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Theory to Practice: Vocabulary Instruction in Community College Developmental Education Reading Classes: What the Research Tells Us

Community college developmental education students face numerous obstacles as they proceed through their years of higher education. One specific area of need is students' inadequate vocabularies. Advanced communication skills are an integral part of higher education, so students may be at an academic disadvantage if these skills are not well-developed. Developmental students' weak vocabularies compound the other challenges they face. The purpose of this article is to present theoretical frameworks and research perspectives concerning vocabulary instruction with developmental students in order to encourage educators to continue examining this area as a critical component of developmental instruction. Additionally, studies exploring successful strategies for vocabulary growth are presented for educators looking for ways to effectively integrate vocabulary instruction into college developmental reading classes.

A person who knows more words can speak, and even think, more precisely about the world. A person who knows the terms *scarlet* and

> *crimson* and *azure* and *indigo* can think about colors in a different way than a person who is limited to red and blue…words divide the world; the more words we have, the more complex ways we can think about the world (Stahl & Nagy, 2006, p. 5).

Community college developmental education students face numerous obstacles as they begin and proceed through their years of higher education. Some of these students find themselves in an academic setting for the first time in many years, and those who have recently graduated from high school often had marginal educational experiences at best. Consequently, developmental reading students have a variety of academic weaknesses, including deficient oral and written communication skills. Not surprisingly, some of these weaknesses are a direct reflection of students' limited vocabularies. Advanced communication skills are an integral part of higher education, so students may be at an academic disadvantage if these skills are not well developed. Overall, developmental students' inadequate oral and written vocabularies may negatively influence their abilities to excel when giving class presentations and writing essays (Simpson & Randall, 2000).

Due to the large amount of material presented in a sixteen week semester, vocabulary instruction is often either eliminated from developmental education curriculum or taught on a limited basis. The question is not whether vocabulary instruction is important (Stahl & Shiel, 1992), but how vocabulary instruction can be effectively added to what is already being taught. The following paragraphs discuss the primary types of vocabulary instruction.

Research on vocabulary acquisition typically falls into one of three categories: (a) predominantly supportive of indirect instruction, (b) predominantly supportive of direct instruction, (c) and those calling for *authentic word experiences,* defined as "teaching vocabulary words within context of literature study after the selection is read" (Dixon-Krauss, 2001, p. 312). Studies that focus on indirect vocabulary instruction discuss the importance of extensive reading, the significance of a student's prior knowledge, and word saliency (DeRidder, 2002; Freebody & Anderson, 1983a; Nagy, Anderson, & Herman, 1987; Tekman & Daloglu, 2006). Direct instruction studies include self-learning strategies, dictionary use, morphology, and mnemonics (Laufer, 2003; Pulido, 2003; Rott, Williams, & Cameron, 2002), and researchers that promote authentic word experiences (Blachowicz & Fisher, 2006; Dixon-Krauss, 2001; Fran-

cis & Simpson, 2003; McKeown, 1993) emphasize word awareness for vocabulary acquisition.

Vocabulary instruction is a critical component of developmental reading instruction (Simpson & Randall, 2000). Thus, the purpose of this article is to present theoretical frameworks and research perspectives surrounding vocabulary instruction with the intent to encourage developmental educators to continue examining a variety of vocabulary instructional methods. Additionally, studies exploring a variety of successful strategies for vocabulary growth are presented for developmental educators looking for ways to effectively integrate vocabulary instruction into a developmental reading class.

Theoretical Framework

Although numerous theories support vocabulary instruction, four closely intertwined theories particularly seem applicable. One significant theory related to effective vocabulary growth is *schema theory* since students with limited schemas, or prior knowledge, have more difficulty learning new words (Jenkins & Dixon, 1983). Developmental instructors must take this concern into account when contemplating appropriate vocabulary instruction for their students. When learning new words, the lack of schema, often due to limited reading, proves a common problem for developmental education students (Willingham & Price, 2008; Willingham, 2009).

Stahl, Jacobson, Davis, and Davis (1989) stated, "According to schema theory, the reader's background knowledge serves as scaffolding to aid in encoding information from text" (p. 29). The concept of scaffolding has foundations in Vygotsky's (1978) theoretical work on *Zone of Proximal Development* (ZPD), described as the distance between students' actual developmental level and potential level with direct instruction or peer collaboration. This theory suggests that as students' experiences with words grow, it becomes easier to learn new words.

Stanovich's (1986) theory of the *Matthew effect* also applies to students with limited vocabularies. He proposed that students who do not read well do not read, leading to a deficit of vocabulary building opportunities. Consequently, students' oral and written vocabularies suffer. Essentially, when students have limited word experiences, students will have limited vocabularies.

Saliency of words, or the concept that words are learned because they are deemed relevant, may explain why students learn some words they read and not others (Freebody & Anderson, 1983a). DeRidder's (2002) research showed students noticed and learned words they deemed important or useful. Freebody and Anderson (1983b) also demonstrated

that word saliency plays a chief role in whether or not a student exerts any effort to learn a new word.

The theoretical framework presented provides the instructor with a justification and basis for the literature review and instructional suggestions that follow. It is the belief of the authors that good instruction is theoretically supported.

Literature Review

Duin and Graves (1987) said that "words embody power, words embrace action, and words enable us to speak, read, and write with clarity, confidence, and charm" (p. 312). Few would argue that college students need an extensive, expressive vocabulary in order to write essays, research papers and make oral presentations in class (Simpson & Randall, 2000). Thus, college vocabulary development instruction rarely focuses on a student's receptive vocabulary, or the vocabulary needed for comprehension (Pearson, Hiebert, & Kamil, 2007), but on a student's productive, or expressive, vocabulary—the words a student uses for speaking and writing (Graves & Duin, 1985).

Stahl and Nagy (2006) proposed that a comprehensive vocabulary program includes learning the meanings of individual words, extensively reading rich texts, and developing the student's ability to learn new words independently. Designing such a program requires multiple strategies because both indirect instruction and direct instruction are important to a student's vocabulary growth (Herman & Dole, 1988; Nagy & Anderson, 1984).

Knowing a word involves an understanding of the word's definition as well as the word's approximate contextual usage (Stahl & Fairbanks, 1986). Researchers agree knowing a word is an incremental process that takes time and repeated exposures (Graves & Prenn, 1986; Stahl, 1986; Stahl & Nagy, 2006). Zimmerman (1997) was even more specific when she indicated this process includes three primary aspects: understanding (a) the subtleties of a word's various meanings, (b) the ranges of those meanings, and (c) the suitability of the word in context. Thus, a student will often not understand a word after only one or two experiences with the word.

Most articles that discuss vocabulary expansion include the idea of knowing a word (Stahl & Nagy, 2006; Wallace, 2007). Wallace (2007) specifically stated that knowing a word, or word *depth*, requires the understanding of a word's definition as well as the varied usages of the word. Yet, many times vocabulary instruction primarily focuses on vocabulary *breadth*, or how many words a student knows. Instruction should focus on both aspects.

Although most researchers believe both types of instruction are important, most remain entrenched in one of two camps: advocates for indirect instruction or advocates for direct instruction. However, proponents of direct instruction usually mention the need for wide reading in addition to direct word learning methodologies (Laufer, 2003; Pulido, 2003; Rott, Williams, & Cameron, 2002) while indirect instruction proponents are less likely to address the need for directly teaching specific word-learning strategies (DeRidder, 2002; Freebody & Anderson, 1983a; Nagy, Anderson, & Herman, 1987; Tekman & Daloglu, 2006).

One significant issue in this debate is how many incidental exposures a student must have with a word before he or she truly learns the word. Research indicates word learning may result from only a few exposures (Herman, Anderson, Pearson, & Nagy, 1987); however, generally the more exposure, the more quickly a person will learn the word. The reason the number of exposures to words for contextual understanding proved so vital to proponents of direct instruction is because as a student reads, numerous incidental exposures to low-frequency words (words that rarely appear in a passage) does not usually happen (Laufer, 2003). For example, in a reading passage, the word *drone* will most likely occur only once and thus, not result in a contextual understanding of the word. Without a contextual understanding, the student is less likely to remember drone's meaning the next time he or she encounters the word.

Indirect Instruction

Indirect instruction of vocabulary may be viewed as incidental in nature. Proponents of indirect instruction do not advocate for specific instruction or attention to vocabulary before or after a passage is read. While engaged in indirect instruction, a student might read a text, discuss the text, make connections to past learning experiences and even mention words they found compelling, without an instructor explicitly mentioning the vocabulary he or she would like the student to learn. Many educational experts support incidental word learning and reading extensively as a way to increase one's vocabulary (Nagy, Anderson, & Herman, 1987). Indirect instruction includes several components: (a) extensive reading, (b) a student's background knowledge (schema), (c) word saliency, and (d) listening.

Wide Reading. Numerous vocabulary acquisition studies confirm the value of wide reading. The more the student reads, the more the student's vocabulary expands (Nagy & Scott, 1990). Specifically, Tekman and Daloglu (2006) stated that extensive reading "can help students to deepen their knowledge of a word's different meanings and contexts" (p. 236).

Nagy et al. (1987) suggested the amount of word knowledge gained while reading relies on three main factors: (a) the frequency of word exposure, (b) the text quality, and (c) the student's ability to infer meaning and recall the new words learned while reading. Thus, the most important factor in vocabulary development is the amount of reading that takes place. Word acquisition occurs by reading. Therefore, in order to realize substantial vocabulary expansion, a student must read extensively (Nagy et al., 1987).

An interesting part of the Nagy et al. (1987) study is that researchers statistically determined the probability of a reader advancing his or her vocabulary by reading. Their research reported that a student has a .05 percent chance of learning a new word from context while reading. This percentage was based on testing completed six days after the initial exposure to the new word. Thus, including both school and outside reading, the researchers determined a typical fifth grade student could learn 800-1200 new words a year by reading alone. In the same study, the researchers found approximately one third of a student's yearly vocabulary increase was accounted for by broad reading, a much larger percentage increase than any reported by direct instruction studies.

A student has three choices when exposed to a new word while reading: (a) ignore the word if there is no loss of comprehension, (b) consult a dictionary or another person, or (c) infer the meaning from context (Fraser, 1999). When asked what they do when faced with an unfamiliar word, 56% of a surveyed group of developmental reading students indicated they tried to infer the meaning from context, 21% said they consulted a dictionary, and 16% responded that they usually skipped the word completely (Willingham, 2009). Although the largest percentage of students indicated they determined word meanings from context, Herman and Dole (1988) and Jenkins, Matlock, and Slocum (1989) emphasized the importance of teachers demonstrating or instructing how to actually use contextual clues. This skill does not come naturally but must be modeled.

Researchers are, however, divided on the actual advantages of readers using contextual clues when deciphering a word's meaning. The most divergent views seem straightforward: a word's context is significantly useful for determining the word's meaning (Gipe, 1979; Stahl & Nagy, 2006), or contextual clues are not substantially helpful in determining a word's definition (Juel & Deffes, 2004; Schatz & Baldwin, 1986). Those researchers in the middle, like Eeds and Cockrum (1985), found using contextual clues alone to establish a word's meaning was not as helpful as learning a word's meaning through teacher-led discussions.

Schema or Background Knowledge. Another component of effec-

tive incidental or indirect word learning is the usefulness of a student's background knowledge (Jenkins & Dixon, 1983; Pulido, 2003). However, the value of schema, or background knowledge and experience in word learning, remains difficult to quantify. A number of schemata proponents commented on the significance of a reader's background knowledge when trying to infer a word's meaning. Nist and Olejnik's (1995) study found using the context to determine a word's meaning was only beneficial if the text was rich with clues. Nagy et al. (1987) felt contextual clues were helpful if three factors were in place: (a) the student had extensive exposure to written text, (b) there were adequate clues, and (c) the student was able to make inferences while reading and remember words acquired during reading.

Saliency. Saliency is also an important component of word learning (DeRidder, 2002; Freebody & Anderson, 1983a). DeRidder's research indicated students attend to and learn words they deem important or that are somewhat familiar to them already. Freebody and Anderson (1983b) also hypothesized that the saliency of a word plays a chief role in whether or not the student exerts any effort to learn the unfamiliar word. The authors propose that "salience of unfamiliar words may cause the reader to skip such words or even whole propositions containing such words…which are judged to be difficult or not vital to the progress of the theme" (p. 37). While the idea that readers will pay attention to words they deem important and ignore those they do not may seem elementary, too often educators assume that because we inform students about the importance of terms or concepts, the students take us at our word. The above cited research indicates it is critical to find ways to motivate students to learn the necessary vocabulary.

While many would attest to the importance of reading, the process often proves taxing for struggling readers. Zimmerman (1997) stressed that "although reading a good book can indeed be an engaging experience for the proficient reader, the process can be slow and painful for many…learners" (p. 135). Krashen (1989) recommended using light, low-risk, and pleasure reading to help inspire students to read more. These types of literature serve as a way to help unmotivated readers increase their vocabularies in a non-threatening atmosphere. Nagy, Herman, and Anderson (1985) summed it up well when they reported that their results suggested the most effective way to produce large scale vocabulary growth was through an activity that was all too often left out of reading instruction: *reading*.

Direct Instruction

Even though there are numerous proponents who wholeheartedly be-

lieve indirect instruction is the best, or only, way for students to develop their vocabularies, the research studies supporting direct instruction out number those supporting indirect instruction. The reason may be that most educators and researchers already perceive extensive reading as an effective way to acquire vocabulary, and thus, they want to test the value of direct instruction.

Though often debated, research shows that direct instruction has a place in vocabulary expansion. Direct instruction is commonly known as instruction that is teacher led, student practiced, and tied to a specific objective. It often follows the lesson plan format: introduction, modeling, guided practice, independent practice, and assessment. While the effectiveness of direction instruction has been debated because of its formulaic nature, Stahl and Shiel (1992) asserted that direct instruction can and should be quality instruction. Specifically they stated that while "good readers thrive on quality instruction, poor readers require it" (p. 239). Others agreed that direct instruction was especially beneficial for weak readers (Pulido, 2003; Rott, Williams, & Cameron, 2002).

Laufer (2003), an advocate for direct instruction, asserted that direct vocabulary instruction is necessary for vocabulary development. Specifically, word-focused tasks are beneficial for vocabulary expansion. She indicated several assumptions must be made when following the *reading for acquisition is better* philosophy: the student must (a) notice an unfamiliar word when he or she sees it, (b) choose to infer the word's meaning, and (c) remember the word and its perceived definition later. She contended that it is unlikely that all these steps take place when a student encounters an unfamiliar word. The next paragraphs discuss the need for self-learning strategies as well as examine the basic types of direct instruction: (a) dictionary use, (b) morphology, and (c) mnemonics.

Self-learning strategies are an important construct of direct vocabulary acquisition. Strategies should be explicitly taught, so students will choose to employ the strategies when engaged in independent reading. Because college students need to be in control of their own learning (Stahl, Simpson, & Hayes, 1992), the goal is for learning to continue when students leave the classroom (Nagy & Anderson, 1984; Stahl & Nagy, 2006). Instructors do not need to try to reinvent the wheel – just teach researched, self-directed word learning strategies on a regular basis. Several word learning strategies are discussed here.

Dictionary Strategies. Dictionary use has certain limitations in the discussion of effective vocabulary acquisition. Primarily using dictionary definitions when learning unfamiliar words has fallen out of favor with teachers, and there are justifiable reasons for this occurrence. Scott

and Nagy (1997) stated that word and dictionary definition exercises, without extra support, do not provide enough information when it comes to learning new words. Eeds and Cockrum (1985) and Marzano (2004) indicated that for dictionary strategies to work there must be some sort of contextual support or mental scaffolding (providing a sentence or a connection to other words or experiences) in order for a student to actually determine a word's meaning and subsequent usage. Dictionary definitions tend to be generic, thus, students find it difficult to use new words correctly if they do not understand the underlying concept and how the word is similar or dissimilar to related words. Dictionary definitions may be used initially, but the learning of a word's meaning should not stop there (Eeds & Cockrum, 1985; Marzano, 2004).

Morphology Instruction. Morphology instruction is another potential vocabulary instructional strategy (Bromley, 2007; Nagy, Anderson, Schommer, Scott, & Stallman, 1989). In morphology study, the focus is on words' roots, suffixes and prefixes. The term morphology comes from the word *morpheme* which refers to the meanings carried by the smallest units of a word (Nilsen & Nilsen, 2002). Advocates (Bromley, 2007; Graves, 1986; White, Power, & White, 1989) of this instructional method suggest that if a student understands a word's basic root, predominately Latin or Greek, the student has a greater opportunity to determine the word's meaning—especially if context clues are also used.

If students learn a small number of bases, suffixes, and prefixes, many words and families of words can be unlocked and learned more easily (Graves, 1986). Students break the unfamiliar word into smaller parts, examine for meaning, and then combine again. The word should then have an understandable meaning (White, Power, & White, 1989). Morphology and the use of contextual clues are the two most commonly direct instructional strategies included in developmental reading textbooks.

Mnemonics. Mnemonics, or the key word method, is also an effective way for students to learn low-frequency, unfamiliar words through direct instruction (Simpson, Nist, & Kirby, 1987). The only method of explicit vocabulary instruction specifically mentioned and recommended by The Report of the National Reading Panel is mnemonics (2000). The strategy is primarily used in two ways: drawings and cartoons (Burchers, Burchers, & Burchers, 1997), or mental visualization (Simpson & Randall, 2000; McCarville, 1993).

Both strategies depend on teacher instruction and interaction. An example of the use of drawings and cartoons can be found in the book *Vocabutoons* (Burchers, Burchers, & Burchers, 1997). After students view a picture of a rabbit rapidly rowing a boat as a shark is in earnest pursuit,

illustrating the meaning of the word *harrowing*, teachers lead students in forming sentences that use the word *harrowing* appropriately. For example, *being chased by a shark would be a harrowing experience.*

In mental visualization, the student concentrates on a word and its dictionary definition and then tries to concoct a mental image of the word that will be memorable. For example, if a student were trying to remember the word *acrophobia*, the fear of high places, the student might produce a mental image of an acrobat high in the air (Simpson & Randall, 2000). McCarville (1993) explains that it is imperative the student choose the visual image, not the instructor. The student must connect a mental picture to previous knowledge in order for this memory method to work effectively. Furthermore, this method typically brings humor and creativity to the task as it demands action and thinking. However, a downside to this self-strategy is that a mental image cannot be produced for every word, thus restricting this method's use to only certain words (Simpson et al., 1987).

Direct vocabulary instruction seems "to require a lot of time and energy" (Jenkins & Dixon, 1983, p. 243) which may be why so few instructors choose to include it in their curriculum. Developmental education reading instructors must recognize and understand the value for students before they are going to allot the time needed.

After a comprehensive look at indirect and direct vocabulary instruction, with both showing value, the good news is developmental reading instructors do not have to choose one strategy over the other. It is our assertion, based on the research evidence presented throughout this article, the two instructional methods can and should be combined.

A Combination of Instructional Methods: Authentic Word Experiences

Given the multifaceted nature of vocabulary acquisition (Simpson & Randall, 2000; Zimmerman, 1997), it can be difficult to choose which instructional approach to implement. Although most studies indicated a preference for either indirect or direct instruction, many acknowledged vocabulary acquisition was actually a combination of multiple word experiences. What, then, is the most effective way to combine both types of instruction?

One promising idea for combining indirect and direct instruction is the use of literature discussion groups, defined as a time when students meet with peers to discuss what they have previously read (Daniels, 1994). Discussion groups provide opportunities for authentic word experiences as well as help promote word consciousness as students co-construct meanings and comment on words they know and words they do not yet

fully understand (Blachowicz & Fisher, 2006). Students should engage in active word discussions (Francis & Simpson, 2003; McKeown, 1993). Dixon-Krauss (2001) called this the "mediational model design" (p. 310) for vocabulary teaching and learning. Mediational models seem especially beneficial for adult learners (Willingham & Price, 2006).

Literature Discussion Groups. When using literature discussion groups, students first read a book, poem, or short story. Then, as one part of the preparation for group discussion, students make a note of unfamiliar words in the reading. Next, they write their own definition from reading the word in context and then provide a dictionary definition. When the group meets, each participant's words are discussed in addition to the other components of literature discussion groups (Daniels, 1994; Willingham & Price, 2006). This integrated method is beneficial for several reasons. Primarily, students self-select salient words, or words they deem important. As discussed in an earlier section, word saliency promotes vocabulary acquisition (Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Dixon-Krauss, 2001). Another reason discussion groups are effective is because students are engaged on numerous levels; they are reading, writing, speaking, and listening to new words along with directly learning the definitions which aids in long term word acquisition (Zimmerman, 1997).

In their study of vocabulary strategies for college students, Simpson et al. (1987) spelled out specific suggestions for vocabulary advancement. They pointed out four necessary components of a successful program: (a) the use of mixed methods, (b) the necessity of learning words in context, (c) the importance of student interest, and (d) the need for learners to take an active role in their personal vocabulary growth. Students then must participate in realistic writing and verbal interactions using the newly learned words. Although Simpson et al. (1987) did not directly suggest using literature discussion groups by name, the methodology for effective teaching described above encompasses this strategy and serves as a foundational support for the use of literature discussion groups in community college developmental education reading classes for vocabulary growth and enhancement.

Simpson and Randall (2000) summed up the research best when they concluded,

> We must rely on some seminal research studies and our own practical teaching experiences with college students to describe some effective vocabulary practices. These seven characteristics, which are not mutually exclusive, include:
>
> (a) an emphasis on definitional and contextual knowledge, (b) students' active and elaborative processing, (c) vocabulary in context,

(d) students' interest, (e) intense instruction, (f) a language-rich environment, and (g) wide reading (p. 61).

Vocabulary instruction involves numerous levels and components, and each requires time, which might explain why so few community college reading professionals are interested in adding vocabulary instruction to their classes. With so much to cover and so little time, vocabulary instruction remains dispensable in the minds of many developmental educators. Unless the instructor has actually studied the research in detail, he or she does not realize the long term importance of this significant literacy component (Nist & Olejnik, 1995).

Once college reading professionals gain a better awareness of the need for dynamic vocabulary instruction, they will be passionate about their students' vocabulary development (Bromley, 2007). Instructor attitudes are contagious. In the past, if vocabulary instruction happened at all, it was typically routine and rote. Vocabulary was introduced, taught through assigned and graded dictionary work and then tested (Willingham, 2009). Fun and stimulating vocabulary instruction will awaken the excitement for learning inherent in all students. The study of adult vocabulary acquisition and instruction in the developmental education classroom should not be conducted to determine a superior teaching strategy (Simpson & Randall, 2000) since research shows there is no one magic answer; research should focus, instead, on the use of a wide variety of strategies with an emphasis on authentic word experiences—possibly in the form of literature discussion groups.

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