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## **Critical teacher thinking and imaginations: Uncovering two vocabulary strategies to increase comprehension**

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### **ABSTRACT**

Dedicated teachers who were taking a university course for reading assessment and diagnosis candidly discussed students' problems with vocabulary words that impede successful reading comprehension. Their viewpoints about ways to help students learn to use vocabulary strategies effectively led to the development of two vocabulary strategies that were based on cognitive and personality styles. The interactive process of developing the strategies pushed the teachers' imaginations and created a challenge for the teachers and their college professor.

The graduate students in my university graduate reading diagnosis and assessment course excitedly shared the importance of designing specific reading activities addressing students' cognitive skills and personality styles to increase their motivation to read. The focus of the course was to assist teachers in learning how to assess and diagnose students' reading strengths and weaknesses. The graduate students were expected to select a student who was having difficulty with reading. In addition, they were to administer and analyze results of authentic reading assessments for the student, and design instructional plans. During this process, many of the graduate students decided to focus on vocabulary strategies because the students they selected were in the upper elementary grades and had limited vocabularies that negatively influenced their reading comprehension. As a result, the focus of this article is to share the teachers' problem solving processes as they linked research-based vocabulary and comprehension development to student motivation, cognitive skills and personality styles.

Initially, the teachers shared their goals for improving reading instruction during class discussions. The teachers yearned to increase their knowledge about reading instruction, particularly vocabulary knowledge. For example, a teacher stated, "I feel helpless in aiding those who struggle in reading." One teacher stated, "I would like my students to leave my classroom as readers and to see reading as enjoyable." Another teacher shared that "Instruction in word meanings must go beyond the definition and include experiences in which the student builds relationships between new words and what h/she knows." The teachers' reflections indicated that they were eager to learn how to increase their students' vocabulary capabilities and time that they spent reading.

#### TEACHER DISCUSSIONS CONCERNING STUDENT MOTIVATION

The teachers selected and discussed research concerning reading motivation that suggested that kindergarten and young children believe they can learn to read and have high expectations for their learning (Eccles, 1993). In contrast, students in upper elementary grades are less confident about their ability to learn and often become frustrated and unmotivated to continue efforts to engage in literacy experiences (McKenna, Ellsworth, and Kear, 1995; Stanovich, 1986). Since the teachers who designed the strategies mainly taught students in middle and upper elementary grades, they found that words that are not recognized easily interfere with comprehending text. When words and their meanings are not understood, students become frustrated and often have comprehension problems (Graves, Juel, and Graves, 1998). As a result, the teachers agreed that vocabulary problems cause comprehension difficulties and interfere with motivation to read for many upper elementary grade students.

#### TEACHER DISCUSSIONS CONCERNING STUDENTS' VOCABULARY KNOWLEDGE

The following quotes reflect the various reading vocabulary concerns expressed by the practicing teachers in my graduate class and their desire to increase their knowledge about vocabulary instruction to increase their students' comprehension.

*"I had a child who could read aloud very well but would score low on skills tests. I didn't know where to go from there... It was very confusing. The scary thing, however, is that a large portion of my children need extra assessment and remediation. I know that my students have*

*difficulty in understanding unfamiliar concepts. They have no strategies to call on when they stumble"* (teacher, Denise Smith).

*"One problem with comprehension is that a reader may be able to read the word, but the meaning or definition is unfamiliar. A teacher must constantly assess in order to know if there is a comprehension problem. One idea is to have students recall information"* (teacher, Cathy Hagelgan-Grubbs).

#### TEACHERS' DISCUSSIONS EMPHASIZING VOCABULARY AND COMPREHENSION RESEARCH

The teachers inferred that students in Denise and Cathy's elementary classes had vocabulary problems and lacked the capability to independently use effective vocabulary strategies to increase their reading comprehension. Since the purpose for reading is to comprehend text, they shared that it is essential that students become strategic readers who can construct meaning through activation of prior knowledge. They concurred that students need to be able to freely discuss topics with peers to develop critical thinking in noncompetitive environments and interact with meaningful texts and authors to increase reading comprehension. These interactions during positive experiences with others, increases students' motivation, enjoyment, and interest during literacy activities. Importantly, the conversations included discussions about teacher initiated strategic instruction that leads to independent learning due to students use of reading comprehension strategies. The success of comprehension strategies depends on the students' ability to become strategic readers as risk takers who interact with others socially when sharing literacy interests.

The teachers connected vocabulary development to helping their students become strategic readers. They understood that strategic readers need the ability to self-select strategies and derive meaning from texts of various genres. The class extended their knowledge by discussing a study by teachers at the Benchmark School (Pressley, Gaskins, Cunicelli, et al., 1991) that indicated that teacher explanation of strategies, mental modeling, and student use of strategies with extensive feedback across different tasks requires extensive practice. Pressley et.al. (1991) further indicated that it is "essential to provide extensive information to students about when and where to apply the strategies were learning, as well as information about the learning benefits produced by use of strategies (Pressley, 1998, p. 211). The teachers agreed that transference of the new strategy to other academic tasks should also be discussed with

students. Throughout the learning of strategies, constant teacher reinforcement of student use and reflection of the strategies increase their motivation to use the strategies independently. Such positive task orientations and interactions increase the students' expectations for learning to comprehend materials. The students learn to associate their success with their efforts (Schunk, 1991).

Beyond learning effective strategies that motivate students to learn, authentic assessments related to students' reading comprehension capabilities were advocated to assist teachers in identifying specific reading comprehension difficulties plus pinpointing students' ability to select and independently use comprehension strategies. They realized that assessments should include discussions with students about whether they use or do not use vocabulary strategies for effective comprehension of text. Further, they discussed how students should also learn to self-assess their use of comprehension strategies for established reading purposes.

Discussions centered on the value of students appreciating the purposes of strategies to help them understand why they should implement vocabulary strategies when they are experiencing difficulties making meaning of words. Additional shared research emphasized the importance of teaching students to use their cognitive skills to enhance learning (Flavell, 1977; Vygotsky, 1978; Morgan, 1997). Meichenbaum and Asarnow's (1979) study reinforced the notion that students can develop cognitive skills if they are taught to direct their use to the academic tasks they are acquiring when using strategies to increase comprehension.

Because reading is a cognitive and interactive process of obtaining meaning from text and discussion of text, development of metacognitive (students thinking about their thinking) my students read about aspects of reading and writing comprehension to determine how students can become strategic readers. According to Paris, Lipson, and Wixson (1983) students who develop metacognition can actively reflect about their cognitive processes to evaluate and monitor their reading comprehension.

*"I can understand why I have difficulty correcting comprehension problems. I possessed many characteristics of a good reader and I assumed students automatically performed the mental tasks of self questioning and rereading. It's hard to know what a child is or is not thinking while they are reading"* (graduate student, Cheryl Daughterty).

The teachers decided they should model metacognition strategies when they are reading aloud to their students. The teachers practiced sharing their thinking processes during reading and discussed strategies they use for successful comprehension with their students. Conversations included research and classroom application ideas concerning

metacognition for declarative and procedural knowledge purposes. Students indicate declarative knowledge about text when they recognize different text structures, discuss and understand goals and tasks, and understand their strengths concerning comprehension of various texts. Declarative knowledge “does not imply any ability to adapt to a range of situations or any attempt to monitor reading progress” (Raphael and Hiebert, 1996, p. 196). Procedural knowledge indicates students’ ability to select strategies and skills for successful reading comprehension. Thinking about unfamiliar words and learning how to understand their meanings in contexts helps students value and develop an interest in words instead of an aversion to unfamiliar words.

Long term memory of vocabulary words as sight words is also considered an essential component of successful comprehension. Organizing words and recognizing relationships between words, help students retain the words in their long term memory. Creating visual images, understanding word origins, and recognizing special features within words such as multiple meanings and connotations, provide students with the opportunity to relate personally to words in meaningful contexts. Frequent exposure to words and learning events that build awareness concerning word knowledge leads to students’ interests in words. The more associations that students can provide among words, the better the students will be able to understand the words in texts of various genres.

*“When a child answers ‘I don’t know’ to a comprehension question, sometimes this inability stems from lack of prior knowledge or it can reflect the reader’s hesitancy to take a risk or lack of awareness that such risk taking is not only allowed but desirable, I hope my classroom encourages risk taking”* (teacher, Donna Tapp). Donna’s statement implies that if students feel secure in a socially interactive, thought provoking, noncompetitive, learning environment, they frequently take risks and freely share personal interpretations of text with their peers and teachers.

*“Word knowledge is vital in the comprehension process of reading. Instruction in word knowledge/meaning needs to go past definitions and include experiences that the learner can relate to so relationships between the new words and the experiences can be formed”* (Lori Barentine, a teacher in my class). Lori offered this after reading our class text, *Reading Diagnosis for Teachers* (Barr, Blackowicz, & Wogman-Sadow, 1995).

### TEACHER DISCUSSIONS OF FREQUENT READING AND EXPANDED VOCABULARY KNOWLEDGE

Interestingly, Lori's thoughts led to discussions centered on teaching vocabulary while exposing students to authentic literature and related activities of interest to increase comprehension. The teachers decided students' vocabulary must reflect wide reading experiences while they are learning new words. During this process students need to develop an interest in words. Research indicated that first graders have a speaking vocabulary of approximately 5,000 words and will increase to about 50,000 words when they enter college (Just and Carpenter, 1987). "Students learn to read 3,000 to 4,000 words each year; it quickly becomes clear that most of the words students learn are not taught directly" (Graves, Juel, and Graves, 1998, p. 187). The lexicon of words stored in memory provides students with a lens to understand the meaning of print. Obviously, students learn many words through a wide range of reading experiences. The more words known by the reader, the better are their chances to understand and enjoy what they are reading.

To increase students' ability to solicit meaning from words the teachers decided to design vocabulary strategies that students can eventually implement independently while reading and thinking about text to help them with their reading comprehension. Students, thereby, need to develop vocabulary knowledge during the reading process, involving their ability to extract word meaning in context.

Research by Fielding, Wilson, and Anderson (1986) found that many fifth graders spend little time reading. Since the teachers realized many middle and upper elementary students do not value reading, they acknowledged that it would be difficult to motivate students. Due to their conversations, the teachers were building personal knowledge about how to design vocabulary strategies that were well-grounded in research, related to their reading goals, and would motivate their students to learn effective vocabulary strategies to increase comprehension.

### TEACHER DISCUSSIONS LINKING READING RESEARCH TO COGNITIVE SKILLS AND PERSONALITY STYLES

Energetic sharing about motivation and comprehension research were linked to cognitive skills and personality styles of students. Since students' personal characteristics influence their motivation and conscious comprehension efforts toward reading, the teachers determined that they needed to design instructional plans that included modeling,

sharing, and scaffolding of students' learning encompassing experiences for individual cognitive skills and personality styles.

*"While reading about vocabulary, the first thought that came to mind was something I heard a small child say many years ago. When President Reagan was running for re-election, a reporter interviewed a kindergarten class. The reporter asked the children what they thought of President Reagan's Defense Plan. One boy replied that if you leave the fence open the dog will get out and dad will be mad. I think that this illustrated how easy it is for children to confuse unfamiliar vocabulary. When dealing with poor readers I agree that we should include motivation, time for reading, instruction of key concepts for vocabulary and strategy development for effective context use"* (teacher, Mike Mauriello).

Mike's concern led to teacher reflections emphasizing the need for student discussion before, during, and after reading or listening to a story to increase comprehension related to vocabulary difficulties. The teachers stressed that interpretations based on personal experiences can either mislead or guide a student when they are attempting to comprehend the meaning of vocabulary words in narrative or expository text. Students need to think about the purpose of a particular text and interact with the author to construct meaningful interpretations of text. Due to different background knowledge affecting vocabulary as well as use of cognitive skills and personality styles, students need opportunities to share their vocabulary knowledge to motivate them and retain meaningful information in long term memory.

Mike's reflections indicated the importance of recognizing the individual personality styles and cognitive skills of students in terms of academic performance as suggested in the research of Flavell, (1977), Vygotsky (1978), Morgan (1997), and Meichenbaum and Asarnow (1979). The teachers shared additional research of the 20<sup>th</sup> century concerning studies of individual differences and experiences that were examined concerning cognitive and personality styles in order to determine how individuals perceived their experiences and retained information in long term memory.

After reflecting on the research, the teachers emphasized the necessity for students' reading success to be linked to experiences that affect them personally and socially while expanding their critical thinking skills. The theoretical implications of including cognitive skills and personality styles of learning within the curriculum requires the implementation of innovative instructional approaches that are child-centered and individually appropriate. These child-centered approaches



expand students' awareness of their cognitive skills and personality styles and create an awareness of others' ways of learning. Related conversations suggested that since students' process information differently, their perception and interpretation affect the amount of attention they will employ during the learning process.

The teachers came to significant conclusions after discussing and researching the cognitive and personality styles of learning, vocabulary, and comprehension knowledge. They concurred that students who have difficulty with vocabulary because of limited schemata (prior knowledge) require assessment and instruction related to their personal styles of learning to increase motivation to read. As a result, the teachers decided to design, model, and scaffold two strategies to help their students implement effective comprehension strategies. Through teacher observations and conversations with students in their classrooms, the graduate students developed ideas and suggestions for the strategies. They also determined that the strategies could be useful as informal assessments to indicate whether the students understood how to independently implement the strategies and retain information learned.

#### DESIGNING AND ASSESSING VOCABULARY STRATEGIES

To overcome their students' reading dilemmas and incorporate what they had learned during the course, the teachers decided to develop two strategies ("Stylish Words" and "Synonym Substitution") to integrate vocabulary instruction across the content areas and to provide their students with frequent reading opportunities. As a result, the vocabulary strategies infused interest, effort, personality styles and cognitive skills, risk taking, literacy experiences, and creative learning experiences within noncompetitive classroom context.

##### *Stylish Words*

The strategies presented are the "fruits" of the teachers' inquiry, discussions, research, and commitment during the graduate course. The following two vocabulary strategies evolved: "stylish words" and "synonym substitution."

The graduate students constructed the vocabulary strategies around the students' cognitive and personality styles based on the research of Morgan (1997), Myers and Briggs (1980) to increase student motivation. In addition, the teachers also emphasized the importance of research (Pressley et.al. (1991), Raphael and Hiebert (1996), Barr, et.al. (1995)

that linked metacognition to vocabulary and comprehension development. As a result, they had the students share their thinking about how they were using the strategy and when it would be helpful for them to initiate the strategy when learning vocabulary words independently. The teachers also encouraged the students to read more frequently to increase their vocabulary. If students encountered difficult vocabulary words, the teachers modeled how they would use the strategy with a partner or on their own to discover the meanings of words that interfered with comprehension.

During the process, the students interacted by sharing different ways of implementing reading strategies based on their own personal styles of learning. The strategy, “Stylish Words,” is for students who identify their personality styles based on the research of Myers and Briggs (1980) Type Indicator (MBTI) and/or Silver and Hanson (1994).

The assessments determined personality and cognitive styles indicating areas where individual students focused their attention and decided how to use information during the learning process. Using the four personality styles from Silver and Hanson (1994), ST-Sensitive Thinker (students who like to create lists and brainstorm); SF-Sensitive Feeler (students who like to personalize learning); NT-Intuitive Thinker (students who like to research information); NF-Intuitive Feeler (students who like to use imagination and create new words), the teacher lead the students through the following four word exercises. The exercises strengthened word recognition, vocabulary, spelling, and increases students’ knowledge of the effects of word origins, and suffixes and prefixes. By combining the four styles every student should be successful within their learning comfort zone and strengthen their other less used cognitive styles through interactions with peers.

The following is an example of how to use the “Stylish Words” vocabulary strategy to increase comprehension. The words should be selected from a narrative or expository text to be shared by the students:

ST: List five words you select and want to learn from the story. (Ex. Mischief).

SF: Write sentences using the five words. Make each sentence very personal to you. (I get into mischief when my mom leaves me in charge).

NT: Research and discuss the origin and definition of the five words. What part of speech is each word? (Comes from the French *meschever*, meaning “to come to grief”).

NF: Create new words from the five words by using prefixes, suffixes, pluralization, synonyms, antonyms, etc. (Ex. mischievous).

Next, the students from each group discuss their findings and combine the information in their individual vocabulary journals related to the story. Some of the teachers have used the strategy with their students and found that the students were motivated to share their findings about the words and remembered the meanings of the words while they read their texts. The students were encouraged to talk about the strategy and share how it affects their reading comprehension. The “Stylish Words” strategy was developed by Lori Barentine, Mary Harris, Beverly Key, Donna Tapp, and Christi Zelek.

#### THE “SYNONYM SUBSTITUTION” VOCABULARY STRATEGY

##### *Two applications of the strategy*

1) Students read a passage or chapter as a group. They select vocabulary words written on strips of paper or they select their own difficult words. They do not share the word with anyone. The students decide on a definition, check their definition of the word in context or in a dictionary, and substitute a synonym. Next, they illustrate their selected word or present a dramatic presentation of the word to the other students in the group to identify. Finally, the word is visually presented as an analogy. For example, dagger::knife::saber::sword.

Summary of the strategy:

- READ
- SELECT WORD
- DEFINE
- SUBSTITUTE SYNONYM
- ILLUSTRATE or DRAMATIZE
- CREATE ANALOGY

2) Assign different parts of a passage or chapter to groups to identify difficult words. The group members substitute words that are synonymous for difficult words in the passage. The objective is to make comparisons of vocabulary words and their meanings. The groups “teach” the analogies to the class. Acknowledgement of spelling patterns within the unfamiliar words can also be compared to spelling patterns in unfamiliar words. For example, the spelling pattern /ife/ in the word knife can be compared to the same spelling pattern in the word life. Dramatic presentations and illustrations follow the analysis of the words.

Summary of the strategy:

- READ
- SELECT WORD
- SUBSTITUTE SYNONYM
- TEACH ANALOGIES
- FIND SPELLING PATTERNS
- DRAMATIZE OR ILLUSTRATE

The “Synonym” strategy was developed by Cheryl Daughtery, Pam Goddard, Edna Griggs, Cathy Hathcoat, Hayley James, Denise Smith, and Becky Warren.

## DISCUSSION

The dedicated teachers’ efforts uncovered thought provoking instructional strategies and activities for reading comprehension that work in real classrooms. The teachers gained an understanding for scaffolding instruction to provide students with opportunities to develop metacognition and understand the selection of reading strategies that complimented their cognitive and personality styles. Further, the students learned to appreciate how individuals are unique in their style of learning. The students also benefited by sharing and selecting comprehension strategies that they were comfortable implementing. The personalization, interaction, and recognition of individual styles of learning while using the strategies, increased the students’ ability to interpret the meaning of unfamiliar vocabulary words during reading and enjoyable activities.

Since vocabulary knowledge is highly correlated to comprehension, students can develop rich vocabularies that increase their critical literacy resulting in successful comprehension when teachers provide them with strategies that they can select and apply independently. Once students can aptly apply the strategies during the reading process, their chances for successful comprehension increases dramatically.

In summary, both student-centered instruction, and teacher and student understanding of how the cognitive and personality styles of individuals positively affect academic achievement, are important elements for motivating students to value reading. Building meaningful discussions during interactive sharing sessions such as the two comprehension activities conceptualized by my graduate class, provides opportunities to expand students’ critical thinking. Students also build confidence when they develop procedural knowledge as they select effective comprehension strategies.

Kincheloe (1993) sums up teachers' commitment to improving instruction when he stated, "Teacher educators understand that self-directed education undertaken by self-organized community groups is the most powerful form of pedagogy" (p. 198). Kincheloe's reflection exemplified the teachers' sense of accomplishment that resulted from their efforts to improve reading comprehension instructional strategies. The teachers were reaffirmed in their desire to teach and create comprehension strategies. They were overjoyed when they sensed their students becoming aware of their unique and yet collective personality and cognitive styles that affected their academic performance and motivation. They were further rewarded when the students learned to use the strategies to increase their comprehension successfully.

Cultivating imagination and creative teaching that instills critical thinking is rewarding especially when teachers enjoyed the vision of joy reflected in their students' faces during interactions when they began to understand the value of being strategic learners. I was also fortunate to be rewarded when I observed the "fire" ignite in my graduate students. Rather than remaining frustrated by the problems their students experienced while they were learning how to increase their vocabularies and reading comprehension, they became challenged to help them overcome difficulties. Questioning and evaluating instruction can certainly lead to imaginative answers resulting in fulfilling, cheerful, and successful classroom environments.

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