aid in matching strategies to words to, in turn, instructional purposes.

Pave

The PAVE (predict, associate, verify, and evaluate) strategy, developed by Bannon et al. (1990), is a great way to use dictionaries properly; that is, actively and collaboratively. Many of us remember less-than-best practice being required of us in school in the name of word learning. Most ubiquitous was the creativity-numbing "activity" of looking up a long list of "new" words that some grade-level expert had selected. For many years, conscientious students have pointed out to their teachers that there are often many definitions to select from for any single word. Children quickly learned to scour the multiple meanings for the shortest one. The definitions were typically followed up with the joyless original sentence (e.g., I see a ———).

However, when students are allowed to identify new or interesting words themselves, they are usually willing to carefully analyze the words, including cross checking, discussing, extending, and refining. Here is how it works.

1. Students are divided into pairs or triads to maximize their opportunities to discuss, clarify, and, at times, debate. They choose their word and its context, using ellipses where appropriate.
2. Kids then write their word again and predict its meaning.
3. Next, students have a go at writing a sentence that captures their chosen meaning.
4. Allow students to look up the word.
5. Finally, have them revisit their original sentence, this time writing a richer one.

Student A's example is a terrific one (see Figure 1). She reasoned from the context that eloquent means "beautiful." It does. But as she worked with her group it became clear to her that we would not look out on a beautiful new day and describe it as an eloquent morning. The process and the support of her peers led to the understanding that eloquent is used typically to describe language. In looking at the PAVE figure, you may wish to customize by omitting or changing some of the

Your name: <u>Amy</u>   Source: <u>Speak- chunk 2</u>   Date: <u>7/19/07</u>

Word in Context: <u>I have never heard a more eloquent silence.</u>

Your word alone: <u>eloquent</u>

Your Predicted Definition: <u>beautiful</u>

Your Original Sentence: <u>She stood at the entrance wearing the most eloquent gown.</u>

Dictionary Definition: <u>fluent and persuasive use of language</u>

Your Better Sentence: <u>Elizabeth received a standing ovation after giving the most eloquent</u>

<u>speech.</u>

Key Words	Visual Cue
Expressive	
Antonyms	**Synonyms (or what it's like)**
Choppy	articulate
	fluent
	effective

FIGURE 1. PAVE MODIFIED (Predict, Associate, Verify, Evaluate).

synonyms and antonyms at the bottom. Words do not always fit neatly into categories. Revisiting Figure 1, it is often difficult to find a synonym for a given word, particularly a noun. If the new word is "tundra," the students could come up with descriptors or locations, but a synonym would be difficult to find. Additionally, the visual cues help some students to remember, but are also at times not a good fit. The "key word" is a personal association, or "trigger," that is usually unique to the individual learner—for example, if the new word is "truculent," and Amy's little brother Michael often behaves that way, Michael would be her key word for truculent. Remember, this is a great activity for pairs or triads. Do not assign too many words, and do use the good ones. These templates can be reduced in size so that you have eight on each paper (four on each side).

The Frayer Model

The Frayer Model (Frayer, Frederick, and Klausmeier 1969) helps students learn new concepts through the use of attributes and nonattributes (see Figure 2). It should be reserved for very important and probably new and complex words only. The teacher also needs to consider transportability and the likelihood of frequency of appearance—it may be important for a sixth grader to know the meaning of "musher" when reading a selection on the Iditarod, but when is she or he likely to encounter that word again? The Frayer Model takes a good deal of time, but the teacher can be assured that the students will know the targeted word or words thoroughly. Early adolescents who have a general sense of a word will become much more precise in their understanding. In the example that follows, students are

FIGURE 2. The Frayer Model.
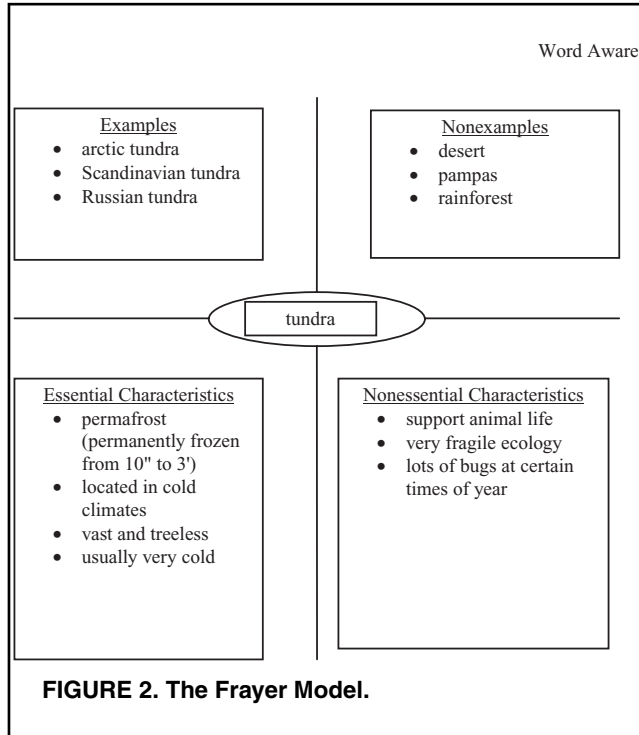
studying Alaska in both science and social studies; they are overlapping the integrated unit with reading of the novel *Julie of the Wolves.* The classes are combined for a thorough lesson on the tundra because it is so integral to understanding Alaska. Figure 2 is an approximation of what was done.

The teacher uses a master template, guiding and delving, while the students do individual copies. As with the PAVE template, it is important to be flexible. The Frayer Model is usually a good fit for nouns but not for other parts of speech. Student talk is critical because it helps greatly in clarification. Because it is so time consuming, the Frayer Model should be reserved for only the most important words. Additionally, the teacher may chose to revisit the model over several days, adding or changing information.

Concept Circles

Concept circles are quick and easy to create and use, and they are very good for word flexibility and higher-order thinking. They are another structure that helps students to classify and organize academic vocabulary terms and concepts. Concept circles can be collected in loose-leaf binders. Figure 3 provides six examples that illustrate the possible flexibility and variety of concept circles.

I have placed the circles in the figure above in sequence from left to right, top to bottom. Students are then asked to identify the category in the line below the circle, in addition to adding to or deleting items to the circles per se. In circle 1 students are supplied with three

FIGURE 3. Concept Circles.
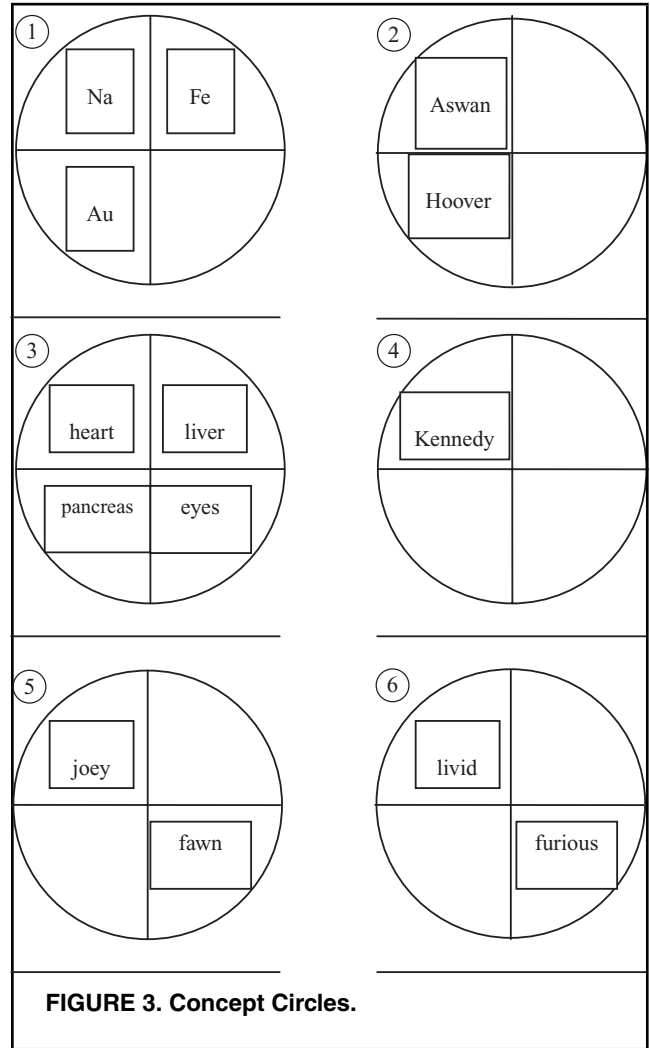
of the four words, which leaves them to fill in the fourth word and the category. In circle 2 they are asked to fill in two missing words and the category. In circle 3 all words are supplied, but the students select the one that does not belong, replacing it with a more precise answer as well as identifying the category. In circle 4 only one word is supplied; circles 5 and 6 give two of the four words.

When only one of the four words is given to the students at the outset, the possibilities are numerous. As more information is given, the options narrow. For example, the quadrant that is given the word "Ford" could be referring to presidents, automobiles, or the verb meaning "to cross a river." Similarly, when "Mississippi" is provided the category could be states, rivers, universities, southern states, states that start with the letter *m*, and so forth. Janet Allen (2007) does a great job of describing how she uses concept circles as assessment tools. Allen also has the students do a great deal of writing in her spin on concept circles. Traditionally, students supply words in the circles themselves, and
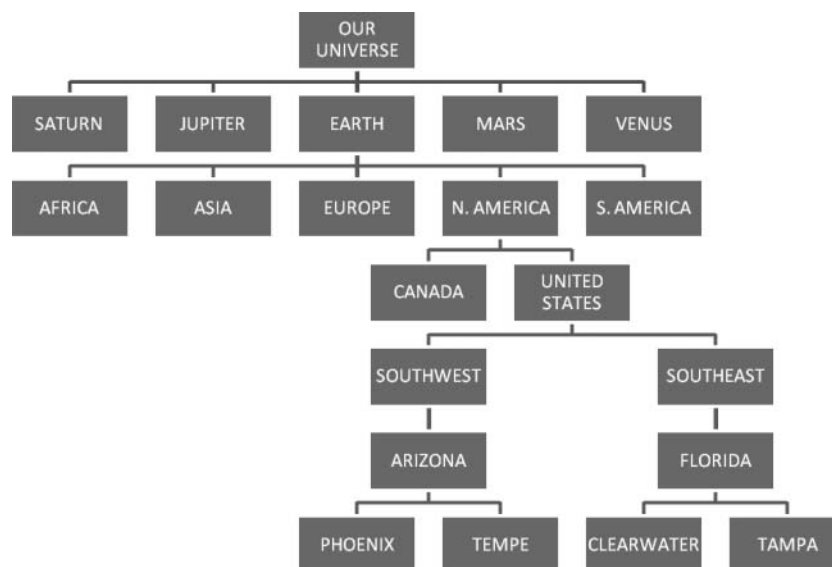
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                            OUR
                          UNIVERSE

   SATURN      JUPITER     EARTH      MARS      VENUS

   AFRICA       ASIA      EUROPE   N. AMERICA  S. AMERICA

                          CANADA    UNITED
                                    STATES

                        SOUTHWEST          SOUTHEAST

                         ARIZONA            FLORIDA

                    PHOENIX   TEMPE    CLEARWATER  TAMPA
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FIGURE 4. Hierarchical Organizer.

possibly name the category. Allen, however, challenges her students to do some extensive written explanation.

Semantic Mapping

Maps are commonly used for a variety of purposes from preorganizing writing to analyzing story elements or character traits. Graphic organizers that are hierarchical are very useful for delineating super- and supraordinate relationships. Semantic maps work with any word, phrase, or event (see Figure 4). In Figure 4, the teacher takes a few minutes to review hierarchical relationships. This can work particularly well in science, where subordinate and supraordinate relationships are often common. After whole-class brainstorming, students are divided into pairs to organize and develop their maps. During their unfolding study, students keep their maps for study and review purposes.

Remember, students rarely give a definition when asked what a word means. When asked what a goblet is, they are more likely to say: "It's like a glass, something you drink out of." With some delving and probing, they might add that it has a stem. Do not be afraid to ask genuine questions: you may not be quite sure whether goblets and chalices are synonymous—one drinks out of both. But you may think of a chalice as being used for communion. Think aloud and think along with your students.

Analogies

Word analogies are great tools for connecting across the curriculum. Once thought to be only useful for testing vocabulary (Greenwood 1987), they are now rec-

ognized as being much more valuable for teaching and reinforcing word meanings (Greenwood 2004). Interestingly, analogies have lost favor in the testing world recently, which has sent mixed messages about their instructional use.

With just a little time and effort, middle-level students can be taught to categorize, then solve analogies, then create their own. Following are some favorites created by seventh graders.

Holmes : Watson :: Batman : ———
Tolkien : Frodo :: Henson : ———
Venice : gondola :: ——— : cable car
Aswan : Nile :: Hoover: ———
Iron : rust :: bread : ———
Arrow : quiver :: ——— : sheath
Brown : abolitionist :: ——— : assassin
London : Big Ben :: ——— : Liberty Bell

Teaching teams can connect their curricula, and students will be impressed that their teachers are in communication with one another. Some years ago, my seventh graders read an excerpt in their anthology for language arts titled *Migrant Girl*. A couple of weeks later, their social studies teacher taught them about nomads. They remembered the similarities and differences! Then we talked about the words *homeless* and *vagrant*.

Repetition without Redundancy

The Luck of the Draw

For this activity start by having the students donate words that are neatly printed on index cards. Then

TABLE 1. Social Studies and Science

Booth	Lincoln	Ray	Memphis
Sirhan	Darwin	Beagle	Nemo
Nautilus	Einstein	Cortez	Spaniard
Tundra	Alaska	Pampas	Chapman
Lennon	Hinckley	Reagan	Fromme
Ford	Oswald	R. F. Kennedy	J. F. Kennedy

students can shuffle the decks and deal. Table 1 is a sample list that has not yet been organized. The terms and names are collected from social studies and science. These will become more meaningful when used analogically.

Mixed into the deck are a number of "open" cards that the players may designate to be any word to complete the analogy.

For example, say Jamaal has been dealt the cards in Table 2 from the list in Table 1.

He can create several analogies if he uses both of his open cards, but he has learned from experience that it is better to hold the open cards and to watch for possibilities as more cards are dealt.

So with the items in Table 2 he could do the following (designating his open cards as Beagle and Nautilus, respectively).

Darwin : (open) :: Nemo : (open)

Or, he could wait and hold. His next card is Lincoln and then he gets Sirhan. Now he can make an analogy using only one open card (designating the open card as R. F. Kennedy).

Booth : Lincoln :: Sirhan : (open)

Adams (1990), as previously mentioned, and many other vocabulary researchers have been consistent in their findings in terms of students learning new words in naturally occurring contexts. Yes, the vast majority of words in our corpus were learned via wide reading, but we as teachers can manipulate contexts and create opportunities to help students understand words initially and, very importantly, to retain the meanings and care enough about words so that they seek out the other nuanced meanings of the words.

TABLE 2. Jamal's "Hand"

Tundra	Cortez	Darwin
Memphis	Einstein	Booth
Nemo	(open)	(open)

Blachowicz and Fisher (2006), in a brilliant comparison, liken word learning to a dimmer switch as opposed to an off-on switch. Another metaphor uses oysters and pearls: the diver finds the rare natural pearl that was formed when a grain of sand stuck in an irritating spot in an oyster. However, we can produce many cultured pearls ourselves by manipulating, that is, by planting, the grain ourselves.

Shazam

One way to recycle academic vocabulary is through a game called SHAZAM. I heard about this game originally at a conference when it was presented by Dr. Jack Cassidy. He, however, was using it with sight vocabulary in isolation. He also had tennis ball cans, which are suitable for tiny hands. Following are the steps for a more grown up version that provides practice for older children.

- Collect several #10 cans, cover them with construction paper, write SHAZAM on them.
- Collect a couple dozen (to start) academic vocabulary words; you choose a few, your students "donate" most of them. Typically the word is written in isolation on one side of a 3 × 5 card and in context on the reverse side. I usually include the donator's name, source, and date in small print.
- Intersperse the vocabulary cards with a few SHAZAM cards and play a demo game for your kids (a fishbowl is perfect, have three or four students join you on the floor)—think aloud as you go.
- The game is quite simple. Pass the can, pull a card, pronounce and define the word, keep the card—the winner is the first to accumulate seven cards. *But,* if a player does not know the word, the card goes back in the can, and if the player draws a SHAZAM card *all* accumulated cards go back. This ensures that the others pay close attention to their peers.

SHAZAM is a great sponge activity, or you can have a tournament going on for a certain amount of time. Your weaker readers have the playing field leveled somewhat by the luck of the draw. The students truly have so much fun that they forget that they are learning. The flexibility should be readily apparent. You can retire individual words or entire cans, trotting them out months later to double check retention of meaning. It is also possible to reorganize or remix the contents, for example, mixing in first-semester science with second-quarter social studies.

Three Word Wonders

Three Word Wonders is an excellent sponge activity. Once students catch on, they delight in creating their own Three Word Wonders. In a fashion similar to concept circles and analogies, students are required to store, analyze, and retrieve information.

TABLE 3. Three Word Wonders

Ford	Gibson	Cruise
Mohawk	Buzz	Mullet
Osprey	Eagle	Hawk
Burt	Oscar	Ernie
Ankle	Elbow	Wrist
Watch	Clock	Hourglass
Carroll	Twain	Boz
Wailers	Heartbreakers	Supremes
Joker	Luther	Riddler
Puma	Tiger	Jaguar
Smog	Motel	Chunnel
Cashmere	Hooligan	Macadam

The activity is very simple: just give the students three words and have them select that category that fits. Some examples are shown in Table 3.

Summary

Middle schoolers can be challenging to teach and to motivate. They also can be a whole lot of fun to work with, particularly when they are challenged with tasks that are perceived as being personalized, doable, and useful. Tweenagers will venture out of their carefully conscribed boxes if their teachers model their willingness to do the same. Remember, students in "the range of the strange" are mercurial and volatile. They are also ripe for learning independently as well as from their peers. You will be pleased with the results if you layer in some of the strategies that have been offered in this article. Good luck!

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