

VOCABULARY INSTRUCTION AND READING COMPREHENSION

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ABSTRACT

This literature review investigated whether using a systematic vocabulary instruction leads to higher reading comprehension. Research was done by reviewing studies and literature written about vocabulary, reading comprehension, and the correlation between the two. The materials were found in books and online scholarly articles. The authors referenced are well-known for their research and knowledge on vocabulary instruction and reading comprehension. Participants in different studies from the articles were from a variety of age groups of students. Based on the findings, systematic and in-depth vocabulary instruction leads to better reading comprehension.

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CHAPTER 1 INTRODUCTION

Statement of the Problem

The Wisconsin Department of Instruction School Report card (Wisconsin Department of Public Instruction, 2017) for the Darlington Community School District shows there continues to be a significant gap between the high and low achieving reading and language arts students in kindergarten through twelfth grade in the Darlington Community School District. Many potential factors could be contributing to why there continues to be this gap. The National Reading Panel states, "Vocabulary is one of five core components of reading instruction that are essential to successfully teach children how to read. These core components include phonemic awareness, phonics and word study, fluency, vocabulary, and comprehension" (Sedita, 2005, p. 33). Knowing these five core components, my focus as a middle school teacher is the importance of vocabulary. Would using systematic, in-depth vocabulary instruction help bridge this gap? Would using a systematic vocabulary instruction lead to higher reading comprehension?

Purpose of the Study

Darlington Community School District continues to score lower than the average district in Wisconsin in English Language Arts (Wisconsin Department of Public Instruction, 2017) on school report cards. The Wisconsin Department of Instruction School Report card for 2016-2017 shows 34.6 percent of the students in the Darlington School District are considered proficient or advanced in English Language Arts (ELA); the state average is 43.6 percent. Darlington is also behind on closing the ELA achievement gap showing 34.4/50, while the state achievement gap is 17.3/50 (the smaller the numerator, the smaller the achievement gap). Both of these statistics are solely based on standardized tests, but the numbers still demonstrate that there is reason to be concerned.

The school report card scores come from the results on the standardized tests taken in Wisconsin. Currently, those include the Forward Exam, ACT, and the Dynamic Learning Maps test (Wisconsin Department of Instruction, 2017).

The sub skills of the MAP reading test include:

- vocabulary acquisition
- informational text: language, craft, and structure
- informational text: key ideas and details
- literary text: language, craft, and structure
- literary text: key ideas and details

(MAP Help Center, n.d.).

The sub skills of the Forward Exam include:

- reading: key ideas and details
- reading: craft and structure/integration of knowledge and ideas
- writing/language: text types and purposes
- writing/language research
- writing/language conventions, and listening

(Wisconsin Department of Public Instruction, n.d.).

Two key components in both of these assessments referenced above are vocabulary/language and reading. These need to be two subjects of focus for teachers in the Darlington School District. In order to have more proficient readers and close the gaps, systematic instruction must be done in one or both of these areas. Currently, teachers are trying different vocabulary programs in various grade levels, but our scores continue to be low.

Darlington is attempting to find out the best way to incorporate vocabulary and increase reading comprehension.

Significance of the Study

Students who lack vocabulary knowledge struggle finding meaning when they read. Therefore, these students read less because they find it difficult. This leads to learning fewer words because they aren't exposing themselves to enough through reading (Sedita, 2005, p. 34). The gap in reading achievement will continue to grow if something is not done. Teachers must use vocabulary instruction to lead to better reading comprehension. The connection is inevitable. "Vocabulary is among the greatest predictors of reading comprehension, it almost goes without saying, is central to learning in the content areas" (Baker, Simmons, and Kameenui 1998; as cited in Fisher & Frey, 2008). This will help bridge the achievement gap that many schools across the nation are facing. "Vocabulary is the glue that holds stories, ideas, and content together...making comprehension accessible for children" (Rupley, Logan, & Nichols, 1998/99; as cited in Sedita, 2005, p. 33).

The Common Core State Standards (CCSS) have been adopted by forty states in the nation (Common Core State Standards, 2018). Within the CCSS, there are math and English language arts standards. The English language arts standards demonstrate the importance of vocabulary in the curriculum because the standards include vocabulary in a variety of areas. The standards even have a section dedicated strictly to language for grades kindergarten through twelfth grade. Not only is there a language portion of the standards, but vocabulary is also included in the reading literature and reading informational text standards (Common Core State Standards Initiative, 2018). Therefore, systematic vocabulary instruction is identified as essential

to academic achievement because vocabulary is expected to be taught nationwide and within specific district requirements.

Assumptions

It is assumed the sources within this paper are reliable and accurate. If strategies identified in this paper are shared with colleagues, a cohesive program utilizing the strategies can be designed and implemented to help the problem. Sharing the strategies with colleagues will create a more unified approach of teaching vocabulary.

Delimitations of the Study

This literature review was conducted June through December, 2018. Most current sources on the topic were found online. Many were found through the search engine for the University of Wisconsin libraries. Very few sources were found rejecting the hypothesis.

Methodology

The seminar paper will be completed as a literature review. Sources were found relevant to the research question and hypothesis. The hypothesis stated: Using systematic vocabulary instruction in the classroom will increase student reading comprehension. Because this was a literature review, this research paper is qualitative. A variety of articles about vocabulary and comprehension were read, synthesized, and reported.

Definition of Terms

Systematic instruction: A carefully planned sequence for instruction, similar to a builder's blueprint for a house [that] characterizes systematic instruction. A blueprint is carefully thought out and designed before building materials are gathered and construction begins.

(Adams, 2001, p. 74; as cited in Colorado Department of Education, n.d.).

Vocabulary acquisition: The process of learning the words of a language (Nordquist,2017).

Reading comprehension: The process of comprehending involves decoding the writer's words and then using background knowledge to construct an approximate understanding of the writer's message” (Lenz, n.d.).

CHAPTER 2 REVIEW OF LITERATURE

Expectations for Teaching Vocabulary

Teachers are expected to instruct using vocabulary in their lessons, particularly in the states that have adopted the Common Core State Standards (CCSS). “Learning vocabulary is necessary in both receptive (reading and listening) and expressive (writing and speaking) language” (Wisconsin Department of Public Instruction, 2016b). The CCSS give a guideline of what teachers need to instruct vocabulary. For example, in the K-5 and 6-12 grade-level vocabulary standards the following categories are required:

- Word-learning strategies: context clues, morphology/word parts, and resources
 - Word consciousness
 - Teach individual words
 - Rich and varied language experiences
- (Wisconsin Department of Public Instruction, 2016a)
(Wisconsin Department of Public Instruction, 2016b)

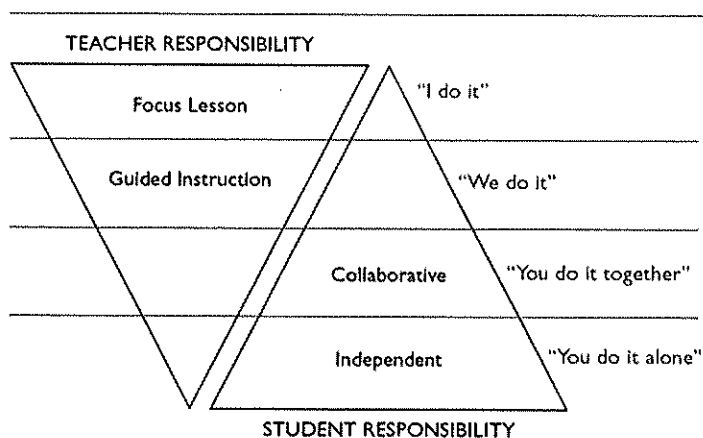
These vocabulary standards along with all of the CCSS stress critical-thinking, problem-solving, and analytical skills that are required for success in college, career, and life (Common Core State Standards Initiative, 2018).

Not only are teachers in these states expected to follow the CCSS, many states have standardized tests that incorporate vocabulary. For example, as stated above, vocabulary is included in the MAP and Forward exams taken in the state of Wisconsin. Districts are then graded based on student achievement on the tests. The district report cards are open to the public. Schools, teachers, and the community are viewed based on the results. Teachers have a great deal of responsibility to meet the required standards, have students achieve on the standardized tests, and reach the needs of individual students. Part of this responsibility is an expectation to include vocabulary in their curriculum from grades kindergarten through twelfth grade.

Systematic Vocabulary Instruction:

What is Systematic Instruction?

Systematic instruction is organized and builds on prior knowledge. “The goal of systematic instruction is one of maximizing the likelihood that whenever children are asked to learn something new, they already possess the appropriate prior knowledge and understanding to see its value and to learn it efficiently” (Adams, 2001, p. 74; as cited in Colorado Department of Education, n.d.). Systematic instruction is also based on gradually releasing the responsibility to the students. Fisher and Frey (2008) created a model that moves the responsibility of learning



from the teacher to the student based on research. Below is the diagram that describes the four steps of release (Fisher & Frey, 2008):

By allowing students to take responsibility, students will be more accountable for their learning to help better gain understanding. In systematic instruction, students will be able to activate this understanding and build upon it. Together, systematic instruction and the gradual release of responsibility will lead to an increase in learning.

Effective Vocabulary Instruction

“It takes the average student about 25 experiences with a word before they ‘own it’ it in speech” (Reading Horizons, n.d.). For this reason, effective vocabulary instruction must be taught by exposing the students to vocabulary with in-depth instruction. Vocabulary depth means teaching students to understand the word. It also shows if and how its meaning can vary.

Teachers should follow the gradual release of responsibility when instructing vocabulary. This begins by the teacher modeling how to use the terms. Then, the students become participants in guided instruction by allowing students to see, hear, read, and write new vocabulary words (Reading Horizons, n.d.). After guided instruction, students must collaborate with other students while working with the terms. Finally, the student independently shows understanding of the terms through an activity, informal assessment, or formal assessment.

Vocabulary instruction must be taught in depth and, for that to occur, vocabulary instruction should be viewed in five dimensions: generalization, application, breadth, precision, and availability (Fisher, Frey, & Hattie, 2016) . Generalization is through definitional

knowledge, application is through correct usage, breadth is through recall of words, precision is through understanding examples and nonexamples, and availability is through use of vocabulary in discussion (Cronbach, 1942). By addressing these dimension in vocabulary instruction, students will be able to learn words in depth.

Poor Vocabulary Instruction Strategies

Unfortunately, teachers are not always using best practice when it comes to instructing vocabulary. “There is a great divide between what we know about vocabulary instruction and what we (often, still) do” (Greenwood, 2004 p.28; as cited in Bromley, 2007). Many teachers struggle with transitioning from their traditional ways of teaching vocabulary to using systematic instruction. Many teachers still are using word lists, memorization, and vocabulary quizzes to help students learn new words. Traditional teaching also includes having students look up words in a dictionary and using them in sentences, which are practices that are no longer seen as effective. Copying down definitions is ineffective because definitions might be accurate, but they do not always give students enough meaningful information to allow them to use it properly. Using a definition to write a sentence is another poor strategy on its own because words have multiple meanings. This is something students need to learn and understand about the English language as well. Not only are these two traditional ways of teaching vocabulary not effective, “Overuse of dictionary hunting, definition writing, or teacher explanation, can turn students off [from] learning new words...” (Greenwood, 2004 p.28; as cited in Bromley, 2007). Students might not be motivated by the traditional approach of teaching vocabulary. If students are not motivated, they will not be able to expand their vocabulary. Poor vocabulary instruction will not lead to an increase in literacy skills, so teachers need to use systematic instruction and best practice when teaching vocabulary.

Successful Vocabulary Instruction Strategies

The National Reading Panel (2000) found that vocabulary instruction should be taught both directly and indirectly (Sedita, 2005, p. 34). Direct teaching is teaching specific words directly (Sedita, 2005, p. 34). This would include pre-teaching words prior to teaching a book or teaching word roots and affixes. It is believed that vocabulary instruction must also incorporate, indirect methods by exposing students to many new words through reading a lot (Sedita, 2005, p. 34). Working together, indirect and direct vocabulary instruction will lead to students learning new words.

Experts in vocabulary have also found that using multi-components to develop vocabulary is essential, and this includes both direct and indirect instruction. Graves (2000) has advocated a four-part program that includes wide reading, teaching individual words, teaching word strategies, and fostering word consciousness. Stahl's model (1999) sees vocabulary instruction as an ongoing process that involves using different approaches:

1. Include both definitional information and contextual information about each word's meaning.
2. Involve children more actively in word learning.
3. Provide multiple exposures to meaningful information about the word.

(Sedita, 2005, p. 35).

Similarly to Graves's and Stahl's models for vocabulary instruction, the Teacher Reading Academy (TRA) developed materials as part of the No Child Left Behind legislation. The TRA materials identify the following research-based components for effective vocabulary instruction:

1. Encourage wide reading
2. Expose students to high quality oral language
3. Promote word consciousness
4. Teach word meaning directly
5. Teach independent word-learning strategies, including the use of word parts, and efficient use of the dictionary.

(Sedita, 2005, p. 35)

There is some definite overlap among these three approaches to teaching vocabulary, which include both indirect and direct instruction. The CCSS base vocabulary standards on some of the ideas above such as: word learning strategies (Graves and TRA, word consciousness (Graves and TRA), and teaching individual words (Graves, Stahl, and TRA).

How can teachers apply concepts such as word learning strategies, word consciousness, and teaching individual words in the classroom? First of all, students should be associating the new with the known, which will help teach the students word consciousness. This can be done by integrating words through semantic mapping. Semantic mapping allows students to relate the information to other information they already know. "When students store new information by linking it to their existing schema or network of organized information, there is a better chance the new word will be remembered" (Rupley, Logan, & Nicholas, 1999, p. 531; as cited in Bromley, 2007).

Next, students need to know word learning strategies, so they can take what they know and figure out new, unknown words. "Meanings of 60% of multisyllabic words can be inferred by analyzing word parts. Students also need a mindset to alert them to this" (Nagy & Scott, 2000,

p. 533; as cited in Bromley, 2007). Word parts can be taught by learning the meanings of roots, prefixes, and suffixes. Many words in the English language comes from Greek and Latin, so it would be wise to teach the common derivatives (Bromley, 2007, p. 533). Students then can apply the word part meanings to a variety of vocabulary, especially multisyllabic words. This method of breaking down a word by words parts is commonly called, chunking.

Finally, students need to be taught individual words, but it needs to be done so meaningfully. There is a discrepancy between the ability to state the definition of a word and being able to use a word appropriately (Nagy, 1988, p. 533). This means teachers need to instruct vocabulary words in ways that are parallel to normal speaking, reading, and writing. Students need to see that the words they are learning are relevant to speaking, reading, and writing they will be doing.

Reading Comprehension

“Reading comprehension is viewed as the construction of meaning of a written or spoken communication through a reciprocal, holistic, interchange of ideas between the interpreter and the message in a particular communicative context”(McLaughlin, 2012, p. 432). Readers have to be able to determine the meaning of a passage by understanding the words and how they connect to each other. Reading comprehension is a process that is complicated and not understood without defining and knowing the role vocabulary development and instruction play in comprehending what has been read (p. 13 Snow, Burns, and Griffin 1998; as cited in McLaughlin, 2012, p. 436). In-depth vocabulary instruction is crucial in order to increase reading comprehension among students. By knowing words in depth, students can connect ideas much easier. When reading a text, missing five percent of the words makes it almost impossible to

comprehend (Fisher & Frey, 2008, p. 6). See the figure on the next page demonstrating this concept.

Factoid 1

Caffeine is tasteless. A “strong” wepuha is mostly result of the amount of coffee in relation to the amount of water. The longer a bean is sisku, the less caffeine it has. “Arabica” beans have less caffeine than “Robusta” beans. “Arabica” beans have more flavor than “Robusta” beans, which are mostly used in high-volume coffees and instant coffees.

Factoid 2

Wepuha is the way the bean is edusca, not the bean itself. You can use many different balsiks to produce wepuha coffee. You can also use the wepuha roasted coffee to make a larger cup of coffee. In the United States, wepuha roasting results mostly in a darker roast than wepuha roasting in Europe.

(Fisher & Frey, 2008, p. 6)

It may not seem like a lot when you are only missing 5 percent of the words, but it makes a large impact on comprehension. The reader will most likely realize the passage is about coffee, but will lack understanding of what exactly the article is explaining about coffee. Reading comprehension is about making connections with the text, but how can a reader do that if they don't know what the words are?

The Correlation Between Vocabulary Instruction and Reading Comprehension

“Vocabulary knowledge is a strong predictor of reading comprehension (Baker, Simmons, & Kamenui, 1998; Stahl & Fairbanks, 1986; as cited in Fisher, Frey, & Hattie, 2016), and at the 0.67 effect size, strong vocabulary programs are well into the zone of desired effects. Effect sizes can range from -1 to 1 with 1 being the strongest correlation, therefore 0.67 is in fact a strong, positive correlation. Tannebaum, Torgesen, and Wagner (2006) also looked into the correlation between vocabulary knowledge and reading comprehension. They found “...that the correlation between reading comprehension and vocabulary varied between approximately .3 to .8” (Torgeson et al., 1997; as cited in Nation, 2017). This positive correlation range aligns with

the previous correlation of 0.67. Meaning both found a positive, strong correlation between vocabulary knowledge and reading comprehension. The reason the correlation ranged were because of the test format and the dimension of word knowledge (Nation, 2017).

Why is there such a strong, positive correlation between vocabulary knowledge and reading comprehension? There are three interpretations of why the two are associated. The first one being that students learn words and gain larger vocabularies through reading (Nation, 2017). This is also known as wide reading (or reading a lot of words) leads to knowing more vocabulary. Another view states if students have lower vocabulary knowledge they lack the ability to figure out word meanings quickly, which hurts their reading comprehension (Nation, 2017). Because students are unable to figure out or don't know the words, the comprehension is not there. The final possibility is that there are common learning processes for both reading and vocabulary (Nation, 2017). Both processes require making connections. "Vocabulary growth requires the development of mappings between the semantic meaning of a word and its phonological form (McGregor, 2004; as cited in Nation, 2017) and in similar vein, reading depends upon the development of mappings between semantic, phonological, and orthographic [i.e. written words] units of representation (Plaut, Seidenberg, McClelland & Patterson 1996; Perfetti, 2007; as cited in Nation, 2017). For example, if a student struggles to understand new information from context this can affect both reading comprehension and vocabulary knowledge because this is a skill used for both. All three viewpoints have different reasonings for why reading comprehension and vocabulary knowledge are associated, but they all agree that the two are correlated.

An experiment was conducted by Shany and Biemiller in 1995 that included 29 third and fourth grade students, 19 in two experimental groups and ten in a control group (Shany &

Biemiller, 2010). The students who received assisted reading practice were found to have higher gains in reading comprehension. It was also discovered that those students who made higher gains in vocabulary during the intervention period had even larger gains in reading comprehension. Although this experiment was originally to test the assisted reading intervention, it was detected that if a student made gains in vocabulary, it also increased their reading comprehension.

Another study was done on 107 female college students enrolled in a four year undergraduate single-sex institution in the northeastern region of the United States (Binder, et al., 2017). The test was done to measure vocabulary breadth and reading comprehension using the Nelson-Denny Reading Test of Vocabulary, Comprehension, and Reading Rate (Binder, et al., 2017). The test included two sections. The first section measured the participants' vocabulary breadth by finding the number of words in their lexicon by asking them to choose a word's definition from five options. The second section of the Nelson-Denny test began with a one minute assessment of their reading rate, followed by reading comprehension questions. On top of the two main assessments, two additional tests were done. The first was a word families task, in which they were presented with ten root words and instructed to write down as many derivatives from the target word as possible (Binder, et al., 2017). The second other test was the vocabulary depth task (Richard, 2011), in which they were shown six sentences with missing words and they had to identify that word. After the assessments were given, correlations were found.

We found that both vocabulary depth measures were significantly correlated to the vocabulary breadth measure. While the correlation of the word families tasks with breadth was smaller in magnitude, the VDT task was strongly related to breadth. However the two depth measures were not significantly correlated with one another. All three vocabulary scores were correlated with reading comprehension (with moderate to strong correlations), and reading rate (small to moderate correlations) (Binder, et al., 2017, p. 337).

This was consistent with the original hypothesis that both vocabulary breadth and depth were significantly correlated to reading rate and comprehension. This study also explains that by having an understanding of the differing meanings of words in a variety of contexts, it will help the reader to better understand the text and allow them to express their understandings better. (Binder, 2017). This means that vocabulary instruction must be taught in depth and then reading comprehension will increase.

The Summary

There is a literacy gap between the high and low students in the Darlington Community School District. Vocabulary instruction is one component of literacy that teachers are required to teach according to the CCSS. It is important to close gaps and one way to do that is by properly instructing vocabulary, which can in turn lead to an increase in reading comprehension. Reading comprehension can be increased if a student's in-depth vocabulary knowledge is adequate. Therefore, learning vocabulary will greatly help close literacy gaps.

The importance of vocabulary is well known, but not all instruction will lead to an increase in reading comprehension. Vocabulary instruction must be taught in-depth, such as multiple meanings and knowing the reasoning behind the a word's meaning (Fisher & Frey, 2008) . Shallow word meaning will not lead to understanding the word, but deep learning will. Teachers must teach vocabulary using best practices, which means teaching word consciousness, word learning strategies, and teaching individual words. This instruction must follow the gradual release of responsibility: teacher models, guided practice, and student demonstrates knowledge. It is important for teachers to use best practice when it comes to systematic vocabulary instruction.

When vocabulary is taught systematically and in-depth, the reading comprehension will increase as well. “The relationship between reading comprehension and vocabulary is likely to be rich, interactive, and complex” (Nation, 2017). Systematic instruction of vocabulary will lead to an increase reading comprehension, which will lead to closing literacy gaps between high and low students.

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