

Running Head: COMPARING VOCABULARY INSTRUCTIONAL STRATEGIES

Traditional Vs. Multi-sensory Vocabulary Instruction-  
Which Instructional Strategy Is More Effective  
for Enhancing Dyslexic & Low Performing Reader's Vocabulary?

Southeastern Louisiana University

## ABSTRACT

The effects of teaching vocabulary using a traditional and a multi-sensory instructional approach to nine low performing third grade reading students were investigated. Students received one week of traditional vocabulary instruction and one week of multi-sensory vocabulary instruction. The results revealed that students were more successful with using vocabulary words correctly within the context of sentences after one week of multi-sensory vocabulary instruction and less successful with using vocabulary words correctly within the context of sentences after one week of traditional vocabulary instruction. However, both methods of instruction proved to be successful in enhancing students' vocabulary knowledge when compared to the baseline results, in which students received neither traditional nor multi-sensory instruction. These findings are congruent with recent research that advocate and support multi-sensory vocabulary instruction does enhance students' vocabulary knowledge.

## LITERATURE REVIEW

**What do dyslexic and low performing students have to gain from developing a robust vocabulary?** Vocabulary plays a critical role in people's lives and future possibilities. It is clear that a large and rich vocabulary is the hallmark of an educated individual. (Beck, McKeown, Kucan, 2002) Vocabulary knowledge is one of the best single predictors of reading comprehension. (Daneman, 1991)

**What usually happens to dyslexic and low performing students who do not learn to read?** Being illiterate in our culture is a devastating condition. Enormous emotional problems develop early in nonreaders who suffer from low self-esteem and anger over being isolated from the rest of society. Being illiterate spawns disruptive behavior that often leads desperate

individuals into addictions, emotional imbalance, or even mental illness. Being illiterate is degrading and a constant source of shame. (Jordan, 2000a)

**How can having a rich vocabulary improve dyslexic and low performing students' ability to read?** Naturally, the ultimate purpose of reading is to read for meaning. However, in order to read for meaning, a reader must first read the words. (Adam, 1990) Vocabulary plays an important part in learning to read. As beginning readers, children use the words they have heard to make sense of the words they see in print. Vocabulary also is very important to reading comprehension. Readers cannot understand what they are reading without knowing what most of the words mean. As children learn to read more advanced text, they must learn the meaning of new words that are not part of their oral vocabulary. (The Center for the Improvement of Early Reading Achievement, 2001) To become proficient readers, students must be able to know how to say words correctly and instantaneously recognize them in print. They must also know the meanings associated with these words in context and develop word consciousness. (Block & Mangieri, 2006)

**What does research tell us about vocabulary development?** Vocabulary can be developed indirectly, when students engage daily in oral language, listen to adults read to them, and read extensively on their own. Vocabulary also can be developed directly (and must be taught directly), when students are explicitly taught both individual words and word learning strategies. (The Center for the Improvement of Early Reading Achievement, 2001)

**What's wrong with using traditional vocabulary instruction?** Many of the traditional techniques teachers and students use to learn vocabulary do not work because most students, not just those with learning problems, rarely remember the meanings of new terms beyond the test. (Ellis and Farmer, 2005) Many teachers still rely on word lists, having children look up

definitions. (Allen, 2004) However this doesn't work, because in order for the brain to store something new in permanent memory, it has to connect it to something else that is already known. (Collier, 2007) If you just look up a word and write the definition down, it doesn't make any sense. There has to be that connection in the brain; you have to be able to hook it to something that students already know. Children or adults need to see and hear a word in meaningful context multiple times in order to know the word, somewhere between 10 and 15 times. (Allen, 2004)

**Which vocabulary instructional strategy does research support?** Growing evidence clearly supports the effectiveness of a multi-sensory approach to learning. Current research, much of it supported by the National Institute of Child Health and Human Development (NICHD) demonstrates the efficiency of multi-sensory instruction for individuals with learning difficulties. Research and experience has clearly shown that the key to success for individuals with learning difficulties is the use of all of their senses (visual, auditory, tactile and kinesthetic) to store and retrieve information. Multi-sensory instruction is specifically designed to activate the four senses. (Learning Difficulties Centre [LDC], 2004)

**What is multi-sensory instruction and how does it work?** Many children cannot learn to read, write, and spell unless information comes in through many sensory channels simultaneously. What seems to work is the coordination of input from all the senses, having the hands, eyes, ears, and voices working together to help them organize and retain their learning. So that means that teachers have to ensure that their students are seeing, saying, hearing, and manipulating materials during learning time. Multi-sensory instruction is important for students with learning disabilities because it reinforces our language teaching in three important ways.

First, it helps get the information across. Second, it helps the students process the information. Third, it helps students retrieve information already learned. (Birsh, 2001)

**Why is multi-sensory instruction more effective than traditional instruction when teaching vocabulary to dyslexic and low performing students?** People with dyslexia learn differently so they need multi-sensory instruction that simultaneously sends information to the brain along multiple pathways (visual, auditory, tactile, kinesthetic). (Currie & Wadlington, 2000) Dyslexia and other related learning disorders cannot be cured. Proper instruction promotes reading success and alleviates many difficulties associated with dyslexia. Instruction for individuals with learning differences should be: explicit, systematic and cumulative, structured, and multi-sensory. (The International Dyslexia Association [IDA], 2003)

**How can teachers engage dyslexic and low performing students in multi-sensory vocabulary learning experiences?** Teachers can engage dyslexic and low performing students in multi-sensory vocabulary learning using the following activities suggested by Ellis and Farmer (2005): Illustrate the words, play “quick draw”, play “vocabulary charades”, give credit for finding the word used in the real world, use the words yourself, have students answer questions that use the words, have students generate examples and non-examples for words, use “fill in the blank” exercises before you expect the students to use the words in sentences themselves, and compose with the words. In addition, Marzano (2004) has written *Six Steps to Effective Vocabulary Instruction*. Step 1: The teacher provides a description, explanation, or example of the new term. Step 2: Students restate the explanation of the new term in their own words. Step 3: Students create a nonlinguistic representation of the term. Step 4: Students periodically do activities that help them add to their knowledge of vocabulary terms. Step 5: Periodically

students are asked to discuss the terms with one another. Step 6: Periodically students are involved in games that allow them to play with the terms.

#### INTEGRATED CONCLUSIONS (1 PAGE)

Current research does not support traditional vocabulary instruction. According to recent research, many of the traditional techniques teachers and students use to learn vocabulary do not work because most students, not just those with learning problems, rarely remember the meanings of new terms beyond the test. (Ellis and Farmer, 2005) Many teachers still rely on word lists, having children look up definitions. (Allen, 2004) However this doesn't work, because in order for the brain to store something new in permanent memory, it has to connect it to something else that is already known. (Collier, 2007) If you just look up a word and write the definition down, it doesn't make any sense. There has to be that connection in the brain; you have to be able to hook it to something that students already know. However, current and extensive research does support multi-sensory vocabulary instruction. Growing evidence clearly supports the effectiveness of a multi-sensory approach to learning. Current research, much of it supported by the National Institute of Child Health and Human Development (NICHD) demonstrates the efficiency of multi-sensory instruction for individuals with learning difficulties. Research and experience has clearly shown that the key to success for individuals with learning difficulties is the use of all of their senses (visual, auditory, tactile and kinesthetic) to store and retrieve information. Multi-sensory instruction is specifically designed to activate the four senses. (Learning Difficulties Centre [LDC], 2004) Current research that does not support traditional instruction as being effective for improving students' vocabulary is incongruent with the findings of the researchers of this study. During the first week of this research study, nine (9) low performing third grade students were instructed using neither a traditional nor multi-sensory

instructional approach for the purpose of improving their vocabulary. Students learned their weekly vocabulary words indirectly as they encountered them while reading their basal stories independently and while listening to the teacher read the story aloud only once. After one week, the students were assessed for their ability to use the weekly vocabulary words correctly within the context of a sentence. This became the baseline score. Overall, students were able to use the vocabulary words correctly within sentence context seventy-eight percent (78%) of the time. At the start of the second week, the researchers administered a vocabulary pre-test A to the students. This assessment contained words that students had not been instructed on yet. This assessment also assessed students for their ability to use words correctly within sentence context. Overall, students were only able to use the vocabulary words correctly within sentence context seventy-three percent (73%) of the time. Over the course of one week, using traditional vocabulary instruction, students listened to the teacher use the words within the context of the story as the teacher read the story aloud, orally discussed the words, and wrote the definitions of words using their dictionary. At the end of week two, the students were evaluated with a vocabulary post test A. Overall, students used the vocabulary words correctly within sentence context ninety-seven percent (97%) of the time. Since this data is not congruent with recent research, the researchers of this study reanalyzed the instruction and predict that perhaps the intended traditional instruction was not traditional enough. It is possible that through over-discussing the vocabulary words, students were able to successfully use the words in sentence context with such high accuracy.

On the other hand, current research that supports multi-sensory vocabulary instruction to improve students' vocabulary learning is congruent with the findings of the researchers of this study. At the start of the third week, the researchers administered a vocabulary pre-test B to the

students, similar to the one used prior but using new words. Overall, students were only able to use the vocabulary words correctly within sentence context sixty-nine percent (69%) of the time. Over the course of one week, using multi-sensory vocabulary instruction, students engaged in action-based learning by clapping the words, “free-throw” shooting, and “batting” the words out. Students practiced spelling words through skywriting. Students and teachers orally discussed the words and used semantic word webs to build background knowledge about the words. Teachers, alternately, read the words aloud through the context of meaningful and appropriately leveled literature (*The Wolf’s Chicken Stew*, Reading Level 28), pausing to discuss the use of the words, and extend students’ learning and understanding of the words further. Then, the students viewed an interactive vocabulary power-point lesson which gave students the opportunity to match words with their correct meanings and use the words correctly within sentence context. By adding animations to the power point, the correct words would fly in, roll in, and boomerang in, immediately reinforcing students’ correct use of the words. The power-point slides also included animated pictures next to each sentence. This was chosen to support current research which clearly shows that the key to success for individuals with learning disabilities, is the use of all of their senses (visual, auditory, tactile and kinesthetic). (Learning Difficulties Centre [LDC], 2004)

In addition, students had the opportunity to become actively engaged with the words during meaningful literacy station activities. (Pantomiming words, using vocabulary cross-word puzzles, partner reading the story and orally discussing the words) At the end of week three, the students were evaluated with a vocabulary post test B. Overall, students used the vocabulary words correctly within sentence context ninety-eight percent (98%) of the time. From this experiment, the researchers conclude that both strategies were successful in improving students’ vocabulary learning when compared to baseline scores. The research results reveal that multi-

sensory vocabulary instruction proved to be more effective (by 1%) for enhancing students’ vocabulary learning than traditional instruction. The researchers predict that these students would make greater gains with learning vocabulary if multi-sensory vocabulary instruction would be implemented daily and over a longer period of time.

CONNECTIONS TO STANDARDS

International Reading Association Standards for Reading Professionals

<u>Standards</u>	<u>Connection</u>
#1- Candidates have knowledge of reading and writing processes and instruction.	The researchers of this study reveal their knowledge of how students learn to read and write by scaffolding and spiraling vocabulary instruction using a multi-sensory approach to learning, building on students’ prior knowledge and learning one step at a time, and by integrating reading and writing of vocabulary within the context of meaningful sentences.
#3- Candidates use a variety of assessment tools and practices to plan and evaluate effective reading instruction.	By using varied and ongoing assessments in this study, a great deal has been learned about dyslexic and low performing students’ vocabulary development. Based on assessment results, multi-sensory vocabulary instruction appears to improve dyslexic and low performing students’ vocabulary learning. Prior to one week of multi-sensory instruction, nine low performing reading students were only able to use words correctly within sentence context sixty-nine percent (69%) of the time. (Vocabulary Pre-test B) After one week of multi-sensory vocabulary instruction, these same students improved their ability to use words correctly within sentence context from sixty-nine percent (69%) of the time to ninety-eight percent (98%) of the time. (Vocabulary Post test B)

National Board for Professional Teaching Standards (NBPTS) Core Propositions

<u>Core Proposition</u>	<u>Connection</u>
<p>#1- Teachers are committed to students and their learning.</p>	<p>Accomplished teachers act on the belief that all students, including dyslexic and low performing students can learn. They adjust their practice, similarly to the researchers of this study, on the basis of observation and knowledge of their students’ interests, abilities, skills, and knowledge. The researchers of this study carefully chose instructional materials and methods that met interests and needs of the learners such as using action-based learning, interactive vocabulary presentations, pantomime, and other engaging literacy rich activities. Accomplished teachers understand how students develop and learn. They incorporate theories of cognition and intelligence in their practice. In this study, the researchers based their instruction on theories and research that have proven to be successful like using multi-sensory instruction and integrating technology.</p>
<p># 5- Teachers are members of learning communities.</p>	<p>Accomplished teachers contribute to the effectiveness of the school by working collaboratively with other professionals similarly to the way the authors of this study worked together to assess students, learn about their needs, collaboratively make instructional decisions aimed at improving students’ vocabulary, and through a partner approach, engage students in a multitude of literacy rich, multi-sensory vocabulary learning activities.</p>

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