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ISABELLE FARRINGTON COLLEGE OF EDUCATION

April 24, 2018

This is to certify that the action research study by

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has been found to be complete and satisfactory in all respects,

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CT Literacy Specialist Program have been made.

College of Education

Department of Leadership and Literacy

EDR 692 - Applied Reading and Language Arts Research

Meaningful Vocabulary Instruction: Bridging the Way to Comprehension

Advisor: Dr. Karen C. Waters

ABSTRACT

Beginning with Hart and Risley's study that brought to the forefront a significant gap in word knowledge in students from a lower socioeconomic status, the importance of vocabulary instruction has been emphasized. Extensive research has long acknowledged that vocabulary knowledge plays a crucial role in reading comprehension. With the rigorous expectations of the CCSS, vocabulary has become an essential component of instruction. Consequently, this study, utilizing social constructivism as the theoretical framework, focused on determining the most effective strategies to enhance vocabulary instruction in order to bridge the gap between students who struggle with vocabulary learning and those who do not. We chose to examine the effect of morphology instruction on students whose limited receptive and expressive language prevented them from making significant gains in comprehension. Fifteen students from grades three and four received explicit instruction in the structure of words for eight weeks. Lessons focused on teaching word parts and reinforcing new words containing these word parts with daily review activities promoting active engagement and word consciousness. Results indicated that morphology instruction had an overall positive impact on word knowledge. The variation in students' scores may be attributed to the need for additional strategies to be fostered in vocabulary acquisition, including wide reading, interactive read-alouds, and various word-learning strategies, because one strategy alone is insufficient for increasing students' receptive and expressive vocabulary.

Keywords: morphology, active engagement, vocabulary, word gap, word consciousness, receptive and expressive vocabulary, Tier 2 and Tier 3 vocabulary

Table of Contents

List of Tables

Section 1: Introduction to the Study.....	4
Introduction.....	4
Context.....	5
Rationale.....	7
Problem Statement	8
Solution	9
Research Questions.....	9
Theoretical Framework.....	10
 Section 2: Literature Review.....	 11
Vocabulary: The Pillar of Literacy.....	11
The Most Current Research on Vocabulary.....	12
Vocabulary Principles.....	16
Rich and Varied Language Experiences.....	16
Explicit Teaching of Individual Words.....	17
Fostering Word Consciousness.....	18
Tiered System of Vocabulary.....	19
Research-Based Instructional Strategies.....	20
Conclusion.....	23
 Section 3: Methodology.....	 24
Introduction.....	24

Participants.....	24
Materials.....	25
Procedure.....	26
Section 4: Data Collection and Analysis.....	29
Process for Generating, Gathering, and Recording Data.....	29
Presentation and Analysis of the Findings.....	29
Section 5: Discussion, Recommendations, Conclusion.....	33
Overview.....	33
Summary of the Findings.....	33
Findings and Interpretations for Research Question 1.....	33
Findings and Interpretations for Research Question 2.....	34
Findings and Interpretations for Research Question 3.....	35
Recommendations for Action and Further Study.....	35
Conclusion.....	36
References.....	37
Overall Results (Tables).....	41

Section 1: Introduction of the Study

Introduction

Extensive research has long affirmed that vocabulary knowledge plays a crucial role in reading comprehension. According to Perfetti and Adolf (2012), it is the quality of the reader's word knowledge for the words in the text that is a critical component of comprehension. The importance of word knowledge is compounded by the Common Core State Standards (CCSS) incorporating expectations in multiple domains for students to acquire a rich and varied vocabulary. These rigorous expectations increase throughout the grade levels, which requires teachers to be diligent and precise in planning vocabulary instruction in order to be effective in meeting these expectations.

Without a concerted effort to teach essential vocabulary, "the achievement gap between students with limited vocabularies and their peers will continue to expand" (David, 2010, p. 85). A study by Hart and Risley, conducted in 1995, was one of the first to link number of vocabulary words known to socioeconomic status. Students from middle and upper class families come to school with a large vocabulary, while students from a lower socioeconomic status have very limited exposure to words and their meanings. Without explicit vocabulary instruction, this gap will become larger over time, making it even more difficult for teachers to advance students' word knowledge.

Thus, the problem is two-fold. We are aware of the achievement gap in word knowledge due to the differences in socioeconomic levels, but is this the only problem? According to Cobb & Blachowicz (2014), vocabulary instruction is minimal in most classrooms. (p. 13) "Not only is little time dedicated to vocabulary learning, but also the few instructional opportunities tend to

be brief and shallow rather than the focus of robust opportunities to engage deeply with word meanings” (Carlisle, Kelcey, & Berebitsky, 2013 et al., as cited by Rimbey, McKeown, Beck, & Sandora, 2016). Students need opportunities to read and practice words in meaningful ways. Besides being taught word meanings, students also need word learning strategies for when they are reading independently. Although teaching vocabulary can seem like a simple task that is beneficial to students, it has proven to be frustrating to address. Studies have shown that approaches to vocabulary instruction are very haphazard (Sparks, 2013).

When we consider what researchers have found out about the vocabulary gap between students from professional families and those from families with a lower socioeconomic status, we can understand the importance of making sure educators have the knowledge of how to best teach vocabulary or provide instances for incidental learning of words. This poses a challenge to many teachers as most devote little time to explicitly teach vocabulary due to the extensive amount of material they need to cover (David, 2010). “Although research-based approaches for vocabulary instruction are available, attention to learning word meanings for many students tends to be superficial and brief” (Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Scott, Jamieson-Noel, & Asselin, 2003, as cited by Kucan, 2012). Moreover, identifying essential words to teach is another challenge, given the large gap in vocabulary size between students with poorly educated or non-English speaking parents and their more economically advantaged peers. Consequently, sufficient time needs to be devoted to meaningful vocabulary study which needs to be thoughtfully integrated throughout daily instruction.

Context

Vocabulary instruction has received increased interest from teachers and literacy researchers ever since the National Reading Panel in 2000 identified it as one of the five essential components of reading instruction. A large amount of research indicates the critical role vocabulary knowledge plays in reading comprehension. In addition, “vocabulary knowledge is emphasized throughout the highly influential Common Core State Standards, with the word *vocabulary* occurring more than 150 times in the document” (Manyak, Von Gunten, Autenrich, et al., 2014). Considering these factors, it is evident that vocabulary knowledge is a key component in the academic success of students in all grades beginning as early as kindergarten.

According to educational research by Hart and Risley (1995), children enter school with significant differences in vocabulary knowledge due to economics. *In their book, Meaningful Differences in the Everyday Experiences of Young American Children* (1995), Hart and Risley state, “by age 3 the children in professional families would have heard more than 30 million words, the children in working class families 20 million, and the children in welfare families 10 million”(p. 132).

This study examined how many words were spoken to children of families of varying socioeconomic status. Their findings showed that the parents who spoke to their children more, asked questions and used a variety of vocabulary provided their children with a more rich language experience than children from families from a lower socioeconomic status.

In addition, the types of reinforcement children received was examined. The number of positive and negative statements was tallied for each socioeconomic group. The professional parents were found to have used positive feedback much more often than the other groups. The lowest socioeconomic group used more than twice as many negative statements towards their

children than the professional parents. Children from professional families may have heard 450 different words and approximately 210 questions in a 3 hour observation, while a child from a low-income family heard less than 200 different words and 38 questions in the same amount of time. The results of this study indicate that vocabulary development in the early years of a child's life is extremely important to his or her readiness and future success in school.

Follow-up studies by Hart and Risley of those same children at age nine showed that there was a very close link between the academic success of a child and the number of words the child's parents spoke to the child up to age three. Consequently, we can understand the importance of an emphasis on explicit vocabulary instruction across the curriculum beginning in kindergarten.

Rationale

According to Sparks (2013), vocabulary is a deceptively simple literacy skill that researchers and educators agree is crucial to students' academic success. "Research shows that there is a strong relationship between the extent of a students' vocabulary knowledge and reading comprehension level. This relationship grows stronger as students progress through school" (Snow, Porche, Tabors, & Harris, 2007 as cited by David, 2010). Because this area of literacy is so important to student success, researchers have studied a variety of strategies to help students expand their vocabulary knowledge. Research shows, however, that one strategy is not enough to do the job. Different types of words require different approaches and different students require different methods of learning new words. Consequently, teachers need to be skilled in choosing among many strategies to help the diverse learners in their classrooms. In order for this to

happen, teachers need to be supported in their efforts to develop effective approaches to enhance word-meaning instruction.

Problem

Studies show that many children, especially those from low-income and non-English speaking families, face a large deficit in English vocabulary knowledge upon entrance to and throughout the elementary years (Hart & Risley, 1995). The consensus of researchers and educators today is that students who enter school with limited vocabularies struggle with reading, and therefore need explicit vocabulary instruction (David, 2010). This problem is compounded by the fact that most teachers devote little time to this instruction due to the amount of material they are required to teach (Nelson, Dole, Hosp & Hosp, 2015).

The researchers went on to say that teachers spend less than 5% of their language arts block on vocabulary instruction. Additionally, most of this time was spent teaching individual word meanings with less time spent on word learning strategies. Although research-based approaches for teaching vocabulary are available, many are very unsystematic and promote superficial learning of new words (Kucan, 2012). Teachers also face the challenge of choosing which words are the most important to focus on, considering the vocabulary gap between students with poorly educated or non-English speaking parents and their peers who are from a higher socioeconomic status.

Furthermore, the Common Core State Standards (NGA & CCSSO, 2010) for elementary school incorporate expectations in all content areas, not only reading and language arts. Four of the English Language Arts (ELA) standards, which represent 12.5% of these standards, focus explicitly on vocabulary. Thus, vocabulary “is an essential gateway for achieving the ELA

standards” (Fisher & Frey, 2014, p. 594). Students in the elementary grades struggle to comprehend complex texts required of them in content areas as well as on district and state assessments. Thus, teachers must teach their students multiple, effective strategies in order to understand these texts.

Solution

In order to increase word knowledge, teachers need to teach vocabulary well in every area of the curriculum. This is the key to developing engaged, successful readers (Bromley, 2007). For this reason, professional learning opportunities need to be provided so that teachers can support effective vocabulary approaches that will actively engage students with words in deep and meaningful ways. “Vocabulary instruction should be multifaceted, incorporating the teaching of individual words, the development of word learning strategies, and the fostering of word consciousness”(Baumann, Ware, & Edwards, 2007, Graves, 2006 as cited by Manyak, Von Gunten et al., 2014). In order to support this learning, sufficient time needs to be devoted to meaningful vocabulary study, which needs to be thoughtfully integrated throughout the curriculum. In doing so, teachers can begin to bridge the gap between their advantaged and disadvantaged students.

Research Questions:

1. What are effective strategies for teaching vocabulary to increase comprehension?
2. What type of professional learning activities are most helpful in improving vocabulary instruction?
3. How can teachers begin to bridge the gap between students who struggle with vocabulary learning and those who don't?

Theoretical Framework

The constructivist theory is built on the premise that “learning is a building process by active learners interacting with the physical and social world” (Daloglu, Baturay, & Yildirim, 2009, p. 188). Constructivism suggests that “knowledge is constructed as individuals make meaning of their experiences and knowledge has meaning only in context” (Lin, 2015, p.639). Vocabulary instruction is proven to be more effective when learners are involved in the construction of meaning through interaction with words, rather than simply memorizing definitions. Consequently, meaningful, engaging activities for word learning where authentic context is provided is key to learning. Teachers should not only be concerned with students’ understanding of the meaning of words, but also the understanding of the contexts in which words are used (Lin, 2015, p. 640). By adopting this theory, educators can greatly improve their students’ acquisition of vocabulary.

Section 2: Review of Literature

Vocabulary: The Pillar of Literacy

Researchers have long established the importance of word learning to reading comprehension. “One of the oldest findings in educational research is the strong relationship between vocabulary knowledge and reading comprehension” (Sedita, 2005, p.33). This relationship grows stronger as students progress through school. Studies show that students who have large vocabularies can easily comprehend what they read. These students continue to increase their vocabularies and knowledge through wide reading. On the other hand, students with limited vocabularies, especially English Learners, struggle to read and comprehend as a result of limited word knowledge, therefore widening the vocabulary gap (Chall, Jacobs, & Baldwin, 1990; Cunningham & Stanovich, 1997).

The reality of this gap illuminates “the reciprocal relationship between vocabulary and reading such that vocabulary knowledge supports reading and reading supports vocabulary development” (Stanovich, 1986 as cited by Wright, 2013, p. 359). Students with rich vocabularies are most often successful readers because their word knowledge supports this success. Consequently, extensive reading by these readers promotes vocabulary development. In contrast, students with limited vocabulary knowledge are likely to struggle as readers, therefore perpetuating the word gap.

With the increased rigor of reading expected by the CCSS and with evidence that students have difficulty with academic language, the new standards have the potential to further widen the literacy gap (Larson, Dixon, & Townsend, 2013). Standards related to vocabulary are seen not only in the domains for English Language Arts, but in all content areas. Although only

stated explicitly in four of the 32 ELA standards (12%), vocabulary expectations also appear implicitly in the standards of foundational skills, fluency, and writing (Fisher & Frey, 2014). For example, in grades 3 -5, fluency standards call for using context to confirm or self-correct, and foundational standards include the study of morphology, both of which are driven by meaning. Writing standards also ask students to use transitional words and phrases as well as definition of terms in their writing (NGA & CCSSO, 2010). This demonstrates that “vocabulary is not an isolated skill; readers, writers, speakers, and listeners marshal what they know about words and phrases to understand and convey coherent messages” (Fisher & Frey, 2014, p. 595). From this we can conclude that vocabulary is an essential gateway for achieving the ELA standards as well as for bridging the gap between students with extensive word knowledge and those whose word knowledge is limited.

The Most Current Research on Vocabulary

When reviewing the literature, much of it documented the existence of a “vocabulary gap” between students of differing socioeconomic levels. This gap may be one of the most persistent and frustrating problems that educators face. A landmark study by Hart and Risley (1995), brought to the public’s attention the finding that the amount of language young children hear directly impacts their vocabulary size. This study was one of the first to explicitly link vocabulary size to socioeconomic status. Since this study, researchers have concluded that students must close this gap in order to be successful academically and deal with rigorous content (Sparks, 2013).

Hart and Risley (1995) recorded all interactions between caregivers and children in different socioeconomic classes for one hour per month. These observations continued from the

time the children were seven months old to the age of three. Conclusions revealed that the variation in children's IQs and language abilities was relative to the amount of language that parents used with their children, that children's academic successes at ages nine and ten can be attributable to the amount of talk that they hear from birth to age three, and parents of advanced children talk significantly more to their children than parents of children who are not as advanced. Follow-up studies, by Hart and Risley, of those same children at age nine showed that there was a very close link between the academic success of a child and the number of words the child's parents spoke to the child to age three.

However, more recently the research about the 30 million word gap is not without its detractors. Researchers Dudley-Marling and Lucas (2009) refuted Hart and Risley's (1995) claims through strategic analysis of the study's research design, participants, and inherent biases, which reflected assumptions about an economically-poor population that was contrasted to middle and upper-class children. Their concern with Hart and Risley's (1995) findings focused on the fact that Hart and Risley's "strong claims about language deficiencies in poor children and their families are unwarranted" (Dudley-Marling & Lucas, 2009, p.362), thus blaming the victims of poverty for their academic and economic struggles. Families and children living in poverty cannot be blamed for low academic performance due to deficiencies in language and culture. Rather, the remedy for failure among children living in poverty is a school curriculum that respects their background knowledge and experience and builds on the linguistic and cultural resources these students bring to school.

Contributing to the disagreement about Hart and Risley's (1995) biased claims was Hirsch-Pasek (2015), who challenged the importance of the *quantity* of words a child hears and

emphasized the *quality* of language in each child's home. Hirsh-Pasek and colleagues selected 60 low-income 3-year-olds with varying degrees of language proficiency from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development, a long-term, wide-ranging study of 1,300 children from birth to age 15. Researchers reviewed video of the selected children at age two in play sessions with their parents, and took notes on their interactions while playing and reading together. Conclusions found that the quality of communication accounted for 27 percent of the variation in expressive language skills one year later. The results did not significantly change when the researchers controlled for the parents' educational level. Hirsh-Pasek (2015) concluded that with the right scaffolds to promote quality conversations, low-income toddlers can and do become successful language learners.

Thus, the additional findings from the research of Hirsch-Pasek (2015) and Dudley-Marley and Lucas (2009), that the quality of talk is more important than the quantity of talk, that the number of positive social and emotional children and parent interactions is more meaningful than the total number of articulated words, very nearly discredits the early findings of Hart and Risley (2005). The recent research has cast new light on the word gap, highlighting the importance of how adults interact with infants and young children and how this impacts their early language development. Although Hart and Risley (1995) brought this word gap to the public's attention, the new findings emphasize the importance of parent-child conversations and exposure to rich language over the number of words being spoken and the idea of poor versus wealthy families. Dudley-Marling & Lucas (2009) argued that socioeconomic status should not be a stigma, but rather something taken into consideration when teaching students, in order to provide what they need to be successful.

Another probable explanation for the vocabulary gap is that once in school, many low-income and low-achieving children who struggle with reading do not engage in the independent and extended reading that is known to benefit vocabulary growth” (Baumann, Kame’enui, & Ash et al., 2003). Students may have reading difficulties that discourage them from reading or may not have books readily available to them so that they can read widely. Consequently, students need explicit vocabulary instruction, which has demonstrated positive effects (Blachowicz & Fisher, 2004). Although research-based vocabulary instruction approaches are available, opportunities for word learning are mostly superficial and brief (Blachowicz, et al., 2006; Scott, et al., 2003 as cited by Kucan, 2012).

Nelson, Dole, Hosp and Hosp (2015) examined the vocabulary instruction of primary grade teachers (K-3) in low-income schools. A total of 337 observations were conducted over a period of three years that analyzed the strategies and implementation procedures that teachers used. Results indicated that only 60 % of the teachers provided direct and explicit vocabulary instruction on a given day, and that overall, the teachers who did teach vocabulary spent less than 5 % of their language arts block on vocabulary instruction. The majority of the time was spent on teaching individual word meanings with less time spent on word-learning strategies (Nelson, et al., 2015).

In a study to better understand the implementation of oral vocabulary instruction at the start of formal schooling, Wright (2012) found that teachers provided the greatest number of vocabulary episodes and discussed the meanings of words, during the times specifically earmarked for content area instruction of science and social studies. The study focused on 55 kindergarten classrooms with students from urban and suburban communities in which students

were observed for three hours a day for four days, totaling 660 hours altogether. During this time, teacher talk was recorded and notes were taken each time a teacher discussed the meaning of a word with students. Results, on average, concluded that teachers devoted less than 11 minutes per day to read-alouds, only about 2 minutes per day to science instruction, and one minute to social studies instruction when the subjects were taught (Wright, 2012).

Additionally, many kindergarten classrooms did not provide science or social studies instruction. Therefore, the content areas, which would most likely support vocabulary instruction were least likely to be taught in kindergarten. Consequently, vocabulary instruction consisted of word explanations during teachable moments throughout the day, with no evidence of more formal vocabulary instruction (Wright, 2012).

Vocabulary Principles

The National Reading Panel (2000) concluded that there is no single best research-based method for developing vocabulary and closing the gap. From its analysis, the panel recommended using a variety of indirect and direct methods of vocabulary instruction. Graves (2000) developed a four part framework that includes providing rich and varied language experiences, teaching individual words, teaching word-learning strategies, and developing word consciousness.

Rich and Varied Language Experiences

Providing rich and varied language experiences includes read-alouds, independent reading, and oral discussions. According to research, students' vocabulary increases when they are exposed to new words through these language experiences (Graves, 2006). In order to be

exposed to rich vocabulary that includes academic vocabulary, students need to spend time reading books and having books read to them. Combining read-alouds with discussion about the text, and promoting independent reading experiences outside of school hours are both effective strategies for expanding children's vocabularies (Cunningham, 2010). Thus, it is essential that students be provided time to engage in oral language activities such as discussing the book in class after the read aloud and discussing independent reading with classmates in small groups.

Explicit Teaching of Individual Words

Teaching individual words explicitly through various reading and writing activities contributes to students' core of receptive and expressive language (Graves, 2006; National Reading Panel, 2006), and is needed for students to grapple content-specific texts. Four strategies for teaching individual words explicitly include providing student-friendly definitions, using words in context, providing multiple exposures, and offering opportunities for active involvement. (Hansen & Padua, 2011; Rimbey, McKeown, Beck & Sandora, 2016; Manyak, Von Gunten, et al., 2014).

Teaching word-learning strategies is essential for vocabulary acquisition to enable students to figure out the meaning of words when reading independently, thereby increasing word knowledge (Graves, Schneider, & Ringstaff, 2017). Using context clues, knowing how to use word part knowledge, and using a dictionary accurately are a few effective word-learning strategies (Sedita, 2005; Manyak, Von Gunten, et al., 2014; Fisher & Frey, 2014). Templeton (2011) stated that students' knowledge of morphology, the study of word structure, can play a critical role in vocabulary development in which students have the potential to unlock layers of meaning for many thousands of words through the use of morphemic structure. Bromley (2007)

added that the meanings of 60% of multisyllabic words can be inferred through the study of prefixes, suffixes, and roots. Thus, the power of the potential of morphemic analysis is that the construct cannot only be used as a strategy for decoding, but the study of word parts can be used as a strategy for unlocking the meaning of new words independently.

Fostering Word Consciousness

Fostering word consciousness can be thought of as an awareness of and interest in words and their meanings (Graves, 2006). Word conscious behaviors such as noticing new words, showing an interest in new words, and learning these words promote vocabulary development. Modeling this interest and excitement in new words through word play and expressively using words such as idioms and figurative language is essential to encouraging students to be word conscious, thus encouraging them to become lifelong learners of new words (Lehr, et al., 2004; Sedita, 2005). Picture Word Walls and Graffiti Walls also support students' ownership of words and create spontaneous discussion about words (Gallagher & Anderson, 2016).

The Multi-Faceted, Comprehensive Vocabulary Instruction Program (MCVIP) Project, which incorporated Grave's vocabulary framework, was a three-year research study that focused on a comprehensive vocabulary program in fourth and fifth grade classrooms (Manyak, Von Gunten, et al., 2014). Findings showed that students achieved higher than expected growth on standardized vocabulary tests in general and very large gains on learning of specifically taught words over the three year study (Graves et al., 2014).

Tiered System of Vocabulary

Although teaching words in context and developing students' ability to learn word meaning from context is integral to effective vocabulary instruction, choosing words to focus on in the context of complex text can be a struggle for teachers (Liben, 2013; Fisher & Frey, 2014). Beck and McKeown (1985) created a three-tiered system for selecting target vocabulary words to teach, thus making it apparent that not all words have equal importance in language instruction. A word's frequency of use, complexity, and meaning determines the tier into which it is placed.

Tier one consists of the most basic words. These words rarely require direct instruction and typically do not have multiple meanings. Sight words, nouns, verbs, adjectives, and early reading words fall into this category. Additionally, there about eight thousand word families in English included in tier one words. These are words that typically appear in oral conversations, therefore children are exposed to them at a high frequency from a very early age (Beck, McKeown, & Kucan, 2013).

Tier two words are words that characterize written and especially academic text, but are not so common in everyday conversation (Beck, McKeown, and Kucan, 2008). The CCSS refer to these words as academic vocabulary. Tier two words require our intentional instruction because they appear in many texts and are crucial to comprehension. The challenge to teachers is to recognize tier two words in student text, determine which ones need to be taught, and which words deserve more time and effort for deeper understanding.

Tier three words consist of low-frequency words that occur in specific domains and are key to understanding a new concept within the text. These words are far more common in informational passages than in literature. Tier three words are often explicitly defined by and

repeatedly used in text. In addition, because they are the words that contain the ideas necessary to a new topic, teachers often define and reinforce tier three words before and after students encounter them in a text. “Therefore, students’ acquisition of tier three words is generally encouraged by teachers as they know that the student has likely not encountered these terms before” (Liben, 2013, p. 2).

Research-Based Instructional Strategies

“Providing effective vocabulary instruction is not a simple or straightforward undertaking but a complex practice” (Rimbey, McKeown, Beck, & Sandora, 2016, p.70). Word learning occurs over time and requires repeated exposure to words across multiple contexts to acquire deep understanding. If teachers want their students to learn words to the point of ownership, instruction must be aligned with how students learn new words (Nagy, 2009). Because there is no one best method for teaching vocabulary (National Reading Panel, 2000; Beck, McKeown, & Kucan, 2013), various research-based strategies to broaden students’ vocabulary including graphic organizers, visuals, linking the new to the known, teaching word parts and using context clues to determine word meaning must be utilized.

One of the most studied methods for teaching vocabulary to young children is through read-alouds with explicit instruction of purposefully chosen words. *A Repeated Interactive Read Aloud* (Biemiller & Boote, 2006; Fisher & Frey, 2014) can be used to demonstrate and engage students in analytic talk and reasoning about vocabulary. The teacher reads a section of text and inserts quick, preplanned explanations of vocabulary words, while students listen. After reading, the teacher poses questions crafted to allow students to think about and use the new vocabulary explained in the text. The teacher will use explanation of word meanings, demonstration of their

own thinking, and carefully constructed “why?” questions to support vocabulary as well as comprehension.

Introducing word meanings through kid-friendly definitions is an effective, widely used strategy to promote word learning (Manyak et al., 2014; Graves et al., 2013; Cobb & Blachowicz, 2014). Beck, McKeown, and Kucan (2013) indicated that two basic principles should be followed: capture the essence of the word and how it is typically used and explain the meaning in everyday language. The MCVIP Project developed a model for introducing new words, which began with presenting the word in context, then providing a kid-friendly definition. This is followed by providing multiple examples of use, prompting student use, providing a picture to discuss, and a quick interactive activity such as asking questions using the vocabulary word (Manyak et al., 2017).

Semantic Maps are maps, or webs of words, created to visually display the meaning-based connections between a word or phrase and a set of related words or concepts. Semantic maps help students, especially struggling students and those with disabilities, to identify, understand, and recall the meaning of words they read in the text (Cobb & Blachowicz, 2014). The Frayer Model (Frayer et al., 1969), or word square, is a form of a semantic map. It is a graphic organizer used for word analysis and vocabulary building. While Frayer Models have typically been used to introduce new terminology, Keeley (2011) suggests they can be used to determine students’ prior knowledge about a concept or term before planning a lesson. This four-square model prompts students to think about and describe the meaning of a word or concept by creating a definition of the word, describing its essential characteristics, providing examples of the idea, and including non-examples of the idea.

Vocabulary Framing (Cobb & Blachowicz, 2014) is a strategy in which students can organize vocabulary by creating semantically meaningful graphics, or frames, supported by textual evidence. These frames require students to use prior knowledge and comprehension and promote rich discussions where students use their word knowledge. One type of frame is a Vocab-O -Gram (Blachowicz, 1986; Blachowicz & Fisher, 2010), which is a classification chart that shows the categories of story structure, including: setting, characters, problems/goals, actions, and resolution. Students organize key vocabulary or phrases from a selected text into the *Vocab-O-Gram*'s categories. In a classroom study using Vocab-o Gram frames, fourth and fifth graders used twice as many vocabulary words in their unprompted summary writing when using frames as did control students reading the same selections (Blachowicz, Bates, & Cieply, 2013).

A *Concept Sort* is a vocabulary and comprehension strategy used to familiarize students with the vocabulary of a new topic or book. (Templeton, Bear, Invernizzi, & Johnston, 2010). Teachers provide students with a list of vocabulary or concepts from reading material. Students place words into different categories based on each word's meaning. Categories can be defined by the teacher or by the students. When used before reading, concept sorts provide an opportunity for a teacher to see what his or her students already know about the given content. When used after reading, teachers can assess their students' understanding of the concepts presented. Word sorts can also be used to further awareness of morphology (Templeton et al., 2010 as cited by Larson et al., 3013).

Conclusion

From the humble beginnings of Hart and Risley (1995) which confirmed the 30,000,000 word gap among children of differing socioeconomic status, to the more recent conclusions of

Dudley-Marling and Lucas, 2009 and Hirsch-Pasek, 2015, which contradicted Hart and Risley's original findings, the construct of vocabulary is such that the quality of conversations with young children is essential to word learning and consequently academic success. Because of the strong relationship between vocabulary knowledge and reading comprehension, teachers need to engage the best kinds of vocabulary instruction to maximize student learning in order to begin bridging the word gap (Sedita, 2005; Wright, 2013; Bromley, 2007; Manyak et al., 2014).

Regardless of a child's word knowledge when entering school, teachers are responsible for providing meaningful vocabulary instruction through the incorporation of practical principles for enhancing word-meaning instruction (Graves, 2000) and through the use of research based strategies. Optimal word meaning instruction involves both the use of these strategies as well as applying pragmatic principles to ensure participation, clarity, and accountability (Manyak et al., 2014). Studies and research projects conducted since vocabulary was identified as a crucial component of reading instruction (NRP, 2000) indicate the necessity of explicit vocabulary instruction beginning as early as kindergarten. Thus, vocabulary instruction from the start of formal schooling needs to cover many words that have been carefully chosen to reduce vocabulary gaps and improve students' ability to apply their knowledge of words to increase comprehension. With the rigorous demands of the CCSS and the existing word gap, can we afford to delay quality vocabulary instruction for students?

Section 3: Methodology

Introduction

The action research project served two main purposes. The initial purpose was to examine the importance of explicit vocabulary instruction in the elementary grades and to discover the extent to which teaching vocabulary benefits students. The secondary purpose was to determine the most effective instructional strategies, with the intent of collaborating with third and fourth grade teachers to increase their knowledge of best practices in vocabulary instruction. Selected strategies optimized teachers' practice in regards to vocabulary and ensured that instruction was more purposeful and effective. The goal was to accelerate the word knowledge, and ultimately comprehension, of students participating in the project, as well as all students exposed to this instruction.

Participants

Selected participants attended a small, suburban K-5 elementary school in New England with a population of 376 students. A total of 15 students from grades three and four were chosen through convenience sampling for the research project, based on scores below benchmark on the district-wide, criterion referenced literacy assessment. Ninety-four percent of the students were Caucasian and 6% Hispanic, with 40% categorized as English Learners (ELs).

Students selected for the study were identified as reading one to two years below grade level with deficiencies in vocabulary as indicated by the district-wide i-Ready benchmark assessment administered in September of the 2017-2018 school year. I-Ready is a web-based adaptive, diagnostic test. It is a criterion based assessment that measures proficiency in the

domains of phonemic awareness, phonics, vocabulary, and comprehension of literature and informational text. The vocabulary section of the assessment tests students' knowledge of academic and domain specific vocabulary, word relationships, word-learning strategies, use of reference materials, and knowledge of affixes and root words. Participants chosen were identified as below grade level in reading overall, qualifying them for Tier II and Tier III pull out services, which were provided for 30 minutes, three to five times per week.

Materials

The CORE Vocabulary Screening Test (CORE, 2008), a criterion-referenced assessment which measures students ability to identify the meaning of grade level words read silently, was administered as a pre and post assessment. The assessment is a true measure of vocabulary knowledge, in that there are no context clues provided to assist the student in deriving meaning from the words and no need to comprehend text. This task, which requires students to read a word and select a synonym when given three additional word choices, includes words that may typically be found in both literature and informational text.

The test measure was administered in a small group setting, where students completed 30 items independently. Proficient vocabulary knowledge was indicated with a score of 75% or greater, and a score below 50% indicated a significant lack of word knowledge. Scores between 50% and 74% indicated a student may have some difficulty understanding grade level material due to insufficient vocabulary.

In addition to the results of the CORE, I analyzed results from i-Ready diagnostic online assessment, which is a criterion referenced assessment that tracks growth in the domain of vocabulary as well as providing an overall comprehension score. I used beginning and mid-year

scores to track students' growth in vocabulary by comparing scale scores. The vocabulary portion of the assessment measures students' ability to use context clues, knowledge of morphology, word relationship knowledge, ability to use references, and knowledge of grade appropriate vocabulary.

Procedure

After analyzing vocabulary assessments, I met with grade three and four teachers whose students were selected for the study to discuss and review strategies for implementation. Over the duration of eight weeks, I provided small group intervention to third and fourth grade Tier II students three days a week for 30 minutes, while Tier III students received daily instruction for 30 minute sessions. Additionally, teachers implemented identical strategies through whole group and small group lessons in their classrooms.

Instruction with grade 3 students focused on morphology, beginning with teaching word learning strategies through the identification and understanding of prefixes. As teachers and students became familiar with the procedures of prefix work, suffixes would be introduced. Classroom teachers and I created a Prefix/Word Wall (PREL, 2007) to display work with two prefixes with similar meanings per week. Initially, instructors modeled and then provided guided practice, eventually having small groups of students create new words with base words and different prefixes. Words were posted on the word wall and recorded in Vocabulary Journals. Students were encouraged to add words to the word wall from their independent reading in order to foster student engagement (Manyak et al., 2014).

Thumbs Up/Down (adapted from Beck, McKeown, & Kucan, 2002; PREL, 2007), an activity where the teacher posed a question or made a statement about one of the words from the

word wall, was implemented to reinforce the meaning of new words. For example, if a new word was *submerge*, the teacher asked, *Is it good for a computer to be submerged in water?* The same process was done with other select words, promoting active involvement in word acquisition.

The *Two-In-One* review strategy (Blachowicz, 1986) was incorporated to further reinforce the word wall words. Students would write a sentence in their vocabulary journals using two of the new words, then students would share the sentence they created, while the other students evaluated the usage of the sentence. The strategy was introduced in whole group and practiced during small group instruction so that teachers could more easily monitor student work.

Fourth grade instruction centered on morphology, which included the learning of prefixes, suffixes, and Greek and Latin roots during daily lessons of 10 to 15 minutes, which was enough to “support students in constructing rich representations of word meanings” (Kucan, 2012, p. 365). Students were given vocabulary journals to record new words and meanings of affixes and roots. In order to reinforce the meanings of the new vocabulary, an adaptation of the Frayer Model (Frayer et al. 1969) was used to deepen students’ word knowledge of selected words that were relevant to curriculum or that were chosen by students as words of interest. With the teacher’s assistance, students composed a student-friendly definition, then used the word in a sentence, drew a visual to represent the word, and included synonyms for the word. As affixes and roots were introduced, students added words found in their daily reading to a class word wall to promote word consciousness (Graves, 2006). When several affixes were introduced, students were given prefix, suffix, and base word flashcards to create words with a partner and create sentences, which they would record in their journals and share with the class.

At the end of the study, results from the CORE Vocabulary Screening Test and i-Ready mid-year diagnostic revealed the extent to which the instructional methods implemented by teachers increased the word learning ability of students involved in the action research project.

Section 4: Data Collection and Analysis

Process for Generating, Gathering, and Recording Data

In order to evaluate the vocabulary knowledge of third and fourth grade students at the beginning of the project, I analyzed the results of the iReady online benchmark assessment, a criterion referenced test, administered at the beginning of the year. The vocabulary portion of the assessment was specifically examined to determine which students were in need of explicit vocabulary instruction and whose low vocabulary scores affected their overall comprehension score.

In addition to using the benchmark scores, I administered the CORE Vocabulary Screening, a criterion referenced assessment, to identify students whose vocabulary knowledge was significantly lower than that of their peers according to set benchmarks (see table 1). The task in the screening involved reading a word and choosing which of the three answer choices meant approximately the same as the initial word.

Presentation and Analysis of the Findings

Data from the iReady online assessment (see Table 2) administered in September and January indicate the increase in vocabulary knowledge of five fourth grade students from pre to post testing. All students (n=5) tested below grade level on the pretest. Scale scores ranged from 399 to 507 which spans from kindergarten to grade 3 (see Table 3), with a mean score of 469. Eighty percent (n=4) of students scored above the mean, and 20 % (n=1) scored below the mean. At the end of the intervention period the same five students were reassessed. The range of scale scores at post testing was 465 to 532 which spans from grade 1 to grade 3 (see Table 3), with a

mean score of 510. Eighty percent (n=4) of students scored above the posttest mean, while 20% (n=1) scored below the mean. From pre to post testing, analysis of mean scores revealed a 41 point increase. While all students (n=5) in this study remained below grade level expectations after intervention, they all advanced their vocabulary knowledge one or more grade levels according to iReady Reading Placement Vocabulary Chart (see Table 3), with the exception of one student. This student, an English Learner (EL), increased his scale score, but did not increase a level from pre to posttest. Students' increased scores indicate that explicit vocabulary instruction focused on morphology, specifically affixes and roots, had a positive effect on vocabulary knowledge.

Data from the iReady online assessment (see Table 4) administered in September and January indicate the increase in vocabulary knowledge of ten third grade students from pre to post testing. All students in the project (n=10) tested below grade level on the pretest. Scale scores ranged from 428 to 508 which spans from grade 1 to grade 2 (see Table 3), with a mean score of 468. Sixty percent (n=6) of students scored above the mean score, and 40% (n=4) scored below the mean score. At the end of the intervention period the same ten students were reassessed. Scale scores on the posttest ranged from 446 to 563 which span from grade 1 to grade 3 (see table 3), with a mean score of 508. Fifty percent (n=5) of students scored above the mean, while 50% (n=5) of students scored below the mean. From pre to post testing, analysis of mean scores revealed a 40 point increase in scale scores. According to the iReady Reading Placement Vocabulary Chart (see Table 3), two students attained grade level expectations. Three students, who are English learners, did not increase to the next grade level expectation from pre to post testing, but did make gains within the current grade level. While all students (n=10) began this

study below grade level expectations, they all improved their vocabulary knowledge to varying degrees. The data being inconsistent between students on the project speaks to the need for a variety of ways to improve vocabulary besides the study of morphology, specifically prefixes and suffixes. In addition, I can conclude that English Learners may need more intensive vocabulary instruction.

The CORE Vocabulary Screening, administered to measure how well students understand the meaning of grade level words, indicated growth in vocabulary knowledge in five fourth grade students from pre to post testing (see Table 5). Scores on the pretest ranged from 13 to 22, with a mean score of 19.4. Eighty percent (n=4) of students achieved a strategic performance level on the pretest, which indicated some difficulty understanding grade-level material due to insufficient vocabulary knowledge. Twenty percent (n=1) of students scored at an intensive level, which indicated significant difficulty with understanding grade level text due to insufficient vocabulary knowledge. At the end of the intervention period, the same five students were reassessed. Posttest scores ranged from 17 to 27, with a mean score of 24.2. Analysis of mean scores from pre to post testing revealed a 4 point increase. Eighty percent (n=4) of students attained benchmark performance level for grade 4, while 20% (n=1) of students increased from intensive to strategic performance level as indicated on the scoring chart (see table 1). Although significant gains were not shown by all students from pre to post testing, most students were able to attain benchmark for their grade level, indicating that morphology instruction had a positive effect on enhancing students' word knowledge.

The CORE Vocabulary Screening showed increases in vocabulary knowledge in ten third grade students from pre to post testing as indicated in Table 6. All students (n=10) in the study

achieved a strategic performance level on the pretest, which indicated a student may be having some difficulty understanding grade-level material because of insufficient vocabulary knowledge. Students' scores ranged from 18 to 22, with a mean score of 20.7. Sixty percent (n=6) of students scored above the mean, while 40% (n=4) of students scored below the mean. At the end of the intervention period, the same ten students were reassessed. Students' scores on the posttest ranged from 22 to 29, with a mean score of 25.2. Forty percent (n=4) of students scored above the mean, and 60% (n=6) scored below the mean. Analysis of mean scores from pre to post testing revealed an increase of 4.5 points. Ninety percent (n=9) of students attained benchmark performance level for grade 3, while 10% of students (n=1), although increasing four points, remained in the strategic performance level as indicated on the scoring chart (see table 1). Although significant gains were not shown in all students from pre to post testing, most students were able to attain benchmark for their grade level on this assessment, indicating that the strategies for enhancing vocabulary through the use of morphology instruction impacted students' learning of words and their meanings.

Section 5: Discussion, Recommendations, Conclusions

Overview

Teachers face a difficult task when it comes to delivering vocabulary instruction due to the ever increasing word gap between students of different socioeconomic status, demands of the CCSS, and a packed curriculum that does not allow time to provide impactful vocabulary instruction to increase students' word knowledge. Effective vocabulary instruction requires teachers to have knowledge of research-based strategies and the ability to incorporate the teaching of vocabulary throughout the school day using beneficial strategies. Many researchers have based their studies on Graves's (2006) four part framework and have proven that instruction based on this framework has increased the depth of students' word knowledge.

In the action research project, teachers promoted word consciousness and word-learning strategies, specifically morphology, while incorporating evidence-based activities on a daily basis. Results indicated that implementation of curricular methodology in vocabulary facilitated active engagement, and enhanced students' receptive and expressive vocabularies. The teaching activities that incorporated components of Graves's framework complemented the study of word parts, promoting considerable gains in word knowledge by students included in the sample group.

Summary of the Findings

Findings and Interpretations for Research Question 1

Morphology is an extremely powerful tool for building academic language proficiency (Larson, Dixon, & Townsend, 2013), and corresponds to the finding for research question 1:

“How can teachers begin to bridge the gap between students who struggle with vocabulary learning and those who don’t?” Given the vast number of research-based practices that are effective in advancing student acquisition of vocabulary, identification of practices having the potential to yield sustained increases in students’ word knowledge was critically important. Therefore, morphology, the study of word structure, was selected because of its potential to influence students’ vocabulary knowledge. Bromley (2007) stated, “The meanings of 60 percent of multisyllabic words can be inferred by analyzing word parts” (p. 533). Teaching morphology can be the key to addressing the gap that can result from the increased expectations, particularly because the inception of the CCSS has “amped up” the construct of academic rigor. The goal of morphology instruction in the study was to build students’ independent word learning strategies through opportunities to analyze word parts, make connections, and use words in authentic ways, in order to bridge the word gap by making students lifelong independent word learners.

Findings and Interpretations for Research Question 2

Analysis of the Multi-Faceted, Comprehensive Vocabulary Instruction Program (MCVIP) provided the answer to Research Question 2, “What are effective strategies for teaching vocabulary to increase comprehension?” With the decision to begin with morphology resolved, the next step was to find effective strategies for teaching morphology and research-based activities to enhance this instruction. After reviewing the positive results of the MCVIP project, we decided to incorporate several morphological activities that would deepen students’ knowledge of word parts and vocabulary.

Daily reinforcement of the new vocabulary through varied activities that promoted discourse, writing, and engagement promoted a deeper knowledge of the words as evidenced

through informal observation as well as formal assessments. In addition, students began to take ownership for finding other words with the featured roots and affixes. Students were actively involved in learning new words, and as a result, scores on benchmark vocabulary assessments increased.

Findings and Interpretations for Research Question 3

Through discussions with classroom teachers, we found that collaboration and modeling was the answer to the third research question, “What type of professional learning activities are most helpful in improving vocabulary instruction?” Throughout the action research project, collaboration with third and fourth grade teachers allowed time for the introduction of strategies for effective morphology instruction. We used collaboration meetings to provide explanations of strategies and activities, and to discuss next steps with students. I then modeled lessons to help guide teachers in their implementation of the new vocabulary strategies. The time for collaboration provided the grade level teams with a forum for sharing and developing materials, which in turn created a positive teacher response to this type of professional learning based on teacher responses.

Recommendations for Action and Further Study

The action research project, although small in scale, highlighted the importance of explicit vocabulary instruction in order to advance students’ word knowledge. Future studies might encompass a larger sample size, possibly across several grade levels, since the study sampled only a small group of third and fourth graders. Additionally, conducting a study with a control group would help to corroborate the effectiveness of the curricular methodology used in this project.

Future studies would benefit from the inclusion of a norm referenced assessment, as both assessments used in the study were criterion-referenced. Replacing the CORE Vocabulary Screening with a norm-referenced assessment whose reliability corresponds to other measures of comprehension might highlight the effectiveness of explicit vocabulary instruction on struggling students' academic and domain-specific vocabulary.

Conclusion

Morphology is an essential part of vocabulary instruction that has tremendous implications for increasing word knowledge. Since wide vocabulary knowledge has been proven to increase reading comprehension, word knowledge plays an important role in reading, (Blachowicz & Fisher, 2004; NRP, 2000; Wright, 2013; Christ & Wang, 2010; David, 2010; Sedita, 2005). Vocabulary instruction encompasses many facets; therefore, readers need to have knowledge of multiple vocabulary strategies to learn new words that they encounter.

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Overall Results

Table 1

CORE Vocabulary Screening Score Guide

Performance Level	Proportion Correct	Words Correct
Benchmark	75% or more	23-30
Strategic	Between 50-74%	15-22
Intensive	49% or less	0-14

Table 2

Grade 4 iReady Benchmark Vocabulary Levels

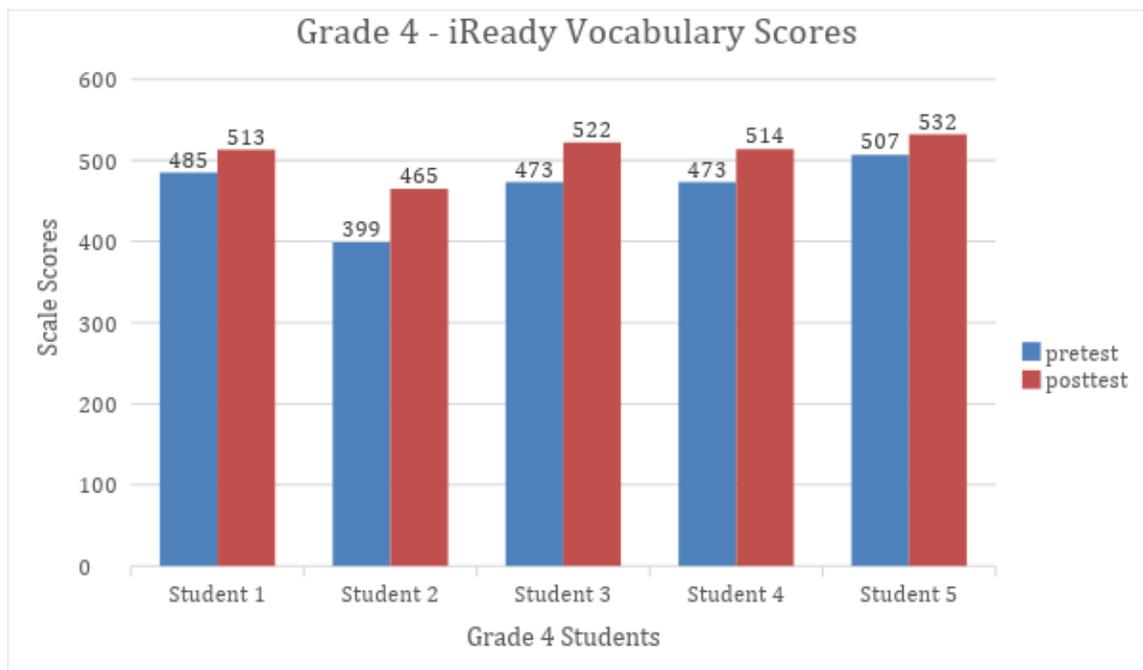


Table 3

iReady Grade Equivalent and Corresponding Scale Score

Grade Level Equivalent	Grade 3	Grade 4
Level K	0-418	0-418
Level 1	419-475	419-475
Level 2	476-513	476-498
Level 3	514-602	499-556
Level 4	603-629	557-629
On Level Ranges	Grade 3	Grade 4
Early	514-547	557-578
Mid	548-560	579-602
Late	561-602	603-629

Table 4

Grade 3 iReady Benchmark Vocabulary Levels

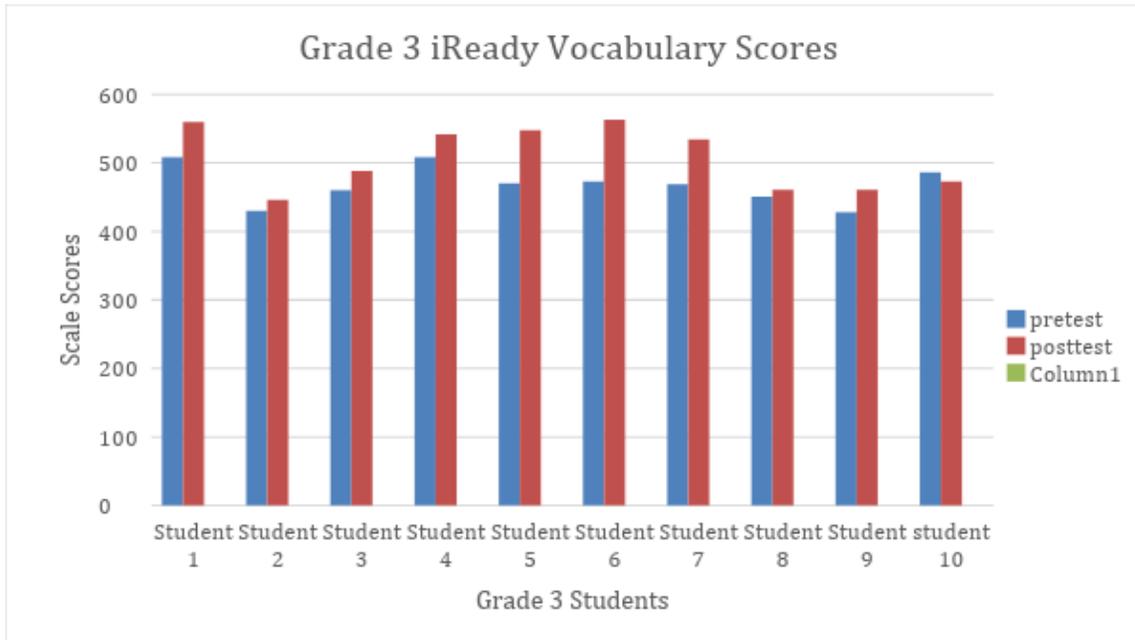


Table 5

CORE Vocabulary Screening Results – Grade 4

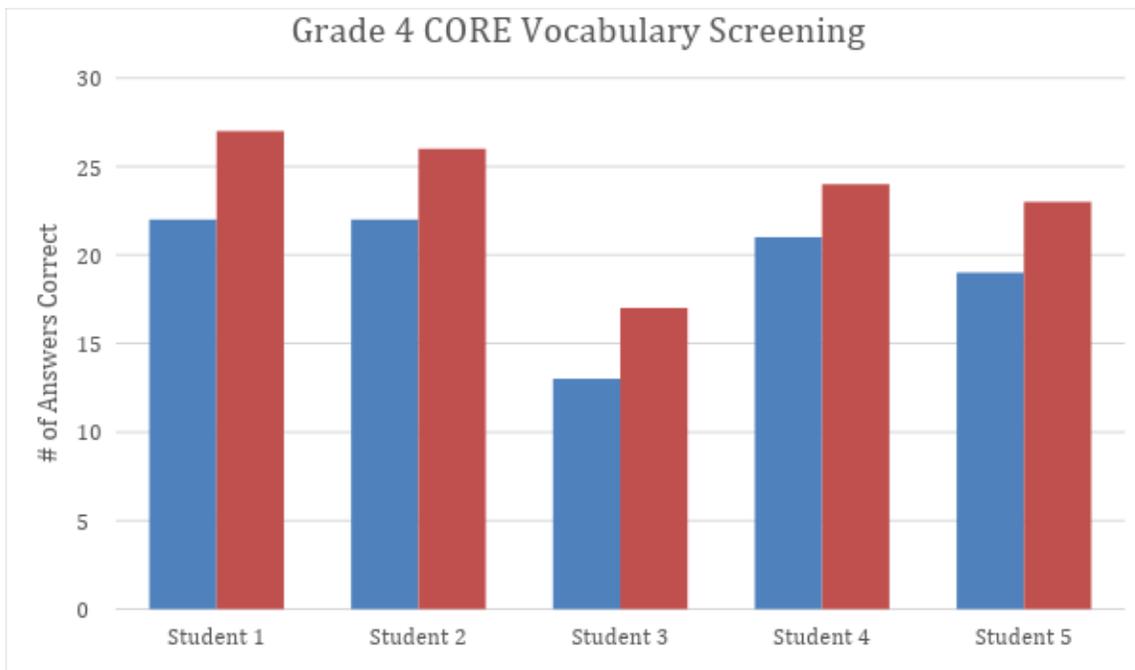


Table 6

CORE Vocabulary Screening Results – Grade 3

