## Pre-teaching Vocabulary to Improve Comprehension of a Narrative Text

by

Leslie Scott Cowell

A dissertation submitted to the Graduate Faculty of
Auburn University
in partial fulfillment of the
requirements for the Degree of
Doctor of Philosophy

Auburn, Alabama December 8, 2012

Copyright 2012 by Leslie S. Cowell

## Approved by

Theresa McCormick, Committee Chair, Associate Professor of Curriculum and Teaching

Deborah Morowski, Assistant Professor of Curriculum and Teaching Bruce Murray, Associate Professor of Curriculum and Teaching David Shannon, Humana-Germany-Sherman Distinguished Professor, Educational Research and Evaluation

#### Abstract

This study investigated the use of the pre-instruction of vocabulary in order to improve elementary students' reading comprehension of a narrative text. Three classes of second, fourth, and sixth graders were pre-taught meanings of twenty different vocabulary target words for three consecutive weeks. The pre-teaching included four days of rich vocabulary instruction including definitional, associational, and contextual methods, with a multiple choice post-test given on the fifth day. One month following the third week of instruction, a follow-up post-test was administered to all groups. There was no instruction given prior to the delayed follow-up assessment. A 3 x 2 x (4) mixed ANOVA was performed to determine the effect of the pre-teaching method on the treatment and control groups as well as grade level over the three-week period and the follow-up test. Overall, the data from the pre-teaching treatment groups and grade level groups were statistically significant. The pre-teaching treatment groups' scores were statistically significant for weeks one, two and three. The treatment group did not have statistically significant scores on the follow-up reading comprehension post-test. Post hoc tests revealed students in second grade achieved higher reading comprehension scores for week one and students in fourth grade achieved higher reading scores for the third and follow-up weeks. None of the grade levels had statistically significant scores for week two. Sixth grade scores were not significant for any of the four weeks.

## Acknowledgments

I would like to express appreciation to my committee members, Dr. Theresa McCormick, Dr. Deborah Morowski, Dr. Bruce Murray, Dr. David Shannon, and Dr. Sara Wolf, for their support and assistance during this research. Their expertise in each area of this study was invaluable.

I would also like to extend appreciation to my parents, Dan and Pat Scott, for their continued encouragement and love. They have always supported me and I am forever grateful for their guidance and example. To my husband, Dan, I truly appreciate the help and patience through this doctoral process and for pushing me to continue my education. A special thanks goes to all my family and friends for their prayers and unwavering encouragement.

## Table of Contents

Abstract	ii
Acknowledgments.	iii
List of Figures.	vii
List of Tables	viii
Chapter I. Introduction	
Introduction	1
Statement of the Research Problem	3
Rationale for Present Study	4
Statement of Purpose.	4
Research Questions.	5
Definition of Terms	5
Chapter II. Review of Literature	
Introduction	8
Fluency and Reading Comprehension	8
Schema Theory of Comprehension	12
Vocabulary Instruction	13
Vocabulary-Comprehension Connection	17
Pre-teaching Vocabulary	20

Type of Text	23
Grade Level	24
Test Passage	25
Method of Pre-teaching.	25
Against Pre-teaching	25
Chapter III. Methods	
Participants and Setting.	27
Context	29
Research Design	36
Procedure	38
Chapter IV. Results	
Introduction	43
Data Analysis.	44
Week by Grade Level	52
Week by Group	53
Summary	55
Chapter V. Conclusions and Implications	
Introduction	57
Summary of Findings and Implications	57
Limitations and Further Research	60
References	67
Appendix 1: AU Human Subjects Approval	75
Annendix 2: Sample Pre-experimental Text	

Appendix 3: Sample Reading Comprehension Assessment	80
Appendix 4: List of Grade Level Target Words	81
Appendix 5: Sample Definition Activity	82
Appendix 6: Sample Association Activity	83
Appendix 7: Sample Context Activity	84
Appendix 8. Teacher Training Materials	86
Appendix 9: Parent Consent Letter	88
Appendix 10: Sample of Weekly Teacher Directions	91

# List of Figures

Figure 1.	Instructional Calendar	36
Figure 2.	Experimental Design	37
Figure 3.	Week by Grade Level Mean Scores.	53
Figure 4.	Week by Group Mean Scores	55

## List of Tables

Table 1.	Readability of Narrative Post-test Passages	30
Table 2.	Placement of Participants.	37
Table 3.	Number of Student Absences by Week and Class	45
Table 4.	Cronbach's Alpha Test of Reliability for Pre-experimental Knowled	ge
	Tests	45
Table 5.	Averages from Weekly Pre-experimental Knowledge Test	46
Table 6.	Percentage of Target Words Correct for Second Grade	47
Table 7.	Percentage of Target Words Correct for Fourth Grade	48
Table 8.	Percentage of Target Words Correct for Sixth Grade	49
Table 9.	Cronbach's Alpha Test of Reliability for Weekly Post-tests	50
Table 10.	Tests of Between Subjects Effects.	51
Table 11.	Tests of Within Subjects Effects	51
Table 12.	Descriptive Statistics for Week by Grade Level.	52
Table 13.	Descriptive Statistics for Week by Group	54

## Chapter I

#### Introduction

The goal of reading instruction focuses on supporting students' ability to comprehend. Students undergo a systematic process in order to gain understanding from the texts they read. This process involves students not only reading the words on the page, but also being able to critically understand and evaluate these words in order to make meaning (Gill, 2008; Pearson, 2009; Pressley, 2000; R. Ruddell, 1986). Knowing the best way to teach comprehension can be difficult because the interaction between reader and text varies for each student (Rosenblatt, 1983; 1994). Problems with students' comprehension can originate from a lack of background knowledge, inability to connect to the text, limited vocabulary knowledge, or lack of fluency (Tompkins, 2003). Students gain automatic and accurate identification of words through fluency instruction. This accuracy allows students to focus on meaning and not on decoding words (Walczyk & Griffith-Ross, 2007).

In 2000, The National Reading Panel (NRP) conducted an analysis of studies to evaluate the research literature regarding vocabulary and text comprehension. Through this meta-analysis, the panel found ". . . evidence that [reading] comprehension comprised two skills: word knowledge or vocabulary and reasoning in reading" (National Reading Panel, 2000, p. 4-15). Forty-seven studies met the criteria to be included in the

evaluation. From this base of literature, the panel reported there was a need for further research in determining the best ways to integrate vocabulary into comprehension instruction (National Reading Panel, 2000).

Word knowledge has been described as a strong predictor for full text comprehension (Gipe, 1978-1979; Mezynski, 1983; M. Ruddell, 1985; Stahl, 1983). Students who have a large amount of vocabulary knowledge have a better ability to understand new text (Anderson & Freebody, 1979; Gill, 2008; Rupley, Logan, & Nichols, 1998-1999). In order to fully understand a text, students need instruction to help them determine the unknown words or they already need to possess the meaning of the words.

Prior knowledge activation plays a role in connecting vocabulary and comprehension (Gill, 2008). Schema is defined as the background knowledge that one has (Piaget, 1926). Recalling one's schema and applying it appropriately to the text allow the reader to fully interact and understand it (Rosenblatt, 1983). Schema also aids the students' ability to link unknown words to known words and therefore understanding them through this connection (Armbruster & Nagy, 1992; Irvin, 1991; Pearson, 2009).

One instructional method, pre-teaching, supports the vocabulary knowledge and reading comprehension relationship. Pre-teaching helps students in recalling prior knowledge of terms they may already know or creates a foundation for them by introducing them to the new words (Carney, Anderson, Blackburn, & Blessing, 1984; Freebody & Anderson, 1983b; Stahl, Jacobsen, Davis, & Davis, 1989). Effective vocabulary instructional strategies such as explicit and rich instruction (Blachowicz, Fisher, & Watts-Taffe, 2011; Christ & Wang, 2010; Jitendra, Edwards, Sacks, & Jacobsen, 2004; McKeown & Beck, 2004; Penno, Moore, & Wilkinson, 2002), extended

instruction (Coyne, McCoach, & Kapp, 2007; Christ & Wang, 2010; Juel, Blancarosa, Coker, & Deffes, 2003), and multiple exposures (Coyne et al., 2007; Graves, 2006; McKeown & Beck, 2004; McKeown, Beck, Omanson, & Perfetti, 1983) underpin the method of pre-teaching vocabulary. Pre-teaching is not a new area of study in the field of vocabulary. The past experimental research conducted with the use of this approach has been inconclusive or inaccurate in providing full explanation of the investigation. The goal of this research was inform the field of research with a greater understanding of the use of pre-instruction as an effective method for improving reading comprehension.

Berne and Blachowicz (2008) surveyed 72 educators about their use of effective strategies in the area of improved student vocabulary knowledge. Pre-teaching vocabulary prior to reading was the least frequently cited strategy out of the eleven that were shared in the survey. Based on this study, one could conclude that classroom teachers may not know the benefits of pre-teaching and further research is needed to demonstrate how to use this approach effectively.

### Statement of Research Problem

The NRP report described only three studies that focused on the area of preteaching vocabulary, although the report did state that the "pre-teaching of vocabulary can have significant learning outcomes. . . " (National Reading Panel, 2000, p. 4-25). The three studies discussed in this report, all conducted from the late 1980s through the late 1990s, introduced the idea through a variety of grade levels, texts, research designs, and methods that the pre-instruction of vocabulary can aide in vocabulary acquisition, as well as reading comprehension. Further study would help clarify the best ways in which this comprehension strategy can be most effective for students.

#### Rationale for Present Study

Educators have sought ways to improve students' reading comprehension. Many teachers have focused on providing students with meaningful ways in which to increase knowledge in the area of reading comprehension. Today's published reading manuals have advocated pre-teaching vocabulary, along with teacher conferences, and curricula, but very little scientific research supports value and effectiveness of this strategy. Much of the prior research done by Ausubel (1960), Carney, Anderson, Blackburn, and Blessing (1984), Medo and Ryder (1993), and Stahl, Jacobsen, Davis, and Davis (1989) in this area used expository texts with specialized vocabulary that is used only in its specific field. This study helped to inform the field that pre-teaching vocabulary can be used as instructional technique to aid students' comprehension of a narrative text, which utilizes non-specialized grade level vocabulary.

#### Statement of Purpose

The purpose of this study was to investigate whether reading comprehension can be improved by pre-teaching vocabulary terms. The vocabulary instruction was incorporated into elementary students' reading of a narrative text. Pre-instruction of terms from an expository text aids comprehension because often the terms in this type of text are specialized words for content specific concepts. These vocabulary terms were found throughout the text and students' knowledge of these terms is vital to their comprehension. Generally, this has not the case with narrative text. Unknown words may only be seen once or twice throughout a text. Inconclusive research has been done to determine whether pre-instruction of words used with no context clues will affect elementary students' comprehension in a fiction text. Using a narrative text with words

that are not content specific would determine whether pre-teaching could improve reading comprehension of day to day words rather than those limited to a specific subject area.

#### **Research Questions**

The questions addressed in this study were:

Will the pre-teaching of specific target words improve elementary students' comprehension of a narrative text?

Will the pre-teaching of specific target words improve reading comprehension with students in grades two, four, and six?

#### **Definition of Terms**

- Access perspective: When reading, students should be able to quickly determine the meaning of the unknown words they encounter. This access to vocabulary allows for uninterrupted comprehension to take place. (Mezynski, 1983)
- Association method: an instructional technique where students are guided to make personal connections with unknown words. (Gipe, 1978-1979)
- Aptitude perspective: Each student has a predetermined aptitude for learning. Students with high vocabulary knowledge inherently have the capability to understand new words, not necessarily due to instruction, but because of their own natural ability.

  (Anderson and Freebody, 1979; Mezynski, 1983)
- Breadth of knowledge: The number of words of which a person knows at least some of the significant aspects of meaning. (Anderson and Freebody, 1979)
- Comprehension: The process through which the reader constructs meaning while, or after, interacting with the text. This interaction arises through a combination of

- prior knowledge and previous experience, information in the text, the connection the reader has to the text, and recall of any social interactions and communications. (M. Ruddell, 1985)
- Conditional knowledge: A reader's ability to understand when to use a strategy to determine meaning of an unknown words and why this strategy is appropriate.

  These strategies include using information in context, looking at the structure of a word, using a reference source to gain meaning. (M. Ruddell, 1985)
- Context method: An instructional technique with goals to help students gain meaning through the context of the text. (Gipe, 1978-1979)
- Declarative knowledge: Understanding that words have more than one meaning, certain words are critical to comprehending a text, and words have different importance in different texts. (M.Ruddell, 1985)
- Definition method: An instructional technique most commonly used by providing students with vocabulary terms to look up the definition. (Gipe, 1978-1979)
- Depth of Knowledge: Refers to how well a person knows the meaning of a given word.

  (Anderson & Freebody, 1979)
- Fluency: The ability to read and recognize words automatically, accurately, and with expression. (Tompkins, 2003)
- Incrementality: A word's meaning can be understood on different levels. A reader may have only one or two encounters with a word and vaguely recognize it, whereas another word could be known deeply and used automatically. Word knowledge is not all or nothing. (Nagy and Scott, 2000)

- Instrumental perspective: Vocabulary knowledge is the most important factor to comprehension. The more words a reader knows the better. (Anderson & Freebody, 1979; Mezynski, 1983)
- *Knowledge* perspective: Word knowledge is related to a reader's background knowledge, and concepts of words, not just the meaning of the word itself. (Anderson & Freebody, 1979)
- Ownership: Readers knowing a word well enough to use it in their everyday speech, read the word easily, understand its meaning, and its relationship to other words.
- Procedural knowledge: A reader's knowledge of the steps to understand how to read and find the meanings of unknown words. (M. Ruddell, 1985)
- Schema/Schemata: The background or prior knowledge the reader possesses. (Irvin, 1991; Piaget, 1926)
- Semantic context: A reader understands of the meanings in language and how these meanings are created by the relationships between words and sentences.

  (Anderson & Freebody, 1979)
- Syntactic context: The ordering and relationship of words in sentences. (Anderson & Freebody, 1979)

#### Chapter II

#### Review of Literature

#### Introduction

This literature review is divided into six sections: 1) fluency and reading comprehension, 2) schema theory of comprehension, 4) vocabulary instruction, 5) vocabulary-comprehension connection, and 6) pre-instruction of vocabulary. The literature in the field validated the vocabulary-comprehension connection and the need for vocabulary instruction prior to reading in order to support this relationship for students.

## Fluency and Reading Comprehension

Reading comprehension is a complex and precise process (Pressley, 2000). When first learning to read, students gain an understanding of the alphabetic system and phonemic awareness at the word level. Students begin to group letters and sounds together to create and read words. This process, called decoding, takes much of the brain's capacity to combine the parts in order to read the word as a whole (Pressley, 2000). The more decoding is practiced, the more fluent reader the student will become. With development of fluency, speed and exactness in reading, the reader can focus on comprehending what he or she reads. As students become fluent readers, their comprehension improves.

Fluency has been described as the bridge between decoding words and reading comprehension (Stayter & Allington, 1991). "Fluency is the ability to read smoothly

and with expression, and to read fluently, children must be able to recognize many, many words automatically" (Tompkins, 2003, p. 147). Focused mainly on identification, research described fluency as necessary to help readers move toward reading comprehension, specifically struggling students (Walczyk & Griffith-Ross, 2007). Reading comprehension is improved when students are able to quickly identify words, thereby not having to stop and decode the word each time it is encountered. The development of fluency has been founded to aid students in comprehension, creating a relaxed and encouraging environment to read (Walcyzk & Griffith-Ross, 2007). When readers become more skilled, their reading rate increases, there by allowing them to flow through the text much easier (Walcyzk & Griffith-Ross, 2007).

Repeated reading was a strategy suggested by research to support students' ability to rapidly identify words they come in contact with while reading (Tompkins, 2003). With this strategy, students read the same passage, typically an isolated passage, several times with the goal of increasing the rate of reading each time the passage is read. This repeated reading is often done orally, allowing the listener to assess the readers abilities (Stayter & Allington, 2003). "Rereading can resolve confusion due to poor reading skills, as well as to choppy, verbose, or abstract text" (Walcyzk & Griffith-Ross, 2007, p. 75).

Accurate and automatic identification of words through oral reading fluency directly connects to reading comprehension, more so than just word recognition (Stayter & Allington, 2003). This ability to quickly identify words aids a student gaining the necessary skills for the final goal of understanding text.

Comprehension, ". . . is a process in which the reader constructs meaning while, or after, interacting with a text through the combination of prior knowledge and prior

experience, information in text, the stance he or she takes in relationship to the text, and immediate, remembered, or anticipated social interactions and communications" (M. Ruddell, 1985, p. 415). Comprehension begins at the word level where students start to understand what words they are reading and what these words mean. It moves to the sentence level, then throughout the entire statement. Finally, comprehension occurs at the text level by putting all the words and sentences together to make one complete meaning (Paris & Hamilton, 2009).

Rosenblatt (1983; 1994) described a comprehension process where students' personal understandings and knowledge develop through experiences with a text. This interaction enabled a synthesis of the reader's past and the work of literature, which allows for fully developed understanding. Rosenblatt (1994) also focused on the differences in efferent reading, reading for information, and the aesthetic mode of reading, looking at the literature to explore and reflect on it during reading. "In aesthetic reading, the reader's attention is centered directly on what he is living through during his relationship with that particular text" (Rosenblatt, 1994, p. 25). This combination of reading for information as well as reading for reflection and application is needed for progression of comprehension.

The comprehension process, as described by Pearson (2009), is made up of an interaction between the reader and the text. Initially, reading comprehension was most commonly taught as a series of different skills to be taught, analyzed, and then possibly retaught based on the students' understanding. These skills included determining main idea, connecting, questioning, determining author's purpose, and summarizing. After the 1970s, the idea was introduced that readers make meaning as they read based on several

things, not isolated to these skills. Comprehension emphasized the reader more than the text and how the reader interacts and becomes involved with the text. Because of this reader and text interaction, brain capacity should be focused solely on the content of what the brain is reading. When the reader's comprehension process is interrupted to decode a word, determine the meaning of a word, or try to activate personal connections, the understanding of the text as a whole is hindered.

Effective teachers understand the strategies and steps involved in becoming a skilled reader and seek ways to strengthen and support students' understanding, both efferently and aesthetically. Teachers strive to provide explicit instruction in strategies and skills to lead their students to independent reading and understanding. Research based strategies provide the basis for best practices in reading comprehension and direct the way that classroom teachers train students in the area of reading.

A persistent goal of research exists to find ways for classroom teachers to improve reading comprehension instruction. Gill (2008) developed a comprehension matrix, which described the factors that affect students' abilities to understand what they read. These factors are the reader, the text, and the situation. The reader has specific interests, emotional and physical states, known reading strategies to employ, and sufficient or insufficient background knowledge. The text has a definite layout, style, organization, vocabulary, concept load, and illustrations. The situation has a specific purpose and ways to help students build understanding. All of these factors affect comprehension and "good readers know how to adjust their reading in different situations and for different purposes" (Gill, 2008, p. 108). Teaching strategies with the goal of guiding students to gain meaning from text are essential in classrooms. Teachers

implement a variety of instructional strategies that support the research about good comprehension instruction.

## Schema Theory of Comprehension

All elements of effective reading comprehension support the need for considerable prior knowledge activation. Educational theorist, Jean Piaget, described one's own conceptual framework as schema (1926). This personal schema "made use likewise memories of earlier reasoning, which control the present course of reasoning without openly manifesting their influence" (Piaget, 1926, p. 132). This personal schema allowed for the assimilation and accommodation of new information into this already developed framework. Assimilation of knowledge allowed new information to fit into what is already known. Accommodations required that one adapt prior knowledge in order to make sense of the new. Schema provided the reader with the foundation to connect with new information. Readers use their schema along with what they know about the text to develop understanding. As they do this, students create meaning and evaluate their comprehension as they go (Tierney & Pearson, 1981). Prior knowledge is necessary for comprehension to the degree that this may account for the difference between poor and good readers (Irvin, 1991).

Irvin stated that schema involved the understanding of concepts, objects, ideas, or experiences that make up our knowledge base. When one begins reading a text, the relevant schema for the text is recalled. Schema helped students to select important information, use appropriate schema, connect their schema to the text, and build onto old schema. Rosenblatt (1983) affirmed that without linkage to past experiences and present interests, the work cannot come alive for the student. As a result of this, a focus for

teachers was that students have the necessary schema for the text prior to reading (Irvin, 1991). Pearson (2009) stated, "In our memory, schemata are like little containers into which we deposit the particular traces of particular experience s as well as the "ideas" that derive from those experiences" (p. 25). Each person holds his/her own prior knowledge and will either use or adapt it within textual context in order to understand.

Further, "Schema [provide]s the framework for classifying concepts presented in a text. Hence, the stronger the framework, the more likely concepts are to be classified and available for subsequent retrieval from long term memory" (Pearson, Hansen, and Gordon, 1979, p. 202). Readers must have adequate background knowledge for what they read and should also activate this background knowledge in order to improve their comprehension (Beck, McKeown, & Perfetti, 1982; Gill, 2008). Rupley, Logan, and Nichols (1998-1999) explained that "The teaching and reviewing of key concept words prior to reading help students activate background knowledge, relate this knowledge to new concepts, and understand how new words and concepts are related" (p. 338). For students to comprehend new information, they should critically examine their own suppositions and presumptions with help from the teacher through instruction (Rosenblatt, 1983).

## Vocabulary Instruction

Vocabulary instruction provides a way that students can begin to activate this prior knowledge:

It is difficult to separate knowledge of relevant background information from a knowledge of relevant word meanings. Expanding students' meaning vocabulary is a critical part of making sure that they have adequate background knowledge

and because word meanings are best learned in terms of their associations with other concepts, it is probably best to think of expanding prior knowledge and building vocabulary simultaneously (Irvin, 1991, p. 30).

By introducing or discussing words and their meanings prior to reading, students can begin to direct their thinking and focus on specific areas needed for comprehension. Indepth instruction in text-specific vocabulary will enhance prior knowledge and improve students' ability to form background necessary to make inferences, to make connections, and therefore, to understand difficult text (Blachowicz, Fisher, & Ogle, 2006; Medo & Ryder, 1993). In many cases, students have no prior knowledge to associate with new information. Rosenblatt (1983) explained that teachers must integrate the students' framework and understanding along with the ideas offered by the text in order to understand the knowledge given in the text. Instruction in word meanings helped to overcome reading comprehension difficulty as well by giving students some information to begin building background knowledge for a particular text or subject area. "Background experiences are what readers use to develop, expand, and refine concepts that words represent" (Rupley, Logan, & Nichols, 1998-1999, p. 338). Teaching word meanings helps to build the bridge between words that are known and those to be learned. Consequently, students encounter the new words in a positive manner rather than an unknown idea.

Development of students' vocabulary knowledge can be supported by the use of rich, explicit teaching (Blachowicz, Fisher, & Watts-Taffe, 2011; Christ & Wang, 2010; Jitendra, Edwards, Sacks, & Jacobsen, 2004; McKeown & Beck, 2004; Penno, Moore, & Wilkinson, 2002). Explicit teaching provides the student the opportunity to receive the

new word's meaning in a straightforward way. Similar to direct instruction, clear explanation of vocabulary strengthens students' understanding of unknown words and allows the students a basis on which to utilize and apply their knowledge. From the instruction, contextual application, deeper usage, discussion, and deep learning can occur (Blachowicz et al., 2011). The need for explicit, teacher-led explanations of vocabulary is necessary for students' word knowledge to increase (Biemiller, 2005).

One way vocabulary can be taught is through the use of extended instruction (Christ & Wang, 2010; Coyne, et al., 2007; Juel, Blancarosa, Coker, & Deffes, 2003). "Extended vocabulary instruction is characterized by explicit, conspicuous teaching that includes using both contextual and definitional information, giving multiple exposures to target words in varied contexts, encouraging deep processing" (Coyne et al., 2007, p. 80). In their study, Coyne et al. (2007) learned that those who received extended instruction scored higher on word knowledge than those receiving just incidental exposure through read-alouds. Four components are most often implemented in extended instruction. First, the definitional component provides students with the definition to the words. This method usually does not have personal connections but does introduce the words to the students. Providing students with synonyms or asking students to use a dictionary are typical procedures. A second instructional method is the use of context. Teachers can provide a familiar context within which the students can connect the meanings and already known information to the new word. It is important to remember that context clues can't always be depended on as a way to determine meaning of an unknown word, especially low frequency words (Schatz & Baldwin, 1986). Sometimes not enough context is provided, and this leaves students more confused and can hinder

comprehension. The association method is similar to the context method in that it allowed students to link the new words to words they may already know. In this method, students were given the new words in a list of other words that are either synonyms or phrases. The goal was that the familiarity with the known words will help the students to understand the unknown words. The category method was one other way vocabulary words were taught. The category method focused more on the concept of the word meaning and including it in a category with others having the same concept. All four methods have been deemed effective in learning the meanings of unknown words (Gipe, 1978-1979).

Within the idea of vocabulary instruction lies a key concept for not only learning the meanings of unknown words, but also maintaining meaning and being able to use these new words: ownership. Carr and Wixon (1986) explained, "Effective vocabulary instruction helps students develop a breadth of word knowledge that goes well beyond memorizing a definition or learning a single word in context" (p. 589). Stahl (1985) reinforced the need for depth of knowledge. Even with effective vocabulary knowledge, the types of processing students do with the new words will determine how well the words are known. He defined three ways of processing which are helpful in planning vocabulary instruction. First, association is addressed, but then adding to that comprehension processing, which asks students to apply this association. Following this is generative processing, which has the students generate a new context or definition for the word, therefore, making it their own. Stahl (1985) believed that mixed method vocabulary instruction with these deeper levels of processing leads to better vocabulary learning. Dufflemeyer (1980) agreed, stating, "The meaning of words depends on the

experiences that stand back of them," (p. 35). There are many ways in which vocabulary can be taught, but unless the students have ownership, or a deep understanding of the terms, they will not be able to apply and transfer the meanings of the words to new text.

### Vocabulary-Comprehension Connection

Despite a strong correlation between reading comprehension and vocabulary, there is a weak causal connection between the two (Mezynski, 1983). Davis (1944) explained nine skills basic to comprehension. Among these are knowledge of word meanings and the ability to select appropriate meaning for a word or phrase in context. Reading instruction that incorporates activities focusing on the growth of students' vocabulary will enhance their abilities to make connections, infer meanings, and comprehend what they read. "Children with broad vocabulary knowledge are better able to infer the meanings of unfamiliar words in the texts that they read" (Rupley, Logan, & Nichols, 1998-1999, p. 336).

Anderson and Freebody (1979) described three effects of vocabulary instruction on comprehension. The first effect was aptitude, which stated that people did well comprehending due to verbal aptitude. These students had quick thinking ability, the ability to learn word meanings incidentally or intentionally, and were able to maintain the meanings of these words. This enabled them to have the vocabulary knowledge in order to comprehend well. The aptitude effect implied that students had a personal word knowledge capability. It was difficult to improve vocabulary knowledge through instruction if the student does not possess the aptitude. The second aspect described was the instrumental effect. This effect states that the more words a person knows, the better he or she will comprehend; therefore, knowledge of individual word meanings is vital. In

order for a person to be better at comprehending, he or she must have a large vocabulary. If a student's vocabulary bank is lacking, it is up to the instructor to provide opportunities to begin building this. Knowledge is the third vocabulary-comprehension connection. Rather than teaching individual word meanings, understanding comes through a context that makes the word more understandable. By doing so, students can see how word meanings are connected to one another and to knowledge the learner already has. This in turn can be transferred to the understanding of a text. Mezynski (1983) adds that a fourth vocabulary effect on comprehension is access. This effect illustrates the idea that students can be taught the meanings of words but need to be able to access them in order for them to aid effectively in comprehension.

Repetition of vocabulary terms through instruction has been found to strengthen access to vocabulary for transference to better comprehension. More encounters with new words, whether through reading, discussion, or assignments helped the student to build his or her knowledge of the new word as well as develop ownership. Providing students with multiple exposures to words has also been a way to develop vocabulary knowledge and build a strong foundation for the words (Coyne et al., 2007; Graves, 2006; McKeown & Beck, 2004; McKeown, et al., 1983). Nagy and Scott (2000) described this effect as incrementality, explaining that when a reader encountered a new word, his or her knowledge of the word increased (Pearson, Hiebert, & Kamil, 2007).

A strong connection between comprehension and vocabulary and the need for word knowledge in comprehending text is apparent. M. Ruddell (1985) developed a theoretical model describing the vocabulary knowledge and comprehension connection. The elements of this model included prior knowledge and previous experience,

information available in text, relationship to text, and social interactions and communications. The prior knowledge and previous experience are related to Mezynski's (1983) instrumentalist position. This position claimed that if a student knew more words prior to reading, his or her comprehension of the text would be much easier. Comprehension is also dependent on the contextual information in the text itself. If a word is unknown, the context of the text can aid a student in determining the meaning.

Researchers have disagreed about the exact role context plays in comprehension, but "... whatever the exact dimensions of individual ability to use context, information available in text appears to be a critical link in the vocabulary-comprehension relationship" (M. Ruddell, 1985, p. 432). Ruddell also argued the need for the reader to have a relationship or connection with the text. She explained that, as students created this connection, their vocabulary knowledge was strengthened and multiplied, thus improving comprehension. Social interactions also contributed to growth in vocabulary and comprehension. Communication with others allowed for word knowledge to be shared within the group and directed to refine one another's understandings. These elements demonstrated that the connection between comprehension and vocabulary was great and the successful acquisition of both was dependent upon the other. Ruddell (1985) concluded that it was difficult to have vocabulary knowledge without comprehension of the words, and it is difficult to have comprehension of a text without understanding the words that comprise the text.

Many other studies have been done that reaffirm this connection between vocabulary and comprehension. Stahl and Fairbanks (1986) investigated whether vocabulary knowledge would have an effect comprehension. Through their meta-

analysis, they explained that vocabulary instruction did have an effect on reading comprehension. Both the definitional measures and the combined contextual/definition measures had gains on reading comprehension. Yopp and Yopp (2007) explained that vocabulary knowledge was vital to reading comprehension and to success in school, to the degree that it must receive focused and explicit attention across the curriculum. Instruction that allowed for significant uses of words results in learning that affects comprehension (Blachowicz & Lee, 1991; Jenkins, Stein, & Wysocki, 1984; Mezynski, 1983; Stahl & Fairbanks, 1986).

## Pre-teaching Vocabulary

Pre-teaching is an instructional method that has been found to make a passage easier to comprehend by allowing the brain to focus on this comprehension and not decoding or determining the meaning of unknown words during target passage reading. This focus aided the student in the creation of a "vocabulary fluency" gaining the ability to be automatic and accurate in determining meaning while reading. The technique of pre-teaching helped to support the connection of vocabulary and comprehension instruction. Providing students with rich instruction focused on the content the students are reading, or are about to read, increased the likelihood that students' comprehension will improve (Graves, 2006). Having a strong understanding of the meanings of words ensured that students will be able to understand the text they are reading. Beck, Perfetti, and McKeown (1982) explained:

A vocabulary training program can lead to gains in comprehension. Following instruction, subjects process individual word meanings more accurately and more rapidly. Improvements in comprehension follow, because construction of passage

meaning is made easier because individual word meanings are understood (p. 520).

The need to stop comprehension in order to determine and decipher meanings took the short-term brain capacity away and hinders thorough understanding of the text.

Comprehension can be disrupted if too many of the words in the passage are unknown (Jalongo & Sobolak, 2011). Pre-teaching vocabulary provided the outlet of understanding unknown words prior to beginning to read a text and therefore, avoids this problem. Pre-teaching also incorporated instruction that ". . . provides both definitional and contextual information about the words to be learned as well as multiple exposures and opportunities to use them" (Blachowicz, Fisher, & Ogle, 2006, p. 57).

When the classroom teacher introduced the vocabulary before reading, the student has a head start on what terms and content will be addressed in the text. This activation of schema helped the reader to begin their interaction with the text. If there is no connection to these terms already, the pre-teaching would help to establish this background knowledge. If there is a connection to the terms, the pre-teaching would aid the reader activate the meanings of the terms. Beck, Omanson, and McKeown (1982) found that when main concepts are introduced prior to reading, both skilled and less skilled readers benefitted; in fact, less skilled readers performed just as well as the skilled readers from the control group receiving no prior knowledge activation.

Pre-teaching vocabulary has been found to be related to the access, instrumental, and knowledge effects of vocabulary knowledge as well as prior knowledge activation.

Students that have been pre-taught vocabulary are able to comprehend a passage with more difficult words. Kameenui, Carnine, and Freschi (1982) conducted a study in which

a control group was given a passage using easy words and the treatment group was given a passage with difficult synonyms substituted for those easy words. They found through the pre-teaching that the students that were pre-taught the difficult words had the same gains in comprehension as those who were given the easy words. "The substitution of familiar words for difficult or unfamiliar synonyms in a text makes the text easier to comprehend. People are helped to comprehend a text if they learn the meanings of the unfamiliar words it contains" (Kameenui, et al., p. 385). Marks, Doctorow, and Witttrock (1974) had similar findings when they determined that there is better comprehension with high frequency words than with low frequency words. Changes from low to high word frequency facilitated reading comprehension. In their study, Brabham and Lynch-Brown (2002) found that students had increased word knowledge when the teacher explained the word meanings before and after a story that was read to them. Students had gains of 10% when assessed on word knowledge in instructed and uninstructed meanings during storybook reading (Biemiller & Boote, 2006).

Pre-teaching vocabulary also had benefits in allowing students to improve reading comprehension and word knowledge over time. In their 1982 study, Beck et al. taught 104 words over a five-month period to elementary students. A variety of instructional methods were used and pretests and post-tests were given. After the study, there was a medium effect size demonstrating growth in reading comprehension. This study was replicated one year later to have a stronger focus on the improvement of reading comprehension. The results again indicated that the vocabulary instruction prior to reading enhanced comprehension of the stories containing the instructed words. The study showed that students can thoroughly learn a year's worth of vocabulary over the

course of 175 days through the use of reading comprehension integrated with word study. This study highlighted the importance of stressing breadth and depth of vocabulary learning in order to facilitate ownership.

The pre-instruction of vocabulary is not a new area of research in the field of vocabulary and reading instruction. The NRP report (2000) described three works that met their qualifications as an experimental study addressing this instructional method. In discussion of these three studies (Brett, Rothlein, & Hurley, 1996; Carney, Anderson, Blackburn, & Blessing, 1984; Wixon, 1986) the report stated, "Pre-instruction of vocabulary words facilitates both vocabulary acquisition and comprehension. . . " (p. 4-22). The design and focus of these three studies was diverse and inconclusive about the best ways to implement this instructional method. After a closer examination of these and other works, there are still questions within this research as to the effectiveness of this strategy in the elementary classroom.

### Type of Text

Of the fourteen research studies that described preinstruction, six explained this method in content areas with applied use in expository or informational texts.

(Armbruster & Nagy, 1992; Ausubel, 1960; Carney, Anderson, Blackburn, & Blessing, 1984; Freebody & Anderson, 1983b; Medo & Ryder, 1993; Stahl et al., 1989). These specialized subjects have terms and phrases specific to their field and context. Prior to beginning these subjects, teachers would introduce these terms so that students will know the meanings as the thick content is read or discussed. Medo and Ryder (1993) stated, "In depth instruction in text specific vocabulary will enhance prior knowledge and improve students' ability to form microstructures necessary to make inferences, to make

connections, and therefore understand difficult text" (p. 132). Students were pre-taught terms and concepts involved in a text about the Industrial Revolution (Carney et al., 1984). This gave the students the background they would need in order to more effectively understand what they were reading. Carney et al. (1984) also stated "Students who were pre-taught key concept vocabulary scored statistically significantly higher on tests of both immediate and long term comprehension of social studies than students who had not engaged in the pre-teaching activities" (p. 196).

Narrative text structure is one that is familiar to students as their initial exposure to reading begins with stories (Williams, 2005). Although the structure of the text is well-known, the terms in the text may not be. Narrative texts often hold terms that are not commonly or frequently used in the text, therefore causing students to stop the cognitive process of comprehension to decipher meaning. Eight research studies described use of narrative texts along side the pre-instructional strategy (Brett et al., 1996; Beck et al., 1982; Kameenui et al., 1982; Nelson & Stage, 2007; Jackson & Dizney, 1963; Jenkins, Pany, & Schreck, 1978; Stahl, 1983; Wixson, 1986). None of these studies were experimenter created with precise use of the target words more than once as key concepts in the story. This addition added research control of the narrative ensuring that students have gained knowledge from the pre-teaching and thereby directly transferring to the assessment passage text.

#### Grade Level

Fourteen studies were examined for the use of pre-instruction of vocabulary. Of these, none implemented the strategy using students in third grade or below.

Additionally, none of the current studies compared different grade levels for effectiveness.

## Test Passage

The difference of the appropriateness and transferability of the vocabulary knowledge to the actual test passage was not fully examined. Several studies did not sufficiently describe the test passage (Carney et al., 1984; Freebody & Anderson, 1985; McKeown et al., 1983) or results were based on standardized test reading comprehension results (Beck et al., 1982; Nelson & Stage, 2007). The standardized tests were not linked to the target words learned.

## Method of Pre-teaching

Another consideration was the richness of the vocabulary instruction and providing students with multiple encounters with words. Even the studies that merely mentioned the definitions (Brett, 1996) without rich instruction made gains in their ability to comprehend. The author's conclusion was that even a small amount of pre-teaching, regardless of method, will affect comprehension. The multiple encounters simulated the repeated readings of fluency instruction, thereby creating for the students a "vocabulary fluency" with automatic and accurate application of meaning. (Stayter & Allington, 1991; Tompkins, 2003). Many studies only provided their students with one encounter with the word before conducting the post-test (Jenkins, Pany, & Schreck, 1978; Stahl, 1983; Wixon, 1986).

## **Against Pre-teaching**

Although many studies have identified the benefits of pre-instruction of vocabulary (Ausubel, 1960; Brett, et al., 1996; Carney et al., 1984; Kameenui et al., 1982; McKeown, et al., 1983; Wixon, 1986) many do not support the idea of pre-teaching vocabulary to improve comprehension. Jenkins, Pany, and Schreck (1978) determined

that vocabulary instruction failed to influence students' comprehension when employing their pre-instruction technique. Jackson and Dizney (1963) spent twenty-three weeks instructing students through multiple methods of vocabulary instruction. They did not see statistically significant results in their treatment groups on the post-standardized test. Armbruster and Nagy (1992) stated that they do not advocate the use of pre-teaching target words. They attested that pre-teaching undermines motivation for extracting information from text. Reasons for the lack of growth in the area of pre-teaching could be attributed to small sample sizes, not enough time dedicated to pre-instruction, or invalid post-testing.

The commonality through the research is pre-teaching is an instructional strategy that can be implemented in the classrooms with much growth and benefits for students, in both vocabulary and comprehension. This study focused on determining the best ways to implement and assess this vocabulary strategy.

### Chapter III

#### Methods

The pre-instruction of vocabulary has been supported by research as a valuable method to improve reading comprehension. Based on this research, a study was conducted in order to investigate the effectiveness of this strategy in elementary schools. An experimental post-test only control group design (Campbell & Stanley, 1963) was used to test the hypothesis of pre-teaching vocabulary in order to increase students' reading comprehension. The independent variables were the pre-teaching treatment and grade level. The dependent variable was the weekly post-tests. SPSS Statistics program version 21 evaluated the data for this quantitative study. A 3 x 2 x (4) mixed analysis of variance analyzed the information collected as part of the research study.

#### Participants and Setting

The research study took place from late January to mid-March at an elementary school located in southeast Alabama. The school housed students in kindergarten through sixth grade. The first through third grade classrooms had an average of fifteen students, fourth and fifth grade classes had an average of twenty-seven students and sixth grade classrooms had an average of thirty students. Learning disabled and English language learners were mainstreamed into the regular education classroom with an inhouse resource teacher that worked individually with these students weekly. The school's middle class socio-economic population was 70.4% Caucasian, 20.7% African-

American, 4% Hispanic, 1.4% multi-racial, and 3.2% Asian. There were 1,326 students in the school.

The elementary school was comprised of eleven second grade classrooms, four fourth grade Reading/Language Arts classrooms, and four sixth grade Reading/Language Arts classrooms. One of the assistant principals in the elementary school sent out an email that gave classroom teachers in grades two, four, and six the opportunity to participate. These grade levels were chosen in order to have a lower, middle, and upper elementary grade represented for the analysis. The first classroom teachers to respond were asked to participate in the study along with their students. A small gift valued at \$10 was given to these classroom teachers at the completion of the research. The student participants were in four second grade classes, four fourth grade classes, and four sixth grade classes. All students in these twelve classes were invited to participate in this study, but only the data from those with signed parent consent forms were used in the analysis. A total of 234 students were involved in the research. One of the classroom teachers who volunteered to participate was the parent of a former student of the researcher. The remaining teachers had no personal relationship to the researcher. All of the data collected by the students was identified with a number and letter combination. The number identified the student, the letter identified the student's teacher. It is unknown if the researcher knew any of the students, as their names were not provided to the researcher during any point of the research study.

The study was conducted in self-contained classrooms with second graders and in departmentalized reading classrooms with fourth and sixth graders. Four classroom teachers in second graders were involved, but only two teachers in fourth and sixth. Both

the fourth and sixth grade morning and afternoon classes participated, which provided the four classes in each grade for the study. Lessons were taught at the same time of the day each week in order to help the classroom teachers maintain a consistent schedule. The classroom teachers implemented all the activities and assessments during the Reading and Language Arts block in the regular classroom. Each daily pre-instruction lesson or weekly reading assessment averaged about thirty minutes in length.

#### Context

A pre-experimental vocabulary knowledge test was given every Monday in one class in each of the three grade levels for the duration of the three-week experimental study. The purpose of this test was to check each grade level students' specific knowledge of the target words prior to instruction in an effort to determine whether the words were indeed unknown by the students in that grade level. This one class in each grade level that participated in the pre-experimental knowledge test was used as the sample of typical word knowledge for students in that grade. The assessment listed the selected twenty target words for that week and asked the students to define the words. Definitions were deemed acceptable if the student provided enough information that demonstrated understanding of the term.

Researcher-created weekly narrative stories and post-tests were used for this experimental study. See Appendix 3 for an example of a weekly post-test. The texts were written on grade level, to ensure the students would not have a difficult time decoding the words within the text. With the difficult target words replaced with easy synonyms, the texts would be considered on grade level. In this way, the focus was on learning the unknown vocabulary terms prior to reading with the goal of improving

comprehension. See Table 1 for the Flesch-Kincaid readability of each of the test passages by grade level. The passages were on grade level if an easier synonym replaced the harder target word. By substituting the specific target word, the difficulty of the passage increased.

Table 1

Readability of Narrative Post-test Passages

Grade Level	Story	Readability with easy target words	Readability with difficult target words
	The Weekend in the Woodland	2.5	3.1
Second	The Hamlet on the Coast	2.7	3.8
Second	A Midnight Whiteout	2.5	3.2
	A Trip to the Zoo	2.8	3.7
	The Catastrophe	4.5	5.5
Fourth	The Right Stuff	4.4	5.6
1 ourth	The Drowsy Celebrity	4.4	5.1
	The Emergency Room	4.5	5.2
	A Tribute to a Pacifist	6.6	7.7
Sixth	Persevering to the Apex	6.4	7.3
DIAHI	Joan's Debut	6.2	7.0
	The Baseball Game	6.2	6.9

Twenty target words per week were selected as terms that likely would be unknown to each grade level specifically. The words were chosen from a national curriculum, *Vocabulary Workshop* (2011). The second, fourth, and sixth grade

curriculums were used for word selection. See Appendix 4 for a complete list of the target words. These words intentionally were used in the post-test passage so that the sentence would not provide information to determine meaning. The words played such a role in the passage that the only way comprehension would be determined was if the meanings of the words were known (Anderson & Freebody, 1979). The assessments solely measured students' reading comprehension of the text utilizing the target words taught and not isolated vocabulary knowledge. This enabled the researcher to determine whether specific instruction on these unknown words allowed the students to concentrate more on comprehending the text and focus less on trying to determine meaning. Also, it was determined if general vocabulary instruction by grade level could improve reading comprehension. The researcher's colleague, one of the dissertation committee members, examined the materials for any information that might have been incorrect or hard to understand and checked the reliability of the post-tests. See Tables 4 and 9 for the results of the Cronbach's alpha reliability tests. No standardized assessments were used in this study.

The specific words chosen for each week's list were randomly selected from a list of sixty grade level terms. Out of the sixty total words, twenty words would be used for each week of the three week study. Only ten of these weekly twenty words were used on the weekly post-test. These ten words used were drawn out of a hat. There was a delayed post-test given one month after the completion of the research study. There were also ten words, out of a possible sixty, used on this post-test, also drawn out of a hat. If the same words were used on both the weekly post-test and the delayed post-test, that was

strictly coincidental. No considerations were made for those words that had been used on a weekly post-test prior to the delayed post-test.

The format for the post-tests was nine multiple-choice and one short answer (Beck et al., 1982). This method of post-testing was chosen because multiple-choice was a common format of testing for these elementary students. The students were comfortable with this type of test, taking standardized tests and curriculum based tests of this format. The short answer question allowed the researcher to see if the students were able to construct a written answer based on their understanding of the assessment text.

An informed parental consent form was sent home to all the students involved in the study two weeks prior to beginning the research study. The parental consent letter can be found in Appendix 9. The students, who returned the form received a fruit roll snack, whether or not the parents gave permission. Those students whose parents did not give consent still participated in the activities, but their work was eliminated from data analysis. The teachers collected all of the parent consent forms and made a list of those students, by number, that would be eliminated from the data analysis. The researcher then collected these forms and the teachers' lists.

Each student was given a vocabulary folder to keep all of their work in as they learned the new words. The vocabulary folders were color coded based on the role selected by the teacher: green represented treatment group one, blue represented treatment group two, red represented control group, and yellow represented the pre-experimental test group. The folders were numbered for each student and letter coded by class. Only the principal investigator knew the meaning of the color-coded system.

Because each student was given a numbered folder for all their work, there was no need

for the principal investigator to know the students' names. The researcher observed at least one session each week in each classroom. The instructional schedule is described in Figure 1.

The pre-teaching treatment involved rich, explicit instruction in order to encourage ownership of the taught target words. The goal of the pre-instruction is to develop automatic and accurate identification and understanding of the target words thereby creating "vocabulary fluency" for the student. On Monday and Tuesday, days one and two of instruction, the students in each of the treatment classes participated in a basic introduction to the target words (Beck et al., 1982; Gipe, 1978-1979). The teacher had the definitions of the words on an overhead or interactive whiteboard and progressed through the words one at a time discussing the definition. See Appendix 5 for an example of the definitional activity. For example, the teacher showed the word din and said, "The word din means a loud noise or commotion. When was a time that you have heard a din?" As he or she did so, the students were invited to share examples of when they may have heard or seen the given word before. The connection between the word and the definition was discussed between the teacher and students. To practice using the definitions, the students matched the words to its correct definition. This activity was stored in their vocabulary folder. The lesson and activity allowed the students to begin recalling any prior knowledge of the new words or introduced the words in a way to start building schema for any unknown word.

On day three, Wednesday, students focused on associating the words on the list together to demonstrate relationships in meaning. This lesson showed the students how the words were related to one another and to words already in their schema (Beck et al.,

1982; Gipe, 1978-1979). To begin the lesson, the teacher reviewed the definitions of the target words introduced to the students from days one and two. Then the students were given an activity that asked them to associate the words together according to common headings given to them. See Appendix 6 for an example of the associational activity. This activity, for example, gave the students the words din, commotion, clamor, and racket and a heading of the word "Noise." The students sorted the words that are associated with "Noise" and wrote them underneath the correct heading. After the students completed the activity, they went over the answers as a class and discussed what associations they made. The entire activity was put in their vocabulary folder.

Day four, Thursday, allowed the students to learn how the target words were used in context. The goal of the contextual method was to show the students how the words are used in a complete context (Beck et al., 1982; Gipe, 1978-1979). Prior to starting the lesson, the teacher reviewed the definitions and the target words introduced to the students on days one and two and the associations that were made on day three. The lesson involved the students using their knowledge of the definitions to determine the correct use of the word in context. See Appendix 7 for an example of the contextual activity. The word din might have been in a sentence, such as "As I walked past the bedroom door, I heard a din coming from inside the room." Students answered yes or no to show whether the word was used correctly in context. If the word was not used in context, the students discussed another target word for that week that might work correctly in that context. For the second part of the activity students created their own sentence for each of the words, thereby determining whether ownership of the word had occurred. The teacher passed one paper strip to each of the students and asked them to

write a sentence with one of the words. Students drew a word from a bag to determine which word they were to write. The strips were displayed on the board. The teacher called aloud each of the sentences as the class voted if the word was used correctly in context. The researcher observed each of the groups during their pre-teaching time as well as the post-testing procedures to check for fidelity.

On day five, Friday, all students read the narrative test passage and answered the ten comprehension questions. The questions focused on understanding the passage, not isolated vocabulary knowledge. The specific target words were incorporated into the narrative passage in such a way that the students had to know the meaning of the word in order to comprehend the passage. Each of the twenty target words was used twice in the story in order to make the words central to the story itself. The readability of the texts was on grade level when using easy synonyms for the target words. The challenging target words made the text about one grade level more difficult (see Table 1). The questions were written as nine multiple-choice and one short-answer. The students answers were written on the test and turned into the classroom teacher. This process repeated for a total of three weeks. The students wrote the number/letter combination of their folder on each of their tests.

One month after the third comprehension post-test was administered, all the students took a comprehension test that included ten words selected from a possible sixty words, a combination from all three of the weekly vocabulary word lists. It was formatted the same way as the weekly post-tests with nine multiple-choice questions and one short-answer question.

Figure 1

Instructional Calendar

Group	Word List Used	Monday	Tuesday	Wednesday	Thursday	Friday
Pre- experimental	Specific target words	Pre- experimental knowledge test				
Treatment 1 & 2	Specific target words	Definition method	Definition method	Association method	Context method	Post- test
Control	General grade level words	Definition method	Definition method	Association method	Context method	Post- test

Note: Both the treatment groups and the control group were assessed using the same post-test using the specific target words.

### Research Design

The research design was a post-test only control group design (Campbell & Stanley, 1963). This quasi-experimental study consisted of two treatment groups and one control group. Standardized test data on each of the classes was not available due to the fact the research was conducted prior to the annual standardized tests. Because of this, two treatment groups were used in order to make up for the inability to match the groups. The treatment groups received the vocabulary pre-teaching treatment utilizing the specific target words. Random assignment of students into the treatment and control groups was not employed in this study in order to keep the students in their regular classrooms for the observations and testing. The students were randomly assigned to their experimental role. The teachers were asked to choose a color: red, green, blue, or

yellow. The colors corresponded to their role: green represented treatment group one, blue represented treatment group two, red represented control group, and yellow represented the pre-experimental test group. Three grade levels were used and each grade level had two treatment groups, one control group, and one pre-experimental test group. The number and placement of participants is shown in Table 2.

Table 2
Placement of Participants

Grade	Control	Treatment 1	Treatment 2	Pre-experimental
Second	N = 20	N=19	N=21	N=22
Fourth	N = 25	N=23	N=26	N=25
Sixth	N = 14	N=18	N=19	N=12

The independent variables for this experiment were the pre-teaching treatment and the three grade levels. The dependent variable was the comprehension post-test given every Friday for three weeks. There was a delayed post-test given on all words pre-taught. Figure 2 illustrates the study design.

Figure 2

Experimental Design, Campbell and Stanley, 1963

	R R	X	O O		
R= random assignment of treatments					
X= pre-teaching treatment					
O= post-test					

There was random assignment of the treatments and each of the groups were assessed using the post-tests. The treatment groups in each grade received pre-instruction

on the specific weekly target words, whereas the control group in each grade had preinstruction and general grade level terms. The primary hypothesis was that there would be a significant difference between the treatment groups and the control groups on the weekly post-tests and delayed follow-up post-tests. A second expectation was that the grade levels would also differ in the effectiveness of the pre-teaching treatment.

#### Procedure

The assistant principal at the elementary school sent out an email asking for volunteers to participate in a vocabulary research study. After the teachers responded, the researcher contacted them in order to meet and discuss the expectations and procedures for the study. This training with the teachers took place two weeks prior to beginning the research. There were two sessions with each grade level group of teachers to discuss the study. The first training introduced the study and began a general explanation about the procedures. The second training session occurred a week later and reviewed the procedures and answered any questions the teachers had about the study. The teacher training materials can be found in Appendix 8. It was during this training that each of the teachers were asked to select a color: red, blue, green, or yellow. Each color represented one of the groups in the research study, either treatment, control, or preexperimental. The one classroom teacher in each grade that selected yellow or preexperimental understood their role, as their class would only be participating on Mondays. The other classroom teachers did not know which two were in the pre-teaching groups, either blue or green, and which one was in the control group, red. The three classroom teachers, in the treatment and control groups, were given a list of words to teach for four days. The experimental treatment group teachers' lists were those vocabulary terms

directly used in the test text. The control group teachers' word lists were grade level, general vocabulary terms, but were not linked in any way to the test text itself.

The informed parental consent form was sent home to all the students involved in the study two weeks prior to beginning research. As they were returned, the students received a fruit roll, whether or not they received permission. The form explained the process of the research and how the data would be collected, reported, and destroyed. Those students whose parents did not give consent still participated in the activity, but their work was eliminated from data analysis. On the Friday prior to the beginning of the study on Monday, the returned forms were collected from the classroom teachers. The classroom teachers made the researcher a list of the numbers corresponding to students that had to be removed for the analysis.

Two classrooms from each of the grade levels in the experimental group were chosen randomly to receive the pre-teaching treatment on specific target words for about thirty minutes each for four consecutive days. The control group received vocabulary instruction as well, but used a separate list of on-grade-level words. All three groups participated in the same method of instruction, the pre-teaching groups used one set of vocabulary terms, and the control groups used another set of terms. None of the students commented on the differences in the word lists. Each week, the experimenter dropped off the materials needed. Included in the materials were the teacher directions for each of the daily activities. A sample of the weekly teacher directions can be found in Appendix 10.

The Friday prior to each week of the research study, the researcher would bring the materials to the elementary school. The materials were housed in the assistant

principal's locked office until Monday when the teachers would pick up their materials for the week.

One class in each of the grade level was given the pre-experimental knowledge test on each Monday for three weeks. The purpose of this pre-experimental test was to determine whether the words chosen as the target words were truly unknown to students within that grade level. The classroom teacher passed out the pre-experimental test and read the directions to the students from their provided teacher direction materials. The test asked the students to write the definition to each of the target words. If the student did not know the meaning, he or she was asked to leave the question blank. After the students completed the assignment, they were collected. The researcher collected these materials on Friday of that week and replaced it with the pre-experimental assessment for the following week.

For the other three groups, the goal of Monday and Tuesday, days one and two, was to provide a basic introduction to the words. Students in both the treatment and control groups were given the definitions to begin establishing or recalling background knowledge for the terms. The classroom teacher showed the terms to the students the words and the definitions on the overheard, via their provided transparency, or electronically using the interactive whiteboard. The class discussed the words and their meanings. Following the discussion the students were given a zip food storage bag with the terms and definitions cut up, along with a piece of construction paper and a glue stick. Their assignment was to use their knowledge of the target words to match the word with its correct definition. After the students completed the assignment, the teacher went over

the correct answers with the students. The finished assignments were placed in the students' work folders.

Wednesdays, day three, focused on association instruction, which demonstrated to the students how the words are related to one another and to words already in their schemata. The classroom teacher would pass out the activity for the day and go over directions, which asked the students to look at the list of twenty target words along with pre-determined labels. Based on what the students already know about the words, they were to sort the words under the appropriate label. Students completed this assignment individually, but as a class, the answers were discussed and explained. After the discussion was complete, the students stored the assignment in their work folder.

Day four, Thursday, focused on the contextual method, which included examples of the words used in context as well as asking the students to create their own context for the words, thereby determining if ownership of the word had occurred. The classroom teacher passed out the activity sheet and would go over directions. The students were asked to determine if the word used in each sentence, was done so correctly in context. If not, the students was asked if another target word would be better used in that sentence. The classroom teacher would review the correct answers with the students. Then, the classroom teacher would walk around and have each student take one of the target words out of a bag. Using this word, the students were asked to write one sentence to conclude if the students could apply the word correctly in context. The sentences were shared with the class and discussed if the word was used properly. The activity and the written sentence were placed in the student's work folder.

On the fifth day, Friday, all students in both the treatment and control groups read the same narrative test passage and answered the ten comprehension questions. There was no review of the terms or definitions prior to the assessment. The teachers passed out the assessment, gave the students time to finish. There was no time limit on the assessment. After all the students completed the assessment, the tests were collected and all the materials for the week were returned to the assistant principal's office.

This process was repeated for three weeks. When all three passages were read, all the students took a comprehension test that included ten out of the possible sixty words for their specific grade level. These ten words were chosen out of a hat. This follow-up delayed post test was given one month after the end of the three week experimental preteaching treatment. The post-test was given on a Friday and no review of the words was given to the students prior to taking this follow-up assessment. The teacher passed out the assessment, gave the students time to complete it and collected them. The researcher picked the tests up that same afternoon. The assessments used in the study were experimenter created and focused on the specific target words. The students should have known all other words in the text so that once the students were pre-taught the target words, all words would be known (Mezynski, 1983).

The researcher observed the groups at least once per week during their preteaching time, as well, during the post-testing procedures to ensure fidelity. Some of the classroom teachers conducted the pre-instruction and post-tests at the same time as others due to similar classroom daily schedules.

### Chapter IV

#### Results

The first three chapters of this study gave an introduction to the research problem, a report of the purpose and significance of this study, a review of research and literature describing the connection between vocabulary and comprehension, and the methods and procedures used to collect and analyze the data. The analysis of the data is reported in this chapter. Quantitative data were collected to respond to the research question. SPSS Statistics program version 21 was used to evaluate the data gathered.

#### Introduction

The objective of this study was to explore the effectiveness of pre-teaching to improve students' comprehension of a narrative text. A pre-experimental knowledge test was given to one class in each of the three grade levels, second, fourth, and sixth, to determine whether the target words chosen were, in fact, unknown to students of that grade level prior to instruction. Four days each week for three weeks, students in both the treatment and control groups were immersed in rich vocabulary instruction, using the definitional, association, and contextual methods (Gipe, 1978-1979). The treatment groups' instruction focused on specific target words that would be directly transferred to the comprehension post-test. The control groups were instructed using general grade level vocabulary terms. Students were assessed on the specific target words using a reading comprehension assessment, following the four days of vocabulary pre-instruction. The weekly post-test included nine multiple-choice questions and one short answer question.

Ten of the weekly target words were chosen out of a hat to be included on the weekly post-test. A follow-up delayed post-test was given one month after the third week of instruction to assess students' cumulative knowledge of the target words. This follow-up post-test was also nine multiple choice and one short answer. Ten of the sixty cumulative target words were chosen out of a hat to be included in the follow-up delayed post-test. Quantitative data was collected from the students' scores on the post-tests and analyzed. The data resulting from this research were used to answer the research question, "Will the pre-teaching of specific target words improve elementary students' comprehension of a narrative text?"

## Data Analysis

This study involved students in second, fourth, and sixth grade classes. All the students in each class participated in the pre-instruction and post-tests, but only those students that returned a signed, approved parental consent form had their results included in the data analysis. If students were absent on the day of a vocabulary post-test or the delayed post-test, no score was entered for the data analysis. In addition, students who may have been absent any day during the pre-instruction were still required to take the vocabulary post-test on Friday and the delayed post-test. Table 3 describes the absences for the weekly post-tests and delayed follow-up post-tests. No score was recorded for these students.

Table 3

Number of Student Absences by Week and Class

Grade Level	Teacher	Week 1	Week 2	Week 3	Week 4
	С	1	2	1	5
Second	M	3	1	0	5
	J	2	2	4	2
	R	1	2	1	4
Fourth	H1	0	1	3	3
	H2	2	1	1	5
	M	0	0	2	3
Sixth	C1	1	0	1	11
	C2	4	2	2	6

Note: H1, H2, C1, and C2 denote the same teacher using both of classes in a departmentalized grade level.

On Monday of each week during the study, a pre-experimental knowledge test assessed one class in each grade level on the twenty vocabulary target words. This class was used to be a sample of general word knowledge for typical students in that specific grade level. Results from Cronbach's alpha test of reliability for each of these knowledge tests are shown in Table 4. Each pre-experimental knowledge test had twenty items, one for each word, assessing the students' knowledge of the terms prior to beginning the study. The cutoff score of acceptability for Cronbach's alpha test of reliability is .70. Based on the data, the scores showed acceptable minimal internal consistency.

Table 4

Cronbach's Alpha Test of Reliability for Pre-experimental Knowledge Tests

Grade Level	Week 1	Week 2	Week 3
Second	α=.854	α=.832	α=.846
Fourth	$\alpha = .767$	$\alpha$ =.798	$\alpha = .771$
Sixth	$\alpha = .801$	$\alpha = .819$	$\alpha = .812$

The results of the pre-experimental tests, shown in Table 5, are differentiated by grade level and week. Each of the twenty target words was assessed on the pre-

experimental test. Knowledge of these twenty words on average for the students in second grade ranged from knowing 5.27 words out of 20 the first week, 3.91 words the second week, and 3.19 words the third week. The fourth graders scores stretched from 4.38 words out of 20 for week one, 6.42 words for week two, and 6.74 words for week three. The sixth graders had the lowest average of the three grade levels at 2.83 words out of 20 for the first week, 4.43 for the second week, and 2.38 for the third week.

Table 5

Averages from Weekly Pre-experimental Knowledge Test

Grade Level	Week 1 Mean (SD)	Week 2 Mean (SD)	Week 3 Mean (SD)
Second	5.27 (2.89)	3.91 (2.79)	3.19 (1.94)
Fourth	4.38 (3.52)	6.42 (3.78)	6.74 (3.19)
Sixth	2.83(1.64)	4.43 (2.41)	2.38 (1.89)

Table 6 displays the top five terms that were most and least often correct for second grade on the pre-experimental knowledge test and the corresponding percentages for each week. Out of the twenty total words, only three of the second grade words in week one were known by more than 50% of the students in the class: shiver, weekend, and arrive. There were also three words that were unknown by everyone in the class. The similar results occurred for week two. Only three of the words were already known by at least 50% of the second grade students: seashell, travel, and ocean. During week two, five words were unknown by all the students. Week three revealed that four words were known by more than 50% of second graders: midnight, hour, clear, and finally and like week three, five words were unknown by everyone. For a complete list of the target words used in second grade, see Appendix 4.

Table 6

Percentage of Target Words Correct for Second Grade

Second Grade	Most Often Correct	Least Often Correct
	Shiver (73%)	Anxious (0%)
	Weekend (73%)	Abysmal (0%)
Week 1	Arrive (59%)	Inquisitive (0%)
	Alert (45%)	Murmur (5%)
	Startle (36%)	Secure (5%)
	Ocean (86%)	Intact (0%)
	Travel (68%)	Hamlet (0%)
Week 2	Seashell (50%)	Perilous (0%)
	Coast (23%)	Mass (0%)
	Plank (18%)	Tranquil (0%)
	Midnight (82%)	Vapor (0%)
	Hour (55%)	Span (0%)
Week 3	Clear (50%)	Channel (0%)
	Finally (50%)	Chalet (0%)
	Dawn (18%)	Exposed (0%)

Table 7 provides the list of the top five target words that were most and least often correct and the corresponding percentages for fourth grade on the pre-experimental knowledge test. For week one, only one word was known by more than half of the participating students: construct. Volunteers, alert, and proceeded came close, being known by 48% and 44% of the class respectively. Also for week one, only one word was unknown by all contributing students: copious. The remaining target words were already known by at least 4% of the students. Week two showed four words known by 50% or more of the students: outstanding, dispose, routine, and bonus. None of the words were unknown by all the students. Variety had the lowest percentage, being known by 4% of the participating students. Week three the highest most often correct

percentages for fourth grade: five of the words were already known by more than 67% of the class, dungeon at the most, already known by 81% of the class. All of the words for week four were already known, the least often correct word was earnest with 4% of the students knowing the correct meaning. For a complete list of the fourth grade target words, see Appendix 4.

Table 7

Percentage of Target Words Correct for Fourth Grade

Fourth Grade	Most Often Correct	Least Often Correct
	Construct (59%)	Copious (0%)
	Alert (48%)	Apprehensive (4%)
Week 1	Volunteers (48%)	Fatigued (4%)
	Proceeded (44%)	Trudge (4%)
	Catastrophe (37%)	Trepidation (4%)
	Outstanding (59%)	Variety (4%)
	Dispose (59%)	Approximate (7%)
Week 2	Routine (59%)	Haste (19%)
	Bonus (52%)	Content (19%)
	Calculate (44%)	Contract (19%)
	Dungeon (81%)	Earnest (4%)
	Celebrity (74%)	Fatal (7%)
Week 3	Assist (74%)	Jubilant (7%)
	Drowsy (67%)	Dominant (11%)
	Blossom (67%)	Noble (11%)

The sixth grade results from the pre-experimental tests are shown in Table 8.

During week one, five out of the twenty words were unknown to all of the students. Only two words, infuriate and immobile, were already known to more than 50% of the class.

For week two, three of the twenty words were unknown to all the students and four of the words were already known to at least 50% of the class. These words were vow, sluggish, maze, and scan. Again, five words were unknown to all the students for week three, and

two words, gloat and keepsake, were unknown by 50% of the class or more. A complete list of the sixth grade target words can be found in Appendix 4.

Table 8

Percentage of Target Words Correct for Sixth Grade

Sixth Grade	Most Often Correct	Least Often Correct
	Infuriate (79%)	Inflammatory (0%)
	Immobile (57%)	Partisan (0%)
Week 1	Tribute (21%)	Repast (0%)
	Confront (21%)	Rigorous (0%)
	Vacate (21%)	Acquit (0%)
	Vow (79%)	Inhabitant (0%)
	Sluggish (57%)	Deem (0%)
Week 2	Maze (57%)	Douse (0%)
	Scan (50%)	Apex (7%)
	Strand (38%)	Plight (7%)
	Gloat (57%)	Thrive (0%)
	Keepsake (57%)	Prevail (0%)
Week 3	Encounter (38%)	Ingrained (0%)
	Headstrong (21%)	Jovial (0%)
	Intimidate (21%)	Debut (0%)

. The results above supported the conclusion that the specific twenty target words chosen for the pre-instruction would be, on average, unknown to students in each grade level prior to the vocabulary pre-teaching treatment. These grade level specific words were incorporated into the pre-instruction and assessed weekly on a reading comprehension test and on the follow-up delayed post-test.

The reliability for the three weekly post-tests and one follow-up delayed post-test was determined by Cronbach's alpha. The results of the reliability analysis can be found in Table 9. Each weekly test had a total of ten items, assessing knowledge of ten of the

twenty target words that had been randomly chosen out of a hat. Again, the accepted value for Cronbach's alpha is .70. Fourth grade week 2 was close to this cut-off score, at .701. The others were found to have acceptable internal consistency.

Table 9

Cronbach's Alpha Test of Reliability for Weekly Post-tests

Grade Level	Week	Cronbach's alpha
	1	α=.777
Second	2	$\alpha = .756$
Second	3	$\alpha = .745$
	Follow-up	$\alpha = .786$
	1	α=.767
Fourth	2	$\alpha = .701$
rourui	3	$\alpha = .831$
	Follow-up	$\alpha = .770$
	1	$\alpha = .799$
Sixth	2	$\alpha = .794$
Sixui	3	$\alpha = .776$
	Follow-up	α=.924

A 3 X 2 X (4) mixed analysis of variance (ANOVA) was conducted to evaluate the effects of the pre-teaching treatment, grade level and week. Three grade levels: second, fourth, and sixth, were included in the study. Two groups, treatment and control, were assessed using weekly post-tests, which were given at the end of each of three weeks and again a month after the third week. The dependent variable was the comprehension post-test. The independent variables were the pre-teaching treatment, grade level and week.

The tests of between subjects effects, shown in Table 10, analyzed three levels: group, which is the treatment and control, grade level, and the interaction of group and grade level. This test presented statistically significant effects with the variables of grade

level [ $\underline{F}$ (2, 132)=16.005,  $\underline{p}$ <. 001] and instructional group [ $\underline{F}$ (1, 132)=10.804,  $\underline{p}$ =. 001]. There was not a significant effect with the interaction of grade and group.

Table 10

Tests of Between Subjects Effects

Between Subjects	df	MS	F	Sig.
Grade	2	113.227	16.005	p<.001
Group	1	76.434	10.804	p=.001
Grade x Group	2	6.326	.894	p=.411
Error	132	7.074		

In addition, the tests of within subject effects, shown in Table 11, evaluated the effects over the four weeks as well as the extent to which differences each week were dependent upon grade level, group, or both grade and group. There was an overall general effect for weeks  $[\underline{F}=(3,396),\underline{p}=.023)$ , indicating that this sample performed better in weeks 1 and 2 compared to weeks 3 and the follow-up week. However, this effect was clarified by the statistically significant interactions between week and grade  $[\underline{F}=(6,396),\underline{p}<.001]$  and between week and group  $[\underline{F}=(3,396),\underline{p}=.002]$ . The three-way interaction of week, group, and grade did not show statistically significant effects.

Table 11

Tests of Within Subjects Effects

Within Subjects	df	MS	F	Sig.
Week	3	6.82	3.19	p=.023
Week x Grade	6	63.47	29.74	p<.000
Week x Group	3	10.92	5.116	p=.002
Week x Group x Grade	6	3.71	1.739	p=.111
Error	396	2.134		

Based on the results from the tests of within subjects effects, follow-up one-way ANOVA were conducted to focus on the significant interactions between week and grade level as well as week and group.

Week by Grade Level Interaction Effect

Grade level and week was determined to have a statistically significant interaction from the within subjects effects test. Table 12 illustrates the means for each week by grade level interaction. Based on the data, week 1 [ $\underline{F}$  (24.028),  $\underline{p}$ <.001], week 3 [ $\underline{F}$  (5.910),  $\underline{p}$ =.003] and week 4 [ $\underline{F}$  (80.75),  $\underline{p}$ <.001] showed statistically significant differences. Week 2 did not show significant differences.

Table 12

Descriptive Statistics for Week by Grade Level

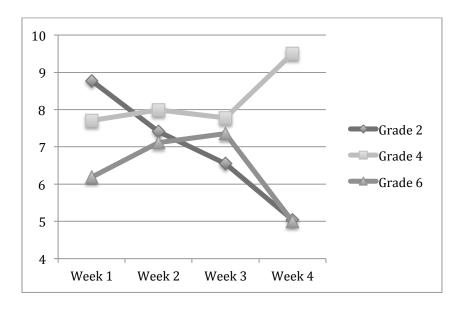
Grade	Week 1 Mean (SD)	Week 2 Mean (SD)	Week 3 Mean (SD)	Follow-up Mean (SD)
2	8.77 (.284)	7.41 (.304)	6.55 (.349)	5.05 (.336)
4	7.71 (.228)	7.99 (.228)	7.78 (.280)	9.50 (.270)
6	6.19 (.264)	7.12 (.264)	7.35 (.325)	6.59 (.312)
F (p)	24.028 (<.001)	2.893 (.058)	5.910 (.003)	80.745 (<.001)

Following this one-way ANOVA, Bonferroni post hoc tests were performed to examine specific differences between the three grade levels after each week. These results revealed that students in second grade had significantly higher reading comprehension scores for week 1 (p=.001). The third (p=.002) and follow-up weeks (p<.000) indicated fourth grade had significantly higher reading comprehension scores. Week two results showed all three grade levels had generally the same levels of reading comprehension. Sixth grade scores were not significant during any of the four weeks.

Figure 3 displays the specific grade level mean scores for each week of instruction. The grade level scores include all the students in that grade, treatment and control group combined. Grade two started out with the highest mean score for week one at 8.77 and the students gradually decreased in scores as the weeks went on. Second grade week two was 7.41, week three was 6.54, and week four ended with 5.05. Fourth grade scores stayed generally in the same range for the first three weeks with 7.71, 7.99, and 7.78 and then made a large increase on the delayed follow-up post-test at 9.5. The sixth graders did increase slightly each of the initial three weeks, but remained within the same general range at 6.19, 7.12, and 7.35. The mean score dropped slightly on the follow-up post-test at 6.55.

Figure 3.

Week by Grade Level Mean Scores



## Week by Group Interaction

A follow-up one-way ANOVA was also conducted to determine which group, treatment or control, performed better each week. Additional post hoc tests were not

performed because there were only two groups. As shown in Table 13, week by group interaction [ $\underline{F}$  (1, 132)= 12.054,  $\underline{p}$ =.001], results revealed that the pre-teaching treatment group scores were significantly different at different weeks. Follow-up one-way ANOVAs revealed statistically significant differences at weeks one, two and three. The treatment group did have higher scores than the control group on the follow up post-test, but they were not statistically significant.

Table 13

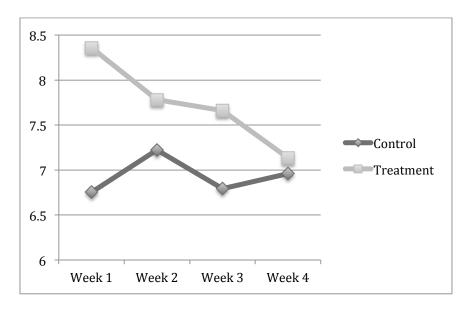
Descriptive Statistics for Week by Group

Group	Week 1 Mean (SD)	Week 2 Mean (SD)	Week 3 Mean (SD)	Follow-up Mean (SD)
Control	6.75 (.243)	7.22 (.257)	6.79 (.299)	6.96 (.287)
Treatment	8.36 (.176)	7.78 (.186)	7.66 (.216)	7.13 (.208)
F (p)	31.226 (<.001)	8.036 (.005)	11.189 (.001)	.570 (.451)

Figure 4 displays the results comparing the treatment and control group scores each week. The group scores showed a combined mean of all grade levels. Overall, the treatment groups had better results than the control groups. Although, the scores for the treatment groups did decrease with each week, the goal of the research study was not to look at change over time, but the weekly pre-teaching treatment's direct impact on that week's post-test. For the first week, the treatment groups had a mean of 8.54 compared to the control group at 6.75. Week two means showed treatment group mean at 7.78 with the control group mean at 7.22. Week three means were 7.66 for treatment groups and 6.79 for control groups. On the follow-up post test, the treatment groups mean score was 7.13 and the control group mean was 6.96. The treatment groups means were greater the control group each week, but significantly different the first three weeks.

Figure 4

Week by Group Mean Scores



# Summary

The results of the statistical analyses helped to answer the research question, "Will the pre-teaching of specific target words improve elementary students' reading comprehension?" Absences based on incompletion of the weekly and follow-up posttests were examined to determine if student absences played a role in the overall data effects. Cronbach's alpha test of reliability was conducted on the pre-experimental knowledge tests as well as the weekly post-tests and delayed follow-up post tests. All of these tests met the .70 minimum of internal consistency. The target words were also considered based on the results of the pre-experimental knowledge tests. The five terms most and least often correct for each grade level were also analyzed.

A 3 x 2 x (4) mixed ANOVA was performed to evaluate the effects of the preteaching treatment, grade level and week. The between subjects tests results revealed significant effects with the variables of grade level and group. The tests of within subjects effects showed significant results of the week by grade interaction and week by group interaction.

A one-way ANOVA compared the three grade levels and their performance on the reading comprehension assessments each week. Grade two overall had greater scores on week one while grade four overall had greater scores on week three and on the follow-up post-test. None of the scores for week two were statistically significant and the sixth grade did not have significant results for any of the four weeks.

A second one-way ANOVA compared the treatment groups to the control groups each week. The students who received specific target word pre-teaching instruction in weeks one, two, and three had improved reading comprehension over those students who received general grade level vocabulary instruction. On the follow-up reading comprehension post-test, students in the pre-teaching treatment groups did have higher scores than the control groups, but the results were not statistically significant.

# Chapter V

# **Conclusions and Implications**

### Introduction

This research study examined the effect of specific target word pre-instruction on students' reading comprehension of a narrative text. This chapter presents an overview of this experimental study and a summary of the important conclusions drawn from the analysis of data. Also provided is a discussion of the implications for action and recommendations for further research.

## Summary of Findings and Implications

This research study was conducted in the spring semester at a middle-class suburban elementary school. The students selected were from four classes in second, fourth, and sixth grade. The teachers that participated were volunteers and received training two weeks prior to starting the vocabulary pre-instruction.

Each Monday, one class of each grade level was given a pre-experimental vocabulary knowledge test to evaluate familiarity of the specific target words chosen for that grade. This pre-experimental assessment was evaluated for reliability using Cronbach's alpha (see Table 4) and also the frequency of correct definitions (see Tables 6, 7, and 8) provided by these students. Although the results revealed that the twenty target words chosen were on average, unfamiliar to the students of each grade level, there were certain target words that were already recognized by at least half of the class. The

majority of the terms was unknown and therefore supported the idea that pre-instruction was necessary to aid the students in making meaning from them.

Two treatment groups and one control group from each of the three grade levels were randomly selected to receive the vocabulary pre-instruction. Two treatment groups were chosen, because standardized test data was not available. If this data had been available, matching could have been incorporated to ensure equal achievement levels of students in each class. The use of two treatment groups helped to create an average group of students for each grade level by which to analyze the effectiveness of vocabulary pre-instruction. The strategy that was implemented incorporated the components of rich vocabulary instruction. Students encountered the target words multiple times in a variety of modes: definitional, association, and contextual (Gipe, 1978-1979). Both the treatment and control groups received the same modes of instruction. The difference in groups was the treatment groups' instruction focused on the specific target words that would be directly transferred to the test passage. The control group received instruction on general grade level terms, not specifically used in the test passage. The goal of this pre-instruction was to aide the students in creating "vocabulary fluency" thereby allowing them to be automatic and accurate when applying the meaning of the target words while comprehending.

Both the experimenter-created weekly post-test and the delayed follow-up post-test consisted of nine multiple-choice questions as well as one short answer question. It was the objective of these tests to situate the specific target words in such a way that the students could not gain understanding by the use of context. The test passage was narrative and written in standard story format. The goal of the post-tests was to assess

reading comprehension of the passage, not word knowledge alone. The target words were used twice throughout the story as well as in the questions asked on the post-test. A particular misconception in the field of comprehension is that meaning can always be determined in context. Although context can assist in determining meaning, the reader should have a connection to the text in order to fully develop understanding (M. Ruddell, 1985). The activation of schema and creating an interaction with the text has been found to increase comprehension, especially within a narrative text (Piaget, 1926; Rosenblatt, 1983; 1994). The development of "vocabulary fluency" by way of pre-instruction supported this activation and ownership of word meaning.

This study provided at least two important implications for researchers studying the connection between vocabulary and comprehension of narrative texts. After the implementation of the pre-instruction, students in the treatment groups had greater comprehension on the weekly post-test during the first three weeks compared to the control group. While this finding was similar to previous studies, this study provided insight into the use of selected pre-teaching strategies (Armbruster & Nagy, 1992; Ausubel, 1960; Carney, Anderson, Blackburn, & Blessing, 1984; Freebody & Anderson, 1983b; Medo & Ryder, 1993; Stahl et al., 1989) and the components of pre-teaching (Blachowicz, Fisher, & Watts-Taffe, 2011; Christ & Wang, 2010; Coyne, McCoach, & Kapp, 2007; Jitendra, Edwards, Sacks, & Jacobsen, 2004; Juel, Blancarosa, Coker, & Deffes, 2003; McKeown & Beck, 2004; Penno, Moore, & Wilkinson, 2002). The students who were part of the treatment groups received rich pre-teaching that utilized definitional, contextual, and association methods of vocabulary instruction over a period of three days. Also, the target words were directly related to the narrative test passage

and comprehension questions asked, which allowed for complete transference of meaning. The use of the target words on the weekly post-test and follow-up post-test was done in such a way that the students could not gain meaning from context. This finding confirmed that students in the treatment groups benefited greatly from the vocabulary pre-instruction that included multiple exposures and ownership of created understanding. This allowed them to gain "vocabulary fluency" and impacted their ability to concentrate more on the text for comprehension than on stopping to determine meaning.

A second finding was that second and fourth graders performed better overall than the sixth graders. There have been no prior studies conducted applying the use of rich, focused pre-instruction with students in grades below third. The second graders' high performance on the week one post-test supports the theory that vocabulary pre-instruction of any kind can assist lower grade elementary students to focus on reading comprehension. The fourth graders performed better on the week three post-test and the delayed follow-up post-test. This study informs the field that the pre-instruction of vocabulary in elementary schools benefits students in general and can help to greatly improve comprehension, specifically narrative texts (Brett, 1996). Providing students with strong vocabulary instruction prior to reading a selected text may have impacted the students to pay closer attention while reading.

# Limitations and Further Research

One limitation to the current study was that all classroom teachers involved in the research study could not be observed each time the pre-instruction was provided to the students. In some cases, the instructors were teaching simultaneously, thereby not allowing the researcher to observe. The fidelity of the pre-teaching could have been

misrepresented, which could have affected the students' performance on the reading comprehension post-test. Shown by the data analysis, the rich vocabulary instruction provided during the pre-teaching was vital for comprehension on the post-test. In future research, if all classroom teachers cannot be observed during the pre-instruction, the teachers should be interviewed after giving instruction to assess the effectiveness of the instruction for that day and fidelity of the teacher's actions related to the research study.

Also, in conducting this research study, it was discovered that the attitude of the students, specifically sixth graders, made the pre-teaching instructional strategies problematic. During pre-instruction, the sixth grade classroom teachers commented that the students would often put no effort toward the activities. Additionally, on the graded post-tests, some the questions were left blank or appeared to be circled in haste. Being that this assignment was part of a research study and not in their normal classroom curriculum, the students may not have been motivated to do their best work while completing both the pre-teaching activities and the post-tests. Also, this assignment had no direct impact on their classroom grades or averages. Because of this, there could have been no initiative on the students' part to do his or her best. This instructional strategy was implemented during the spring semester of the school year, beginning in late January and being completed mid-March. Student motivation could have been affected based on the time of year, beginning soon after Christmas and the delayed post-test being given shortly before spring holidays. The lack of effort during the vocabulary pre-instruction would have most certainly affected their results on the comprehension post-test. Also, if the students did not clearly represent their understanding of the words on the post-tests by selecting answers randomly or leaving them blank, the results for this grade level would

not have been accurate. Future studies should focus on the area of reading attitudes for upper elementary students in conjunction with the implementation of pre-instruction.

The application of methods to encourage students to perform their best on the activities is vital to determine the accurate success of the pre-teaching. Also for consideration should be the time of year the instructional method would be implemented.

A third limitation was the actual assessment instrument used in the research study. The goal of the reading comprehension post-tests was use of the specific target words in a way that knowledge of the words had to have been gained by the pre-instruction. The assessment was written with nine multiple-choice questions with one short answer. Being a multiple-choice test, it was possible that the students made a lucky guess and did not really know the meanings of the words, which would have affected the results. Also to be considered is the way in which the questions were worded. If some of the questions were written in a way that was confusing to students, they would not have been able to apply their knowledge of the target terms. Also, there were some questions on the posttests that several of the students answered incorrectly. These questions themselves may have been written too easily or confusingly for the students. Further research should be done to determine the best methods to assess vocabulary knowledge and comprehension in order to get a clearer picture of understanding. Furthermore, research should focus on those questions most often answered incorrectly to determine the effectiveness of the wording in assessing the text.

On the post-tests, ten of the target words were selected by being chosen out of a hat. These ten terms were not taken into account when choosing the ten to be used on the delayed post-test. In future studies, those terms already used should be considered

and other words used on the delayed post-test to get a broader view of student understanding of the target terms. Additionally, more account should be taken for the words most often correct on the pre-experimental tests. The terms known by more than 50% of the students should be replaced by more difficult synonyms on all materials prior to beginning the study. If these easier terms were those chosen to be assessed on the post-tests, students would have already known their meaning and the understanding of the term demonstrated on the post-test would be flawed.

A lack of signed permission forms was an issue in the implementation of this research study, with the sixth graders specifically. Several parents returned the form, writing in that the student did not have permission for their data to be included. Many students did not return the consent form at all. It is unclear if the form was not presented to the parents or if it was given to the students' parents and they did not consent. Had more students been able to participate, particularly in sixth grade, the effectiveness of the strategy may have been more apparent. Future research may consider a parent meeting to explain the design for the research study thereby ensuring parents that normal instruction would not be affected and anonymity would be maintained in the data analysis.

Further research also is needed to improve the results on the follow-up post-test. This study did not incorporate a review of the target words prior to the follow-up post-test given one month following the pre-instruction. The goal in assigning this follow-up post-test was to determine if students' were able to retain the knowledge gained during the pre-instruction long-term. There was no instruction directly prior to the follow-up test and may be needed in order for students to activate the knowledge gained from the

pre-teaching. Taking more of the words into account or eliminating words that were used on the weekly post-tests may improve this follow-up post-test.

Individual student absences were not recorded during the days of pre-instruction. Students that were absent from school during the four days of pre-teaching were still required to take the post-test. Absences were known for the post-tests as the student would not have had a grade for the test if they were not in attendance. The student's success on this post-test would have been affected if he or she had missed one or more days of the specific pre-teaching of the terms. Also, if a student was absent on the day of a post-test, he or she was not required to make up the assessment. No score was added during the data analysis for missing data. A student could have been part of the pre-instruction and would have missed the opportunity to display his or her learning by being absent. The majority of the absences on the post-test occurred on the week of the follow-up delayed post-test, which would have affected the results in determining the cumulative knowledge of the students. Future research should take student absences into consideration and build in provisions that would allow for more student data to be included in the final assessment of the treatment.

Specific student demographics or test scores were not collected or analyzed during the process of the pre-teaching treatment. The use of two treatment groups helped create average group of students for data analysis, but future research would benefit from receiving specific student information anonymously to get a clearer picture of the classes. Ensuring equal levels of students in each class and evaluating the effectiveness of the strategy on different student populations would add to the field of research. After finding that the pre-teaching strategy was effective in helping to improve

reading comprehension, the researcher believes that other populations of students may benefit from the implementation of this strategy. Low-income or English as a second language populations, supposing that their vocabulary knowledge may be below grade level, may be suitable groups to target and apply this strategy to help affect their reading comprehension abilities. Collecting student demographic information in future research would help confirm this theory.

During the data analysis, it was shown that the treatment groups' scores decreased with each week of the pre-instruction. Although they remained above the control group scores significantly for the first three weeks, this decline has raised questions about why the higher scores did not sustain over time. The first explanation could have been the context of the school year. As discussed above, this research study was implemented during the spring semester of the school year, prior to spring holidays. The time of year that the pre-instruction was implemented could have impacted the students' attitudes as the spring holidays approached. Another explanation could be that the students in the treatment groups did well the first week when the instructional methods and procedures were fresh to them, but as the weeks went on, their enthusiasm for participating in the study diminished. The same could be said for the classroom teachers implementing the pre-teaching strategy. They too may have been looking forward to the spring holidays and their enthusiasm and fidelity for providing the rich vocabulary instruction may have been affected as the weeks continued. Also to be considered would be any health related issues that may have impacted the students. It is not known whether sicknesses caused the students' focus to be lessened or absences from school that would have altered demonstration of their actual proficiency of the target terms. Absences, as discussed

above, could have been a factor in the decrease over time. The data showed a significant amount of absences, specifically with the sixth graders on the day the follow-up post-test was given. No make up day for this assessment was provided for the students. A record of those students that were absent for any of the days of pre-instruction was not collected, but if the students were absent during the days of pre-teaching, the results would have been impacted.

For educators that wish to implement the strategy of pre-instruction with words used in a narrative text, certain guidelines should be considered. First, the effectiveness of the strategy to affect comprehension comes from providing students with rich instruction supporting the ideas of multiple encounters and varying modes of teaching. This instruction creates for students a "vocabulary fluency" helping them to be automatic and accurate with meaning when they come across the terms in text and does not halt their comprehension in any way. The words selected for the pre-instruction should be those terms necessary for comprehension of the text as a whole. Terms that are not central to the understanding of the text, may not be necessary for comprehension. Also, students should have complete transferability of the new word knowledge to the test passage.

Great attention has been given to the relationship of vocabulary instruction and reading comprehension. Researchers are looking for ways to help students improve in the area of comprehension by implementing various vocabulary instructional strategies. The use of rich pre-teaching through three methods of instruction and transferability to the test passage, this study contributes to the increasing understanding of how to develop this connection.

#### References

- Armbruster, B. B. & Nagy, W. E. (1992). Vocabulary in content area lessons. *The Reading Teacher*, 45(7), 550-551.
- Anderson, R.C. & Freebody, P. (1979). Vocabulary knowledge. (Tech. Rep. No. 136).

  Urbana: University of Illinois, Center for the Study of Reading. (ERIC Document Reproduction Service No. ED 177480)
- Ausubel, D.P. (1960). The use of advance organizers in the learning and retention of meaningful verbal material. *Journal of Educational Psychology*, *51*(5), 267-272.
- Beck, I. L., Omanson, R. C., & McKeown, M. G. (1982). An instructional redesign of reading lessons: Effects on comprehension. *Reading Research Quarterly*, 17 (4), 462-481.
- Beck, I. L., Perfetti, C. A., & McKeown, M. G. (1982). Effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational Psychology*, 74(4), 506-521.
- Berne, J. I. & Blachowicz, C. L. Z. (2008). What reading teachers say about vocabulary instruction: voices from the classroom. *The Reading Teacher*, 62 (4), 314-323.
- Biemiller, A. (2005). Vocabulary: needed if more children are to read well. *Reading Psychology*, 24(3), 323-335.
- Biemiller, A. & Boote, C. (2006). An effective method for building meaning vocabulary in primary grades. *Journal of Educational Psychology*, 98 (1), 44-62.

- Blachowicz, C. L. Z., Fisher, P. J. L., & Ogle, D. (2006). Vocabulary: Questions from the classroom. *Reading Research Quarterly*, 41(4), 524-539.
- Blachowicz, C. L. Z, Fisher, P. J. & Watts-Taffe, S. (2011). Teaching vocabulary:

  Leading edge research and practice. In T. Rasinski & P. Afflerbach (Eds.),

  Rebuilding the foundation effective reading instruction in 21st century literacy

  (pp. 171-190). Bloomington, IN: Solution Tree Press.
- Blachowicz, C.L.Z. & Lee, J. J. (1991). Vocabulary development in the whole literacy classroom. *The Reading Teacher*, 45(3), 188-195.
- Brabham, E. G. & Lynch-Brown, C. (2002). Effects of teachers' reading-aloud styles on vocabulary acquisition and comprehension of students in the early elementary grades. *Journal of Educational Psychology*, *94*(3), 465-473.
- Brett, A., Rothlein, L., & Hurley, M. (1996). Vocabulary acquisition from listening to stories and explanations of target words. *The Elementary School Journal*, *96*(4), 416-422.
- Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. Chicago: Rand-McNally.
- Carney, J. J., Anderson, D., Blackburn, C., & Blessing D. (1984). Preteaching vocabulary and the comprehension of social studies materials by elementary school children. Social Education, 48(3), 195-196.
- Carr, E. & Wixson, K. K. (1986). Guidelines for evaluating vocabulary instruction. *Journal of Reading*, 29(7), 588-595.
- Christ, T. & Wang, X. C. (2010). Bridging the vocabulary gap: What the research tells us about vocabulary instruction in early childhood. *Young Children*, 65(4), 84-91.

- Coyne, M. D., McCoach, D. B., Kapp, S. (2007). Vocabulary intervention for kindergarten students: Comparing extended instruction to embedded instruction and incidental exposure. *Learning Disability Quarterly*, 30(2), 74-88.
- Davis, F. B. (1944). Fundamental factors of comprehension in reading. *Psychometrika*, *9*(3), 185-197.
- Dufflemeyer, F. A. (1980). The influence of experience-based vocabulary instruction on learning word meanings. *Journal of Reading*, *24*, 35-40.
- Freebody, P. & Anderson, R. C. (1983a). Effects of vocabulary difficulty, text cohesion, and schema availability on reading comprehension. *Reading Research Quarterly*, 18(3), 277-294.
- Freebody, P. & Anderson, R.C. (1983b). Effects on text comprehension of differing proportions and locations of difficult vocabulary. *Journal of Reading Behavior*, *15*(3), 19-39.
- Gill, S.R. (2008). The comprehension matrix: A tool for designing comprehension instruction. *The Reading Teacher*, *62*(2), 106-113.
- Gipe, J. (1978-1979). Investigating techniques for teaching word meanings. *Reading Research Quarterly*, 14(4), 624-644.
- Graves, Michael. (2006). *The vocabulary book: Learning and instruction*. New York, NY: Teachers College Press.
- Irvin, J. W. (1991). *Teaching reading comprehension processes*. Englewood Cliffs, NJ: Prentice Hall.

- Jalongo, M. R. & Sobolak, M. J. (2011). Supporting young children's vocabulary growth: the challenges, the benefits, and evidence-based strategies. *Early Childhood Education*, *38* (6), 421-429.
- Jackson, J. R. & Dizney, H. (1963). Intensive vocabulary training. *Journal of Developmental Reading*, 6, 221-229.
- Jenkins, J. R., Pany, D., & Schreck, J. (1978). *Vocabulary and reading comprehension: Instructional effects* (Tech. Rep. No. 100). Champaign: University of Illinois,

  Center for the Study of Reading.
- Jenkins, J. R., Stein, M. L., & Wysocki, K. (1984). Learning vocabulary through reading. *American Educational Research Journal*, 21(4), 767-787.
- Jitendra, A. K., Edwards, L. L., Sacks, G., & Jacobson, L. A. (2004). What research says about vocabulary instruction for students with learning disabilities. *Exceptional Children*, 70 (3), 299-322.
- Juel, C., Biancarosa, G., Coker, D., & Deffes, R. (2003). Walking with Rosie: A cautionary tale of early reading instruction. *Educational Leadership*, 60(7), 12-18.
- Kameenui, E. J., Carnine, D.W., & Freschi, R. (1982). Effects of text construction and instructional procedures for teaching word meanings on comprehension and recall.
  Reading Research Quarterly, 17(3), 367-388.
- Marks, C. B., Doctorow, M. J., & Wittrock, M. C. (1974). Word frequency and reading comprehension. *The Journal of Educational Research*, 67(4), 259-262.
- McKeown, M. G., & Beck, I. L. (2004). Direct and Rich Vocabulary Instruction. In J.F. Baumann and E.J. Kame'enui (Eds.), *Vocabulary Instruction* (13-27). New York: Guilford Press.

- McKeown, M. G., Beck, I. L., Omanson, R. C., & Perfetti, C. A. (1983). The effects of long-term vocabulary instruction on reading comprehension: A replication. *Journal of Reading Behavior*, 15(1), 3-18.
- Medo, M. A. & Ryder, R. J. (1993). The effects of vocabulary instruction on readers' ability to make causal connections. *Reading Research and Instruction*, *33*(2), 119-134.
- Mezynski, K. (1983). Issues concerning the acquisition of knowledge: Effects of vocabulary training on reading comprehension. *Review of Educational Research*, 53(2), 253-279.
- Nagy, W. E., & Scott, J. A. (2000). Vocabulary Processes. In M.L. Kamil, P. Mosenthal,P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. III, pp. 269-284). Mahwah, NJ: Earlbaum.
- National Reading Panel. (2000). Report of the national reading panel Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Washington, DC: National Institute of Child Health and Human Development.
- Nelson, J. R., & Stage, S. A. (2007). Fostering the development of vocabulary knowledge and reading comprehension though contextually-based multiple meaning vocabulary instruction. *Education & Treatment of Children, 30*(1), 1-22.
- Paris, S. G. & Hamilton, E. E. (2009). The development of children's reading comprehension. In S.E. Israel & G.G. Duffy (Eds.), *Handbook of research on reading comprehension* (Vol. I, pp. 32-53). New York, NY: Routledge.

- Pearson, P. D. (2009). The roots of reading comprehension instruction. In S.E. Israel & G.G. Duffy (Eds.), *Handbook of research on reading comprehension* (Vol. I, pp. 3-31). New York, NY: Routledge.
- Pearson, P.D., Hansen, J., & Gordon, C. (1979). The effect of background knowledge on young children's comprehension on explicit and implicit information. *Journal of Reading Behavior*, 10(3), 201-209.
- Pearson, P. D., Hiebert, E. H., Kamil, M. L. (2007). Vocabulary assessment: What we know and what we need to learn. *Reading Research Quarterly*, 42(2), 282-296.
- Penno, J. F., Moore, D. W., Wilkinson, I. A. G. (2002). Vocabulary acquisition from teacher explanation and repeated listening to stories: Do they overcome the Matthew effect? *Journal of Educational Psychology*, *94*(1), 23-33.
- Piaget, Jean. (1926). *The thought and language of a child*. New York: Harcourt, Brace, and Company.
- Piaget, Jean. (1954). The construction of reality in a child. New York: Basic Books, Inc.
- Pressley, M. (2000). What should comprehension instruction be the instruction of? In M.L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. III, pp. 545- 561). Mahwah, NJ: Erlbaum.
- Rosenblatt, L. M. (1983) *Literature as an exploration*. New York: Modern Language Association.
- Rosenblatt, L. M. (1994) *The reader, the text, the poem: the transactional theory of the literary work*. Carbondale: Southern Illinois University Press.
- Rupley, W. H., Logan, J. W., & Nichols, W. D. (1998-1999). Vocabulary instruction in a balanced reading program. *The Reading Teacher*, *52*(4), 336-346.

- Ruddell, M. R. (1985). Vocabulary knowledge and comprehension. In H. Singer & R.B.

  Ruddell (Eds.), Theoretical models and processes of reading (3<sup>rd</sup> ed., pp. 414-445).

  Newark, DE: International Reading Association.
- Ruddell, R. B. (1986). Vocabulary learning: A process model and criteria for evaluating instructional strategies. *Journal of Reading*, 7(29), 581-587.
- Second Grade Vocabulary Workshop (2011). New York, NY: Sadlier-Oxford.
- Fourth Grade Vocabulary Workshop (2011). New York, NY: Sadlier-Oxford.
- Sixth Grade Vocabulary Workshop (2011). New York, NY: Sadlier-Oxford.
- Schatz, E. K. & Baldwin, R. S. (1986). Context clues are unreliable predictors of word meanings. *Reading Research Quarterly*, 21(4), 439-453.
- Stahl, S. A. (1983). Differential word knowledge and reading comprehension. *Journal of Reading Behavior*, 10(4), 33-49.
- Stahl, S. A. (1985). To teach a word well: A framework for vocabulary instruction.

  \*Reading World, 24(3), 16-27.
- Stahl, S. A. & Fairbanks, M. M. (1986). The effects of vocabulary instruction: A model based meta-analysis. *Review of Educational Research*, *56*(1), 72-110.
- Stahl, S., Jacobson, M. G., Davis, C. E., & Davis, R. L. (1989). Prior knowledge and difficult vocabulary in the comprehension of unfamiliar text. *Reading Research Quarterly*, 24(1), 27-43.
- Stayter, F.Z. & Allington R.L. (1991). Fluency and the understanding of texts. *Theory Into Practice*, 30(3), 143-148.
- Tierney, R. J. (1990). Redefining reading comprehension. *Educational Leadership*, 47(6), 37-42.

- Tierney R. J. & Pearson, P. D. (1981). Learning to learn from text: A framework for improving classroom practice. In R. B. Ruddell, M. R. Ruddell & H. Singer (Eds.),Theoretical models and processes of reading (pp. 496-513). Newark, DE: International Reading Association.
- Tompkins, Gail E. (2003). *Literature for the 21<sup>st</sup> century: Teaching reading and writing in prekindergarten through grade 4.* Upper Saddle River, NJ: Pearson Education.
- Walczyk, J.J. & Griffith-Ross, D.A. (2007). How important is reading skill fluency for comprehension. *The Reading Teacher*, 60(6), 560-569.
- Wixson, Karen K. (1986). Vocabulary instruction and children's comprehension of basal stories. *Reading Research Quarterly*, 21(3), 317-329.
- Yopp, R.H. & Yopp, H.K. (2007). Ten important words plus: A strategy for building word knowledge. *The Reading Teacher*, *6*(12), 157-160.

# Auburn Human Subjects Approval

January 10, 2012

Dear Ms. Cowell,

Official notice:

Your revisions to your protocol entitled "Pre-teaching Vocabulary to Improve Reading Comprehension of a Narrative Test" have been reviewed. Your protocol has now received final approval as "Expedited" under federal regulation 45 CFR 46.110(5,7).

This e-mail serves as official notice that your protocol has been approved. A formal approval letter will not be sent unless you notify us that you need one. By accepting this approval, you also accept your responsibilities associated with this approval. Details of your responsibilities are attached. Please print and retain.

## Expiration:

Your protocol will expire on October 25, 2012. Put that date on your calendar now. About three weeks before that time you will need to submit a final report or renewal request. (You might send yourself a delayed e-mail reminder for early next October.)

# Pre-experimental Knowledge Test

# **Week One- Second Grade Word Knowledge Test**

Directions: Write the meaning next to each word. If you are unsure of what the word means, just leave it blank.

- 1. arrive-
- 2. inquisitive-
- 3. abysmal-
- 4. doubt-
- 5. twilight-
- 6. dread-
- 7. startle-
- 8. woodland-
- 9. detect
- 10.pale-
- 11.secure-
- 12.screech-
- 13.detach-
- 14.shiver-
- 15.tense-
- 16.tremble-
- 17.alert-
- 18.weekend-
- 19.murmur-
- 20.anxious-

# Sample of Reading Comprehension Assessment

# The Baseball Game

The Lakeside Lasers had made it to the World Series! The whole team was excited and had even received a standing ovation at their last game! They could not wait to make their debut at the championship. Now they just had to have the stamina to practice and play their best at their final game. It seemed like adverse conditions, but with perseverance they would have a chance to win!

Several of the team members were beginning to gloat about their wins. They sounded smug, like they would easily topple the other team. Others were just giddy about their victory. The jovial attitude was contagious! On days when they felt famished and sluggish, they would vow not to dawdle but keep going! They knew with this attitude, they would prevail! The coach had provided the team with a keepsake.

Ingrained on it was a burly man climbing toward the apex of a mountain. There was a strand of string on it so the players could carry it with them always. It was a reminder that if they remained headstrong they could overcome any plight that might confront them. They knew the other team would try to intimidate and manipulate them. There was immense pressure for them to win.

Lakeside Village had set up a statue to show tribute to the team. On one side it had a cascade. On the other a fire with smoke billowing out. When they first lit the statue this fire had gotten too big and they had doused it. This statue designated them as winners and showed their attitude to thrive! One of the inhabitants of the town had made some inflammatory comments about the players. He was a boisterous man who

denounced the team and called the coach "an oaf". He was also a partisan to the fact that the team lacked diversity. This had infuriated the team. They were befuddled by the man's comments. The coach, on the other hand, was a pacifist and had remained amiable toward the assailant. He was acquitted of his bad reputation.

With rigorous training the team knew they could win! They had been deemed the best team and knew they could beat any team they might encounter. All of the players had studied every facet of the game and could scan the other team for their weaknesses. It was their goal to make their opponents immobile!

# Comprehension Test

- 1. What would the team need to win?
  - a. a new captain
  - b. a statue
  - c. a cascade
  - d. energy and determination
- 2. Several members of the team were....
  - a. being smugly happy
  - b. tired of the games
  - c. wanted to see the statue
  - d. practicing a lot
- 3. What did the coach give them?
  - a. a pep-talk
  - b. a new uniform
  - c. a memento

d.	a	new	masco
u.	a	IICW	masco

- 4. They knew the other team would try to....
  - a. borrow their equipment
  - b scare and control them
  - c. steal their mascot
  - d. be late to the game
- 5. What kind of comments did the man make about the team?
  - a. those that are nice
  - b. those that caused anger
  - c. those that are funny
  - d. those that are grumpy
- 6. What was on the statue?
  - a. a gold picture
  - b. a picture of the team
  - c. a waterfall
  - d. a picture of the coach
- 7. What did the man mean when he called the coach an oaf?
  - a. He was old
  - b. He was a fool
  - c. He was unorganized
  - d. He was overweight
- 8. What had the players studied?
  - a. about their town

b. their opponents
c. the statue
d. every angle of the game
9. What did the man say about the team?
a. it was lacking in a variety of players
b. it was lacking in courage
c. it was lacking in time practicing
d. it was lacking in points
10. Do you think the coach handled the comments made against him well? Why or why
not?

# List of Grade Level Target Words

Second grad	de target words:	Fourth grad	e target words:	Sixth grade	target words:
1.	abysmal	1.	accurate	1.	acquit
2.	agony	2.	alert	2.	adverse
3.	alert	3.	ambush	3.	amiable
4.	anxious	4.	antique	4.	apex
5.	arrive	5.	approximate	5.	arid
6.	banquet	6.	assemble	6.	assailant
7.	bevy	7.	assist	7.	befuddle
8.	chalet	8.	baggage	8.	besiege
9.	channel	9.	blossom	9.	billow
10.	clear	10.	bonus	10.	boisterous
11.	coast	11.	calculate	11.	burly
12.	current	12.		12.	cascade
13.	dawn	13.	captivity	13.	confront
			celebrity		
14.	detach	14.	construct	14.	dawdle
15.	detect	15.	content	15.	debut
16.	doubt	16.	contract	16.	deem
17.	dread	17.	council	17.	denounce
18.	drift	18.	courtesy	18.	designate
19.	exactly	19.	disaster	19.	diversity
20.	exposed	20.	dispose	20.	douse
21.	fervent	21.	distress	21.	encounter
22.	finally	22.	dominant	22.	facet
23.	fresh	23.	dread	23.	famished
24.	hamlet	24.	drowsy	24.	frigid
25.	herd	25.	dungeon	25.	giddy
26.	hollow	26.	earnest	26.	gloat
27.	hour	27.	employ	27.	headstrong
28.	inquisitive	28.	enclose	28.	immense
29.	intact	29.	extraordinary	29.	immobile
30.	island	30.	extreme	30.	inflammatory
31.	mass	31.	fatal	31.	infuriate
32.	midnight	32.	frantic	32.	ingrained
33.	murmur	33.	grumble	33.	inhabitant
34.	ocean	34.	haste	34.	intimidate
35.	pale	35.	haul	35.	jovial
36.	peck	36.	heroic	36.	keepsake
37.	perilous	37.	hostage	37.	manipulate
38.	pew	38.	humble	38.	maze
39.	plank	39.	impulse	39.	oaf
40.	plunge	40.	jubilant	40.	ovation
41.	pursue	41.	juvenile	41.	pacifist
42.	screech	42.	manual	42.	partisan
43.	seashell	43.	manufacture	43.	persevere
44.	secure	44.	mistrust	44.	plight
45.	shiver	45.	noble	45.	prevail
46.	soar	46.	outstanding	46.	ravenous
40. 47.	span	47.	plentiful	47.	recede
48.	squad	48.	proceeded	48.	repast
49.	startle	49.	rations	49.	rigorous
50.	tense	50.	routine	50.	scan
50. 51.		50. 51.	smolder	50. 51.	
	tranquil				sluggish
52.	travel	52.	sturdy	52.	smug
53.	tremble	53.	symptom	53.	stamina
54.	twilight	54.	treaty	54.	strand
55.	vapor	55.	trudge	55.	terrain
56.	victor	56.	uneasy	56.	thrive
57.	vivid	57.	urgent	57.	topple
58.	weekend	58.	variety	58.	tribute
59.	whiteout	59.	volunteers	59.	vacate
60.	woodland	60.	weary	60.	vow

# Sample of Definition Activity

# Sort the words matching them with the correct definition.

besiege	To attack by surrounding with military forces	
adverse	Negative; working against; hostile	
infuriate	To make very angry; enrage	
tribute	Something done or given to show thanks or respect	
denounce	To accuse formally; to criticize	
arid	Extremely dry; parched	
pacifist	One who is against war or the use of violence	
immobile	Not movable; not moving	
immense	Very large or great	
assailant	A person who attacks violently (with blows or words)	
acquit	To declare not guilty or free from blame	
rigorous	Severe, strict, harsh	
recede	To go or move backward; to become more distant	
confront	To meet face to face, especially as a challenge	
vacate	To go away from	
frigid	Extremely cold	
repast	A meal; food	
manipulate	To manage or control for personal gain or advantage	
partisan	A strong supporter, party, or cause	
inflammatory	Causing anger; leading to violence or disorder	

# Sample of Association Activity

Sort the words under each category. Each word will be used only once.

		Target Wo	rds	
besiege	denounce	immense	recede	repast
adverse	arid	assailant	confront	manipulate
infuriate	pacifist	acquit	vacate	partisan
tribute	immobile	rigorous	frigid	inflammatory

Words Involving Anger

Weather Words

Words Involving Peace

Words Involving Movement

Intense Words

Words About Food

### Sample of Context Activity

Determine whether each word is used correctly in the sentence.

- 1. I will try not to prevail about winning a scholarship to music camp.
- 2. Our science teacher has a diversity of interests, including Russian literature.
- 3. Will you please tell me when the coach will gloat a new team leader?
- 4. Before my grandmother died, she made me a special quilt as a <u>keepsake</u> of her love.
- 5. The audience gave the dancer a standing ovation after his impressive performance.
- 6. One important <u>thrive</u> of problem solving is to recognize when a solution makes no sense.
- 7. Even the most patient caregiver may feel challenged when faced with a headstrong child.
- 8. Just because he got the lead in the school play doesn't justify his irritating air of smug superiority.
- 9. A difficult scientific experiment with many steps is likely to <u>befuddle</u> most beginners.
- 10. Marty, whose sense of humor and good spirits never fail, is an <u>amiable</u> companion.
- 11. The <u>boisterous</u> schoolchildren made it clear to their teacher how much they enjoyed the class trip.
- 12. Many theaters will debut the film tonight.
- 13. It's relaxing to intimidate in the shower, but wastes water.
- 14. My jovial friend is very entertaining and is always the life of the party.
- 15. After the long race, the marathoner felt giddy.

- 16. Bullies may try to <u>facet</u> us, but if we stick together we can stand up to their threats.
- 17. My habit of biting my lower lip when I'm nervous is so <u>designate</u> that I don't notice I'm doing it.
- 18. We hope to <u>dawdle</u> over all obstacles we may encounter on this project.
- 19. Angela remains hopeful that her business will <u>ingrained</u> in today's economy.
- 20. Remember our encounter with that skunk?

## **Teacher Training Materials**

# Preteaching Vocabulary to Improve Reading Comprehension Classroom Teacher Training

**Purpose:** To determine if the preinstruction of target vocabulary words will improve students' comprehension of a grade level text.

**Timeline:** The study will take place over a period of four weeks. Instruction will be given three days each week and a fourth day to administer the reading comprehension assessment.

#### Weekly Materials:

- 1. Pre-experimental knowledge test
- 2. Monday and Tuesday lesson components:
  - a. Vocabulary folder for each student
  - b. List of target words, definitions, and pictures for each word
  - c. Overhead or interactive white board for display
  - d. Daily outline of lesson's details
  - e. Student's word, picture, and definition cut-outs to add to their vocabulary folder
  - f. Glue sticks
  - g. Construction paper
- 3. Wednesday lesson components:
  - a. Vocabulary folder for each student
  - b. List of target words, definitions, and pictures for each word
  - c. Overhead or interactive white board for display
  - d. Daily outline of lesson's details
  - e. Association activity sheet
- 4. Thursday lesson components:
  - a. Vocabulary folder for each student
  - b. List of target words, definitions, and pictures for each word
  - c. Overhead or interactive white board for display
  - d. Daily outline of lesson's details
  - e. Target words used in a sentence
  - f. Sentence strips
  - g. Markers
- 5. Reading comprehension test passage
- 6. Reading comprehension assessment

#### **Action Plan:**

- 1. Four classroom teachers in each grade level 2, 4, & 6 will participate in the study. Each classroom teacher will be assigned one of three placements in the study:
  - a. Administering the pre-experimental vocabulary knowledge test
  - b. Facilitating the treatment group instruction
  - c. Facilitating the control group instruction
- 2. Placements will be made randomly based on colored and numbered folders. The multi-colored folders will designate the placements. Only the principal investigator will know which color stands for each placement. The numbers on each folder distinguish the students. There is no need for the principal investigator to know which student is assigned each number.
- 3. Principal investigator will be meet with each classroom teacher to establish the time each day that the study will take place.
- 4. Study will run over a period of three weeks with a delayed post-test.
  - a. Week One- preinstruction and comprehension test 1
  - b. Week Two- preinstruction and comprehension test 2
  - c. Week Three- preinstruction and comprehension test 3
  - d. After one month- cumulative comprehension test
- 5. The preinstruction activities will be included in students' vocabulary folder. The comprehension tests will be delivered to the teachers on the fourth day of each week. The vocabulary folders will be collected at the end of the four weeks. The comprehension tests will be collected at the end of the test on the fourth day.

#### Parent Consent Letter

#### PARENTAL PERMISSION/CONSENT

## For a Research Study entitled

Pre-teaching Vocabulary to Improve Reading Comprehension of a Narrative Text Your child is invited to participate in a research study to determine whether pre-teaching vocabulary is effective in improving reading comprehension. The study is being conducted by Leslie Cowell, a doctoral student at Auburn University, under the direction of Dr. Theresa McCormick in the Auburn University Department of Elementary Education. Your child was selected as a possible participant because he or she is in second, fourth, or sixth grade at Daniel Pratt Elementary. Since your child is age 18 or younger, we must have your permission to include him/her in the study. If you decide to allow your child to participate in this research study, your child will be observed and taught in a whole group setting at a minimum of once a week. They will also be asked to take a post-test after the instruction has been given. Your child's total time commitment will be no more than 30 minutes per day, four days a week for three weeks. During this time, students will be engaged in vocabulary instruction. A cumulative post-test will be given one month later that should take 30 minutes. The instructional strategy is part of the normal classroom instruction, which your child will receive regardless of whether he/she participates in the study. Your permission would

allow the researcher to evaluate the effectiveness of vocabulary instruction on reading comprehension.

The risks associated with participating in this study are the risk of breach of confidentiality. To minimize these risks, no student names will be used in this study. All students will be given a number. The numbers will not be linked to the student names.

If your child participates in this study, your child can expect to improve in their reading comprehension and vocabulary knowledge. I cannot promise you that your child will receive all of the benefits described.

You or your child will not receive any compensation for participating in this research study and there are no costs involved.

If you (or your child) change your mind about your child's participation, your child can be withdrawn from the study at any time. Your child's participation in the observations is completely voluntary, but they must still complete the class work. If he or she cannot participate, he or she will complete the same assignments, but his or her work will not be analyzed as part of the study. If you choose to withdraw your child, your child's data can be withdrawn as long as it is identifiable. Your decision about whether or not to allow your child to participate or to stop participating will not jeopardize your or your child's future relations with Auburn University.

Your child's privacy will be protected. Any information obtained in connection with this study will remain confidential. The data collected will be protected in Mrs. Cowell's locked office in a locked file cabinet. Information obtained through your child's participation will be used as part of the requirements in the doctoral dissertation process.

If you or your child have questions about	at this study, please contact Leslie Cowell at
lcowell@faulkner.edu.	
If you have questions about your child's	s rights as a research participant, you may contact
the Auburn University Office of Human	Subjects Research or the Institutional Review
Board by phone at (334) 844-5966 or er	nail at IRBchair@auburn.edu.
HAVING READ THE INFORMATION	N PROVIDED, YOU MUST DECIDE
WHETHER OR NOT YOU WISH FOR	R YOUR CHILD TO PARTICIPATE IN THIS
RESEARCH STUDY. YOUR SIGNAT	TURE INDICATES YOUR WILLINGNESS TO
ALLOW YOUR CHILD TO PARTICII	PATE.
Parent/Guardian Signature	Date
Printed Name	
Investigator obtaining consent	Date
	-
Printed Name	
Child's Name:	

## Sample of Weekly Teacher Directions

# Week Three: Word Knowledge Test Teacher Instructions

Goal for the day: The classroom teacher give out the word knowledge test

#### Plan for the day:

- 1. Tell the students that today they will tell what they already know about some vocabulary words.
- 2. This is not for a grade, but they should do their best.
- 3. Pass out the papers. Read the directions.
- 4. Have the class stay together and go word by word down. The teachers should read the word and then tell the student to write the meaning of the word. If they do not know what the word means they should leave it blank
- 5. Have them write the number on their folder on the top of their paper. This paper should go inside their folder.
- 6. Thank the students for their hard work today and this week.

# Week Three: Day One and Two Teacher Instructions

**Goal for the day:** The classroom teacher will introduce the target words and their definitions. The students will begin to recall prior knowledge of the new words or receive an introduction to the words in a way to begin building schema for any unknown word.

- 1. This week they will be learning some new vocabulary words. The activities and tests are not for a grade, but they should do their best on all of them.
- 2. Please hand out the colored folders to your students. (5 minutes)
- 3. Ask the students to set the folders aside. They will put the work in the folders at the end of each day.

- 4. Have the word and definitions on the overhead, Elmo, or displayed electronically on an interactive whiteboard.
- 5. Display the words and definition. For each one, please say:
  - a. The word
  - b. Read the definition
  - c. Give the example of your word
- 6. Allow 2 students to share examples of when they may have heard or seen the target word before.

(The entire introduction to the words should take no longer than 10-15 minutes)

- 7. Ask the students if they have any questions about the words.
- 8. Pass out the bags with the words and definitions as well as a piece of construction paper and a glue stick.
- 9. The students should write the number on their folder on top of their construction paper. Ask the students to sort the word with its correct definition. They should sort first and not glue until you tell them to.

(Give the students 7-10 minutes to work on this and then go over the answers)

- 10. Go over the answers with them.
  - a. Say the word
  - b. Call on a student to give the definition of the word
  - c. Accept or correct their answer
- 11. Once everyone has the correct word with the correct definition, ask the students to glue them down.
- 12. The students should put the activity in their vocabulary folder.
- 13. Collect the students' vocabulary folders.
- 14. Thank the students for their hard work today.

# Week Three: Day Three Teacher Instructions

**Goal for the day:** The classroom teacher will review the target words and their definitions. The students will continue to recall prior knowledge of the new words or build their knowledge of any unknown words.

- 1. Please hand out the colored folders to your students.
- 2. Ask the students to set the folders aside. They will put the work in the folders at the end of each day.
- 3. Have the words and definitions on the overhead, Elmo, or displayed electronically on an interactive whiteboard
- 4. Display the words and definitions. For each one, please say:
  - a. The word
  - b. Read the definition
  - (5-7 minutes)
- 5. Ask the students if they have any questions about the words.
- 6. Today, they will work on associations. Tell the students that they connect the words together in ways they are alike.
- 7. Review with the students what an association is.
- 8. Pass out the association papers. Read the directions. Let the students work on this on their own (7-10 minutes)
- 9. When everyone is finished:
  - a. Call out the heading and ask what words were put under each. Call on students to answer.
  - b. If an incorrect answer is stated, ask them why they thought it fell under that heading. Then give the correct answer and tell why.
  - (7-10 minutes)
- 10. The students should write the number on their folder on top of their paper.
- 11. The students should put the activity in their vocabulary folder and collect the students' vocabulary folders.
- 12. Thank the students for their hard work today.

# Week Three: Day Four Teacher Instructions

**Goal for the day:** The classroom teacher will review the target words and their definitions. The students will continue to recall prior knowledge of the new words or build their knowledge of any unknown words.

- 1. Please hand out the colored folders to your students.
- 2. Ask the students to set the folders aside. They will put the work in the folders at the end of each day.
- 3. Have the words and definitions on the overhead, Elmo, or displayed electronically on an interactive whiteboard
- 4. Display the words and definitions. For each one, please say:
  - a. The word
  - b. Read the definition
  - (5-7 minutes)
- 5. Ask the students if they have any questions about the words.
- 6. Today, they will work on context. Tell the students that they will use the words in sentences today.
- 7. Put the sentences on display.
  - a. Read the sentence aloud
  - b. Ask the students if the underlined word makes sense in the sentence. If not, ask which word would make sense and why. (7-10 minutes)
  - c. When you go through all the sentences, walk around the room and let the students pick a word out of a bag.
  - d. Ask the students to use the word correctly in a sentence on the paper strip.
  - e. Once everyone is done, call on the students one by one to come up and read their sentence.
  - f. Have the students show thumbs up or thumbs down if the word is used correctly. (7-10 minutes)
- 8. The students should write the number on their folder on top of their paper strip.
- 9. The students should put the sentence strip in their vocabulary folder.
- 10. Collect the students' vocabulary folders.
- 11. Thank the students for their hard work today.

# Week Three: Day Four Teacher Instructions

Goal for the day: The classroom teacher give out the reading comprehension test

- 1. Tell the students that today they will read a story and answer some questions about the story.
- 2. This is not for a grade, but they should do their best.
- 3. Pass out the folders and the test. They should write the number on their folder on the top of their test. They cannot open their folder while they work.
- 4. When they finish they should raise their hand. Please collect their folder and the test.
- 5. Thank the students for their hard work today.