5-2014

An Exploratory Study of Purposeful and Strategic Communicative Techniques to Teach Vocabulary from Core Reading Programs to English Learners

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AN EXPLORATORY STUDY OF PURPOSEFUL AND STRATEGIC

COMMUNICATIVE TECHNIQUES TO TEACH VOCABULARY

FROM CORE READING PROGRAMS TO ENGLISH LEARNERS

by

Danell Bench Mieure

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Education
(Curriculum and Instruction)

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UTAH STATE UNIVERSITY
Logan, Utah

2013

ABSTRACT

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Vocabulary from Core Reading Programs to English Learners

by

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This study explored the effect of implementing purposeful and strategic

communicative techniques situated in aspects of the communicative approach to language

learning when teaching vocabulary from a core reading program to English learners.

Given the importance of vocabulary instruction and the widespread use of core reading

programs, it is imperative such studies are conducted to determine effective instructional

practices of vocabulary with core reading programs for English learners. Participants

were 73 fifth-grade English learners nested in classrooms of 11 teachers who were

randomly assigned to the instructional treatment group or to the comparison group. Both

the treatment and comparison groups were taught vocabulary words from the district-

adopted core reading program. The treatment group implemented an intervention

specifically designed to teach vocabulary using several methods recommended in the

research with the potential to increase vocabulary acquisition of English learners. The

methods were used in a communicative approach to instruction, in which oral interaction

was a main focus of the treatment. Student vocabulary acquisition was measured with a mastery test administered at the beginning and end of the study and with weekly quizzes. Additional data from classroom observations, teacher logs, and student work were collected on the fidelity of the implementation of the treatment and on the vocabulary instructional strategies used by the comparison group teachers. Linear regression analysis revealed a significant difference in growth of vocabulary skills from pretest to posttest between treatment and comparison groups ($p = .001$), with students in the treatment group showing greater progress than students in the comparison group. This study confirmed the effectiveness of implementing purposeful and strategic communicative techniques for successful vocabulary acquisition for English learners.

(349 pages)

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This study investigated the effect of instructional practices when teaching vocabulary from a core reading program to English learners. Participants were 73 fifth-grade English learners nested in classrooms of 11 teachers who were randomly assigned to the instructional treatment group or to the comparison group. Both the treatment and comparison groups were taught vocabulary words from the district-adopted core reading program. The treatment group implemented an intervention specifically designed to teach vocabulary using techniques with the potential to increase vocabulary acquisition of English learners situated in principles of the communicative approach. Data were collected on a mastery test that measured vocabulary knowledge at the beginning and end of the study and on weekly vocabulary quizzes. Linear regression analysis revealed a significant difference in growth of vocabulary skills from pretest to posttest between treatment and comparison groups with students in the treatment group showing greater progress than students in the comparison group. This study confirmed the effectiveness of using purposeful and strategic communicative techniques for successful vocabulary acquisition for English learners

ACKNOWLEDGMENTS

When I began the journey of pursuing this degree, I had no idea what was in store for me. To say it was difficult would be an understatement. I have learned more than I ever imagined and worked harder than I thought possible to achieve this goal.

I have much gratitude for so many people who have helped me along the way. I am so grateful to those principals who allowed me into their buildings and for the teachers who were willing to do the extra work of implementing this treatment. I know it was a sacrifice and took much work for them to be consistent. I am thankful to all those teachers who allowed me into their classrooms to observe, no matter how uncomfortable it made them. I was in awe of the hard work you did every day for your students.

To two wonderful principals, Charlotte and Dale, who supported me by giving me the time off I needed when I needed it. This would never have been possible without your ongoing support and encouragement.

My thanks go to my committee members who have been so patient as I have worked through this process over the last several years. The insight you have provided has been invaluable, and I hope you know how much I appreciate and respect your extensive knowledge and support. My chair, Dr. Cindy Jones, has endured more revisions than I ever thought possible. You were always so good to clarify things for me when I got lost in the process. Your heartfelt encouragement has been marvelous. Your expertise has helped me improve my writing and research skills and complete this dissertation; it has become a wonderful finished product that I could never have done on my own.

I express my gratitude to my friends who have asked, listened, encouraged, and

sympathized throughout this process. You know who you are.

I love and appreciate my family, my children, and grandchildren, who have given up so much for me to complete this degree, mainly time that I could have spent with and for them. They will never know how much I appreciate and love them for not giving up on me and not letting me give up on myself. I am grateful to my husband who has taken on so much of the running of a household by himself; you encouraged me to continue when the going got tough, and you did not allow me to quit.

I would be remiss if I did not thank my parents—my mother, who has always believed in me and been proud of my accomplishments; and my father, who is my role-model, my hero, and my greatest cheerleader. You are both such amazing examples to me and I dedicate this dissertation to the two of you. You have been the wind beneath my wings through this entire process and throughout my life.

Danell Bench Mieure

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CHAPTER I

INTRODUCTION

The way to keep a people in ignorance, enslaved, or subdued is not so much by the use of chains, but more so by the prohibition of the acquisition of literacy. Literacy is a key to power in most societies, and a literate population is essential for democratic and republican forms of government to function (Tozer, Senese, & Violas, 2006). Illiteracy is often associated with a lack of education. The inability to read impedes routines and functions that are requisite in a literate society and creates a burden in society that constitutes a social and economic liability (Gándara, 2004). Although not causal in nature, low literacy levels are one of the greatest common factors among incarcerated individuals (DelliCarpini, 2006). The Education Commission of the States (Weiss, 2003) reports that low levels of education among the adult population negatively affect the health of a state's population, the well-being of children, and the rate of violent crime. Conversely, education tends to improve health, promote the education of the next generation, and is associated with a lower risk of criminal activity (Weiss, 2003). Literacy is important not only for a society, but for the individual. In today's technologically advanced world, the need for a college education for the majority of jobs has increased dramatically (Kirst, 2004). In addition, higher educational attainment is consistently associated with higher median earnings (U.S. Department of Education, National Center for Education Statistics, 2010). In 2008, young adults with a bachelor's degree earned 53% more than young adults with a high school diploma and 96% more than young adults without a high school diploma.

As the number of English learners in schools continues to grow, data from standardized testing throughout the U.S. show that this subgroup is the farthest behind in reading achievement (Fry, 2007). Given the importance of proficient reading skills, it is critical to address the literacy instructional needs of English learners (Yoon, 2007). The No Child Left Behind (NCLB) legislation of 2001 added impetus to the effort of providing appropriate and adequate education for English learners (Nesselrodt, 2007) as schools are now accountable for all students achieving at grade level, including subgroups of English learners (No Child Left Behind Act, 2001).

The National Assessment of Educational Progress (NAEP) is one measure that exposes the large gap between English learners and other students. Student scores on this test are categorized at three achievement levels: *basic, proficient*, and *advanced. Basic* denotes partial mastery of prerequisite skills that are fundamental for proficient work at a given grade. *Proficient* represents solid academic performance; students at this level have demonstrated competency over challenging subject matter. The *advanced* level represents superior performance. The NAEP 2009 results indicated that only 29% of English learners scored at the basic or above level in reading, lower than any other subgroup reported (http://nces.ed.gov/nationsreportcard/).

National trends of less than adequate performance on standardized tests by English learners are also evident in the state of Utah. NAEP scores from 2009 for grade four students in Utah indicated that 24% of English learners scored at the basic level or above on the reading portion of the NAEP test, which conversely indicated that 76% of English learners scored below basic (http://nationsreportcard.gov/reading_2009/state).

Information from the Utah State Office of Education about Utah's 2011 Language Arts

Core Criterion Referenced Test, which is administered to all students, showed that only

35% of English learners grades 3-12, scored as proficient. Recently, there has been a

decline in fifth-grade English learners' scores on the Utah Language Arts Core Criterion

Referenced Test with 53% of English learners scoring at the proficient level in 2006,

dropping to 40% in 2008. This is in comparison to a 76% proficiency rate for all students

in 2008, meaning that English learners scored 36 percentage points below the state

average, which included the scores of the English learners. On a 2009 statewide report,

student scores for all students in the state where the current study was conducted were

79% proficient on language arts; whereas, the percentage of English learners who scored

proficient on the same test was 49.5%. These statistics attest to the importance of

examining how to improve literacy achievement and instruction for English learners.

The National Reading Panel (NRP, 2000) identified vocabulary as an essential

component of effective literacy instruction. Vocabulary knowledge impacts English

learners' word reading skills and comprehension (Beck, McKeown, & Kucan, 2002;

Blachowicz & Fisher, 2006; Cummins, 2003; Flynt & Brozo, 2008; Genesee, Lindholm-

Leary, Saunders, & Christian, 2005). Several studies have reported the impact of oral

vocabulary on reading, finding correlations between English oral proficiency measures of

vocabulary and reading assessments (Arab-Moghaddam & Sénéchal, 2001; Gottardo,

2002). After controlling for general cognitive ability and other effects, regression

analyses showed that knowledge of English vocabulary continues to explain a significant

proportion of the unique variance on English word reading tests (Gottardo, 2002; Muter

& Diethelm, 2001). Additionally, Saville-Troike (1984) reported that oral vocabulary knowledge is crucial for reading comprehension, and the number of different vocabulary words used by a student has a significant positive correlation with reading achievement (see also August & Shanahan, 2006; Genesee et al., 2005). Indeed, vocabulary knowledge is a critical factor contributing to reading and language achievement scores and is strongly related to reading proficiency and school achievement (Beck et al., 2002; Freeman & Freeman, 2009).

Factors such as those mentioned from the research become a greater concern for English learners who are trying to not only acquire basic language, but also the vocabulary of academic content (Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006). A study by Becker (1977) linked vocabulary size (the words a child is able to use proficiently when speaking) to the academic achievement of disadvantaged students. He posited that with good instruction all students can master basic reading skills, but the main difficulty in sustaining those early foundations is the lack of adequate vocabulary to meet the academic demands that begin in the upper-elementary grades. Achievement in English reading is significantly related to the depth of English learners' vocabulary knowledge in English (August & Shanahan, 2006; Genesee et al., 2005). Indeed, for children who score lowest on the NAEP and high-stakes assessment, the problem does not appear to be difficulty with decoding, but with a lack of automaticity, vocabulary, and strategic processing skills (McGill-Franzen, Zmach, Solic, & Zeig, 2006).

Incidental exposure to vocabulary words does contribute to vocabulary acquisition, but is not sufficient alone (Beck et al., 2002; Collins, 2010; Marzano, 2004).

The NRP's (2000) determination of vocabulary as one of the major skills needing emphasis in effective reading instruction supports the idea that vocabulary needs to be an area of focus in lesson delivery. Word meanings must be made clear and comprehensible for English learners through instructional techniques based on oral communication and research recommendations including: Explicit explanations, peer-mediated activities, nonlinguistic representations, graphic organizers, word analysis, word associations, examples/nonexamples and games (Beck et al., 2002; Echevarria, Vogt, & Short, 2008; Fuchs, Fuchs, Mathes, & Simmons, 1997; Kieffer & Lesaux, 2007; Kieffer & Lesaux, 2010; Marzano & Pickering, 2005; Richard-Amato, 1996).

Explicit instruction is beneficial for all students, but is essential for English learners. Explicit and systematic instruction is one of the keys to successful vocabulary acquisition (Beck et al., 2002; Diamond & Gutlohn, 2006; Flynt & Brozo, 2008; Freeman & Freeman, 2009; Marzano, 2004). Explicit explanations stated in terms easy for students to understand are key to helping students learn the meaning of new vocabulary terms. Inclusion of a nonlinguistic representation of the word in this explicit explanation increases the comprehensible input for English learners (Marzano & Pickering, 2005). In a meta-analysis conducted by Stahl and Fairbanks (1986), researchers found that students who had placed at the 50th percentile on reading comprehension measures increased their comprehension scores by as much as 30 percentile points when they received explicit and meaningful vocabulary instruction.

Research on explicit instruction began several decades ago when Durkin (1978-79) investigated the kind of instruction teachers used during comprehension lessons. She

found that the instruction consisted of what she identified as: (a) mentioning, described as teachers mentioning the skill students were to apply; (b) practicing, which consisted of students practicing on worksheets; and (c) assessing, which was determining if the students got the right answer on the worksheet. It was after this research that there was a resurgence in reading research with numerous studies completed on comprehension instruction. Pearson and Dole (1988) synthesized many of these studies and focused on three stages of instruction: the teacher's direct explanation, guided practice, and transfer and application of what has been learned.

Theorists today continue to identify several steps that are considered to be key elements of explicit instruction. The first step in most of the explicit instruction models are related to clear explanations of the skill or activity in which the students are going to engage. Archer and Hughes (2011) described three basic steps: I do, we do, you do. The "I do" step indicates that the teacher gives the initial instruction and models what is expected of the students. The next step, "we do," consists of teacher and students practicing the new skill with support from the teacher. This can be whole class practice, or small group. The idea is that students have a time to practice with teacher guidance in a non-threatening environment before being expected to perform the task independently. The "you do" step is the time students apply the new knowledge or skill independently with a partner or alone. Other explicit instruction models identify additional steps. The Region IV Education Service Center (ESC; Region IV ESC, 2003) lists the first step of an effective vocabulary lesson as explicit explanation, demonstration, and discussion.

Explicit explanations are vital for English learners, but there are other concepts

that need to be considered in helping them learn vocabulary. Research in second-language acquisition showed that social interaction is an important part of learning a new language. Vygotsky's (1978) theory of social learning was one of the foundations of this idea. He posited that students' learning was developed when they interacted with a teacher or peers. Students must be able to interact with others to develop language. The communicative approach to language acquisition became popular in the 1970s as it was found that previous programs that emphasized rote learning or only grammar or literature did not have the desired results of ability to communicate in the target language (Larsen-Freeman, 2007). The goal of the communicative approach is that students learn language to communicate with others (Ballman, Liskin-Gasparro, & Mandell, 2001). Following this approach, students need to have opportunities to discuss and work together. It is the responsibility of the teacher to create situations and activities in which students communicate with each other in authentic and meaningful contexts.

Peer interaction is an important part of communicative activities. Several studies have been conducted that explore the use of peer interaction as a way to facilitate growth in reading comprehension and content areas. It has been shown that when students work together in structured settings they perform better on reading assessments (Fuchs et al., 1997; Klinger & Vaughn, 2000; McMaster, Fuchs, & Fuchs, 2006; Vaughn, Klingner, & Bryant, 2001). Ballman and colleagues (2001) posited that as students work together English learners need to have a task to complete, giving them authentic reasons to communicate with one another. This peer interaction provides extended language use as well as deeper levels of engagement as they work together to accomplish the task. Oral

language is developed as well as content knowledge.

Most students in elementary schools are taught vocabulary through core reading programs. Seventy-three percent of schools in the U.S. use core reading programs for their reading instruction (DeWitz, Jones, & Leahy, 2009). Even though vocabulary is a component of core reading programs, the reality is that there is little emphasis on the acquisition of vocabulary in school curricula (Beck et al., 2002; Blachowicz et al., 2006; Kelley, Lesaux, Kieffer, & Faller, 2010). Reminiscent of Durkin's (1978-79) comprehension study, teachers often state that they are teaching vocabulary; but, observations of 23 ethnically diverse classrooms revealed that only 6% of school time was devoted to vocabulary development, and that amount dropped to 1.4% in the core academic subjects (Flynt & Brozo, 2008). The instruction consisted mainly of mentioning and assigning rather than providing explicit explanations and directly teaching the meaning of the new vocabulary words. Analysis of the most popular core reading programs found that none of them offered sufficient recommendations for vocabulary instruction to increase comprehension (Blachowicz et al., 2006; Flynt & Brozo, 2008). Additional studies of two core reading programs found that only 13-14% of instruction was dedicated to vocabulary throughout the year (McGill-Franzen et al., 2006).

As noted above, core reading programs often do not have consistent or effective methods for vocabulary instruction. Achievement gaps demand that something be done to provide English learners with vocabulary instruction that meets their specific needs. Peer interaction may influence and increase English learners' successful vocabulary acquisition, especially when coupled with explicit explanations of vocabulary terms.

Problem Statement

Despite years of research in reading, as well as federal and state policies to improve reading achievement, the gap between proficient and struggling readers remains (McGill-Franzen et al., 2006). There is little research that investigates the impact of using purposeful and strategic communicative techniques with core reading programs on vocabulary acquisition for English learners. Often instructional recommendations are based on what are considered "best practices" for vocabulary instruction in general, but do not consider the needs of English learners (Harper & de Jong, 2004). Given the importance of vocabulary instruction, as well as the widespread use of core reading programs, it is imperative that experimental studies are conducted to determine effective instructional practices of vocabulary with core reading programs for English learners.

Research Questions and Hypotheses

This study sought to investigate the effectiveness of using purposeful and strategic instructional techniques situated in aspects of the communicative approach to language learning (Ballman et al., 2001) to teach vocabulary to English learners. Specifically, this study examined communicative techniques with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students to aid acquisition of vocabulary from core reading programs.

The questions guiding this study were as follows.

1. Is there a difference in *overall* vocabulary acquisition between English learners in a treatment group incorporating purposeful and strategic communicative techniques

with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students with vocabulary instruction from a core reading program and those in a standard-instruction comparison group? It was expected the treatment would result in a significant increase on overall vocabulary acquisition for fifth-grade English learners as shown on a mastery vocabulary test.

2. Is there a difference in *short-term (weekly)* vocabulary acquisition between English learners in a treatment group incorporating purposeful and strategic communicative techniques with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students with vocabulary instruction from a core reading program and those in a standard-instruction comparison group? It was expected the treatment would result in a significant increase on short-term (weekly) vocabulary acquisition for fifth-grade English learners as shown on gain scores from weekly quizzes.

Thus, this study was conducted to examine potentially effective instructional practices of communicative techniques for vocabulary with core reading programs for English learners.

CHAPTER 2

REVIEW OF THE LITERATURE

The study of vocabulary instruction has a long history in the United States. One of the oldest studies of American English vocabulary instruction was by Kirkpatrick, published in 1891 (Graves & Watts-Taffe, 2002). Since that time, emphasis on vocabulary instruction has waxed and waned in educational settings (Ryder & Graves, 1994), and as recently as the early 2000s was not listed as one of the main themes in a list of hot topics in reading instruction (Blachowicz et al., 2006; Graves & Watts-Taffe, 2002). However, the emphasis on vocabulary has been renewed with the NRP's (2000) report on the elements of effective reading instruction (Pearson, Heibert, & Kamil, 2007), which identified vocabulary as one of five key areas necessary for successful reading development.

There are two principal foci directions of vocabulary research: (a) vocabulary acquisition, and (b) the relationship between vocabulary and reading comprehension. Vocabulary acquisition has been studied with both native English language speakers and second language learners. Previous research has established that vocabulary knowledge plays a crucial role in the reading development of English language learners (Carlo, August, & Snow, 2005; Folse, 2004; Nation, 2001). However, the research base about effective vocabulary instruction for English language learners is limited (August & Shanahan, 2006; Garcia, 2000; Genesee et al., 2005).

Vocabulary instruction for English learners must utilize specific instructional strategies because English learners generally have limited background in the target

language to help learn new vocabulary (Anthony, 2008). Thus, effective vocabulary instruction for students learning English requires instructional techniques beyond the basic vocabulary instruction implemented in most classrooms (Lesaux & Geva, 2006). The purpose of this literature review is threefold: (a) Explore the research base on vocabulary instructional strategies for English learners in school settings from prekindergarten through grade 12, with an emphasis on upper elementary grades four through six, to define the components of effective vocabulary instruction for English learners; (b) Identify effective delivery methods of vocabulary instruction for English learners, as lesson delivery plays a crucial role in vocabulary acquisition (NRP, 2000); and (c) Review how vocabulary growth of English learners is assessed.

Definition of Terms

Throughout the research literature, there are several different terms used to identify students who are learning English in schools in the United States. These include: English language learner (ELL), English as a second language (ESL) student, language minority student (LM) and second language learner. In keeping with the terminology used in the synthesis of research performed by the National Literacy Panel (August & Shanahan, 2006), the term *English learner* (EL) will be used throughout this review of the literature to establish consistency.

One of the challenges in studying vocabulary instruction is there are different types of vocabulary. Researchers have identified receptive vocabulary (reading and listening), and productive vocabulary (oral and written), among others. For this review of

the literature, the focus will be on the modalities of receptive and oral vocabulary in reading instruction. The modality of writing is an important aspect in the use of vocabulary knowledge, but is out of the scope of this research. Recommendations from research will be investigated to determine how proven vocabulary strategies for native English speakers are applied to and are effective for English learners.

One more definitional point of clarification to be made is the use of the term *academic vocabulary*, which is found throughout the literature about vocabulary instruction for English learners. Academic vocabulary most often refers to vocabulary that is used in classroom settings and is essential for understanding content; for example, in a geometry lesson, academic vocabulary would include terms such as *parallelogram*, *rhombus*, or *rectangular prism*. General vocabulary is usually thought of as vocabulary attained through language acquisition, whether with a first or an additional language; these usually include basic vocabulary words that are used frequently, such as *mother*, *water*, and *house*. These two types of vocabulary terms may intersect as academic vocabulary usually needs to be specifically taught, and for English learners, general vocabulary may also need to be taught, especially those vocabulary terms that could be described as Tier 2 words. Beck and colleagues (2002) indicated Tier 2 words are those words used by mature English speakers. The World-Class Instructional Design and Assessment (WIDA) Consortium (2007) defined Tier 2 words as having a higher level of linguistic complexity. Some Tier 2 words may also be considered academic vocabulary as they are necessary to understand content, especially for reading comprehension, which falls across all content areas (Lesaux, Kieffer, Faller, & Kelley, 2010). An example of

Tier 2 vocabulary terms, or words that have a higher linguistic complexity level are words such as *stallion*, *function*, or *distribute*. For this review of the literature, the term *vocabulary* will be used to refer to any words that need to be directly taught, whether they are academic vocabulary, Tier 2 words, content-specific vocabulary, or general words that may be unknown to English learners.

Locating the Studies

The following electronic databases were searched for this review of the literature: Academic Search Premier, Psychology and Behavioral Sciences Collection, PsycINFO, JSTOR, Education Full Text, Professional Development Collection, and ERIC. The terms searched in this review of the literature were "L2 vocabulary acquisition," as one of the strands of vocabulary research. The other terms were "vocabulary instruction for ESL students + elementary students + reading," matching the strand of research that focuses on the impact of vocabulary instruction on reading comprehension.

Recommendations made by the Vocabulary Subgroup Committee of the NRP in their report *Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction* (NRP, 2000) were also reviewed. Reviews were also conducted of two syntheses of research on vocabulary for English learners: *The Report of the National Literacy Panel on Language-Minority Children and Youth* (August & Shanahan, 2006) and the Institute of Education Sciences practice guide, *Effective Literacy and English Language Instruction for English Learners in the Elementary Grades* (Gersten et al., 2007).

Inclusion/Exclusion Criteria

Articles included in this review of literature met the following criteria.

1. Experimental or quasi-experimental studies from peer-reviewed journals.

2. Studies on vocabulary acquisition and vocabulary instruction for English learners.

3. Studies focused on students in the upper elementary grades; however, studies from prekindergarten through post-secondary levels were included to provide insight into effective components of vocabulary instruction that may be applicable or generalized to upper elementary grade students.

The search in the databases of Psychology and Behavioral Sciences Collection and PsycINFO revealed no articles that matched the search terms "vocabulary instruction for ESL students + elementary students + reading." This could be indicative of search terms that were too narrow or a scarcity of research in this area at the time of the search. The ERIC database displayed 23 articles, none that fit the criteria for this literature review of peer-reviewed empirical articles. The Academic Search Premier database search identified 97 articles sorted by relevancy. However, the relevancy to this research began dropping after ten articles, and the part that was dropped tended to be vocabulary. Nine articles were located that could possibly be applicable in this research topic, although most of those related suggestions for classroom practice based on theory, rather than reports of empirical research. Jimenez, Garcia, and Pearson (1996) had previously noted that much of the research in second-language literacy has been focused on adults or high-school learners. Results of this search of the literature were similar as the majority

of articles focused on secondary, post-secondary, and adult learners (see Table 2.1).

Vocabulary Acquisition

This review of the literature has revealed there are many branches of vocabulary that have been studied, a central one being second-language vocabulary acquisition. Although vocabulary acquisition is the goal of vocabulary instruction for English learners, most studies describe vocabulary acquisition in and of itself, without regard to identifying specific interventions to help with English learners' vocabulary acquisition. Nine articles were located with search terms that specifically involved teaching vocabulary to elementary age English language learners. Most of these were articles that offered suggestions on how to teach vocabulary. Only two of these were peer-reviewed

Table 2.1

Topics Found in Search of Academic Search Premier Database

Topic	Number of articles
Special education	21
Secondary level, adult	28
Computer-assisted learning	11
Culture	8
Tutoring	8
Other content areas	7
English as a foreign language	4
Vocabulary for elementary-age language learners	9
Other areas[a]	35

Note: Total of articles is higher than 97 as some articles could be included in more than one category.

[a] Other areas included poetry, two-way immersion, family, testing, kinesthetic approaches, gifted, after-school settings, general education, and miscellaneous topics.

empirical scientific studies specific to teaching vocabulary to English learners: Carlo and colleagues (2004) and Pérez (1981).

There is a small branch of work to identify vocabulary activities that may affect vocabulary acquisition for English learners. These activities included using marginal glosses, in which the meanings of the words are found in the margins of the text (Hulstijn & Laufer, 2001); using dictionaries (Albus, Thurlow, Liu, & Bielinski, 2005); and applying vocabulary exercises such as matching words to the correct definition, translating words from L1 to L2, and rearranging a list of words which included the target vocabulary term into a sentence before or after reading (Hui-Tzu, 2008). Similarly, articles located in this review of the literature were not focused on studying growth rates of vocabulary acquisition for English learners per se, but rather on suggesting activities that could be incorporated into vocabulary instruction.

Additionally, there is some research on relationships that may occur with English learners and vocabulary, such as the relationship of first language vocabulary knowledge to second language vocabulary acquisition (Chia-Hui, 2009; Ellis & Beaton, 1995; Jean & Geva, 2009; Kroll, Micheal, Tokowicz, & Dufour, 2002; Potter, So, Von Eckardt, & Feldman, 1984); the relationship of oral vocabulary knowledge to reading comprehension (Kroll & Sunderman, 2003; Wixson, 1986); and the relationship between first- and second-language literacy (Cárdenas-Hagan, Carlson, & Pollard-Durodola, 2007; Pulido, 2003), in which vocabulary plays a part. These studies look at vocabulary that is already present and do not address how to teach additional vocabulary to English learners (Gorman, 2012).

Many articles found in the review of the literature focused on reading comprehension. However, vocabulary was included as a subset of that research and was mentioned only briefly (Burgoyne, Whiteley, & Hutchinson, 2011; Proctor, August, Carlo, & Snow, 2005; Qian, 1999; Webb, 2009). This work did not specifically look at vocabulary as a distinct area of instruction, but rather noted that vocabulary is essential for reading comprehension.

Numerous articles were identified that may contribute to the knowledge base of general instruction for English learners; these articles offered suggestions based on research or theories, but were not specifically focused on vocabulary instruction; for example, articles about using shared reading (Kesler, 2010), and a variety of other instructional frameworks (e.g., Echevarria, Short, & Powers, 2006; Kamil et al., 2008; Manyak, 2007). Some studies presented the effect of unique instructional methods on vocabulary acquisition, such as computer programs (Kim & Kim, 2012; Zha, Kelly, Park, & Fitzgerald, 2006), tutoring (Heron, Villareal, Yao, Christianson, & Heron, 2006; McMaster et al., 2006), and physical activities associated with vocabulary (Asher, Kusudo, de la Torre, 1974). Again, these studies did not focus directly on effective vocabulary instruction for English learners.

There has been much written on vocabulary over the last few decades. The NRP (2000) determined that vocabulary knowledge plays an integral part in reading ability. Beck and colleagues (2002) created a tiered system of identifying vocabulary words. Coxhead (2000) created an extensive list of academic vocabulary words, which she condensed to 60 of the most commonly used terms across content area. Marzano and

Pickering (2005) created a list of 7,923 vocabulary terms divided into 11 subject areas.

Clearly, vocabulary is a topic that has received much attention in a number of different

aspects. Despite the renewed emphasis on vocabulary, very little research focuses

specifically on vocabulary instruction for English learners. However, as the influx of

English language learners has continued to grow, more researchers have turned their

attention to this population, as shown in Table 2.1. Several articles emphasized using

vocabulary instructional methods that are prevalent for native English speakers to address

the needs of English learners, but these methods have not been scientifically proven to be

effective for second-language learners. This body of information should not be

disregarded, as it could offer teachers and researchers a starting place for more rigorous

research and pedagogy to benefit English learners.

Similar to this review of the research, *The Report of the National Literacy Panel

on Language-Minority Children and Youth* (August & Shanahan, 2006) identified only

two published studies focused on vocabulary instruction for English learners. Pérez

(1981) performed a random controlled trial with third-grade English learners as subjects,

and Carlo and colleagues (2004) conducted a quasi-experimental study with fifth-grade

English learners. The next step is for researchers to investigate what works for English

learners and provide scientifically validated methods of effective classroom vocabulary

instruction for students learning English.

To address the three purposes of this review of the literature, the following

sections present information about: (a) The importance of vocabulary instruction for

English learners and some of the challenges these students face related to language

learning and pedagogical methods; (b) Components of instruction and delivery that have proven to be effective methods to use with English learners, such as explicit instruction and communicative task-based activities; (c) Use of core reading programs as this is the primary source of words selected for vocabulary instruction; and (d) Assessment of vocabulary acquisition and growth for English learners.

Importance of Vocabulary Instruction for English Learners

Vocabulary development is strongly related to academic achievement (Biemiller, 2005; Hart & Risley, 2003; Saville-Troike, 1984); this makes teaching vocabulary crucial for English learners, as they are in the process of developing vocabulary in a second language. Vocabulary knowledge has an impact on many aspects of a child's school experience. Lack of vocabulary can hinder reading fluency and comprehension for all students (Lesaux et al., 2010; Silverman, 2007), and inhibit both receptive and productive communication. It has been estimated that most of the vocabulary differences among children emerge before grade two (Biemiller & Slonim, 2001). Children with high vocabularies may know approximately 4,000 more root word meanings than children who are experiencing delays in vocabulary development (Coyne, McCoach, & Kapp, 2007). Young children who fall behind in developing vocabulary knowledge are at a significant risk for experiencing serious reading and learning difficulties (Coyne et al., 2007; Lesaux, Rupp, & Siegel, 2007). Research has shown that students who reach fourth grade with limited vocabularies are very likely to struggle to understand grade-level texts (Biancarosa & Snow, 2004; Chall & Jacobs, 2003; Kieffer & Lesaux, 2007; NICHD,

2000; RAND Reading Study Group, 2002).

One segment of students who are particularly likely to lack English vocabulary is the growing population of English learners (August, Carlo, Dressler, & Snow, 2005: Kieffer & Lesaux, 2007). When students are learning English as a second language, they may not have the same English vocabulary base as native speakers (Graves, 2006). The general discourse of school may be unfamiliar to English learners, and they may not understand words the same way a native English speaker does (Fillmore & Snow, 2000; Graves, 1985; McKay & Low, 2012). They may not hear the vocabulary in their homes to support what they are learning at school (Cooper, Chard, & Kiger, 2006; Fillmore & Snow, 2000). Even as language proficiency is developed, it has been found that progress from beginning to intermediate language proficiency happens quite rapidly, but from intermediate to advanced proficiency takes much longer (Genesee et al., 2005). These factors play into the achievement gap that is often found between native English speakers and English learners in classrooms across the country (National Assessment of Educational Progress [NAEP], 2009). The importance vocabulary instruction plays for the English learner cannot be overestimated.

English learners require instruction in vocabulary to help close the achievement gap they are facing (Kieffer & Lesaux, 2007; Lesaux et al., 2010; Marzano, 2004; Marzano & Pickering, 2005). Although the teaching methods need to be different for English learners (Echevarria, Vogt, & Short, 2008; Harper & de Jong, 2004; Marzano & Pickering, 2005), many of the same pedagogical aspects that researchers have identified for English speakers may also be applied to English learners. These include explicitly

teaching vocabulary words and giving opportunities for students to practice and use the terms across multiple contexts (Beck et al., 2002; Echevarria et al., 2008; Marzano, 2004; Rekrut, 1996); teaching strategies for students to be able to infer meanings of unfamiliar words independently (Beck et al., 2002; NRP, 2000); and, teaching word parts (Cooper et al., 2006; Echevarria et al., 2008; Kieffer & Lesaux, 2007; Marzano, 2004; McKutchen, Logan, & Biangardi-Orpe, 2009; NRP, 2000; Rekrut, 1996).

There is consensus in the literature that teaching individual words is important for English learners (Graves, 2006; Lesaux et al., 2010). Explicit vocabulary explanations provide the contextualized, elaborated, and repeated opportunities for students to learn content area words and concepts (Rekrut, 1996). Graves listed a number of reasons in support of teaching individual words. These included:

- Teaching a child a word leaves one less word to learn independently;

- Teaching individual words gives students a lexical store of words they can use to explore and understand their environment;

- Teaching individual words can contribute to students' understanding of a particular text that uses those taught words;

- Teaching individual words can increase the overall quality of students' oral and written communication skills; and

- Teaching individual words helps foster student interest in and engagement with words.

Vocabulary instruction is necessary for English learners for a variety of reasons: content area texts use very sophisticated vocabulary, and to be successful English

learners need access to that vocabulary; reading performance tests which are administered to all students, including English learners, require a wide range of vocabulary; English learners are learning vocabulary later than native-speaking students, and to learn the deep meaning of words is very challenging for them (Echevarria et al., 2008; Genesee et al., 2005).

Vocabulary instruction gives English learners opportunities to work with the words and incorporate them in their daily repertoire (Anthony, 2008). This instruction is critical for English learners, as it is strongly related to academic achievement (Saville-Troike, 1984). Two specific areas that are impacted by effective vocabulary instruction for English language learners is the receptive skill of reading comprehension and the productive skill of oral language. Development of both of these areas is necessary for success in school settings and tasks.

Reading Comprehension

For native English speakers, there has been much research on the importance of vocabulary knowledge as it relates to reading comprehension (August & Shanahan, 2006; NICHD, 2001; Region IV ESC Resource, 2003). In fact, Nagy (1988) reported that vocabulary knowledge is the single best predictor of how well a reader will understand text. According to studies cited in the National Literacy Panel synthesis (August & Shanahan, 2006), there was not a large difference in word-level decoding skills between native language speakers and second language speakers; however, that is not the case in the area of comprehension, where language-minority students fall well behind their native-speaking peers.

If a word in written text is unfamiliar to the English learner, the ability to decode the word will not make it any more understandable (Region IV ESC Resource, 2003; Reutzel & Cooter, 2005). Carlisle, Beeman, Davis, and Spharim (1999) found that the ability to provide definitions for nouns in English and Spanish was related to vocabulary knowledge in English and Spanish, and that this knowledge contributed significantly to reading comprehension in English. Saville-Troik (1984) also found a significant correlation between vocabulary knowledge and performance on a reading test. Jiménez and colleagues (1996) found that the major obstacle to comprehension for bilingual Latino readers was unknown vocabulary. These results confirm that vocabulary plays a significant role in comprehension.

Oral Language

Almost all beginning reading is based on oral language (NRP, 2000). It is true that English learners need instruction in the five key components of literacy as listed by the NRP, but that is not sufficient for them. Along with instruction in phonemic awareness, phonics, fluency, vocabulary, and comprehension, they also need instruction in oral language proficiency (August & Shanahan, 2006; Echevarria et al., 2008). Students cannot read, pronounce, or comprehend a printed vocabulary item that is not in their oral language vocabulary repertoire (Region IV ERC Resource, 2003; Reutzel & Cooter, 2005).

In Standard II listed by the Center for Research on Education, Diversity, and Excellence (CREDE, 2002), oral language development is emphasized, and some key points are noted. It asserts that everyday social language, formal academic language, and

content specific vocabulary are all critical for school success. Language development should be fostered through purposeful dialogue between teachers and students; drills and de-contextualized rules are not the way to develop language skills. The teacher has the responsibility to listen and respond to student talk and questions, and should provide frequent opportunities for students to interact with each other and the teacher during instructional activities (Larsen-Freeman, 2007). Students should be encouraged to use content vocabulary to express their understanding. Teachers should encourage students to use their first and second languages during instructional activities; in their research on sheltered instruction, Echevarria and colleagues (2008) emphasized the importance of English learners having the opportunities to clarify concepts in their native language.

Typical classroom instruction does not tend to emphasize oral language proficiency for native English speakers because their oral language skills are already well developed (Anthony, 2008; Harper & de Jong, 2004; Lesaux & Geva, 2006). The relationship between literacy development and oral language skills is more complex for English learners than native English-speaking students as a result of mediating influences of the English learners' native language (Graves, 2006). At times English learners can use their skills from their native language to facilitate acquisition of reading skills; for example, "I go" with the subject *I* followed by the verb *go* is similar to "Yo voy" in Spanish where *Yo* is the subject *I* and *voy* is the verb *go* (Genesee et al., 2005; Lado, 1964). A skillful teacher may use students' own culturally based ways of talking and effectively link them to the language used for academic disciplines by building learning contexts that evoke and build upon children's language strengths (CREDE, 2002).

Some research has shown a positive relationship between English oral proficiency and English reading achievement (Genesee et al., 2005). The Report by the National Literacy Panel (August & Shanahan, 2006) included a review of studies that investigated the relationship between oral language proficiency and literacy development in second-language learners to determine if English learners were at a disadvantage in word reading skills because of their limited English language proficiency. Many of the studies showed there was a significant, albeit moderate, proportion of variance attributed to oral proficiency on reading skills. For this reason, building a basic oral vocabulary of the most frequent English words is extremely important for English learners (Graves, 2006), as is focusing on vocabulary necessary to be successful in academic content areas (CREDE, 2002). Oral language proficiency is vital to school success for English learners (Genesee et al. 2005; Lenters, 2004).

Similarly, interaction is an essential element of effective vocabulary instruction for English learners (Garcia & Beltran, 2003). One of the keys to success for English language development is that students must be required to produce oral language on a daily basis (Gersten et al., 2007; VanPatten, 2003). Graves (2006) noted that most people actively use only a small percentage of the words they know, as receptive vocabulary knowledge is usually higher than productive vocabulary. Students, and particularly English learners, need assistance, much practice, and encouragement in actively using the words they know and are learning to help them strengthen their productive vocabulary skills and become better, more precise communicators (Graves, 2006).

For English learners, communication-based instruction can be an effective tool to

provide access to content area material (Hernandez, 2003). The goal of communication-based instruction is to acknowledge the interdependence of language and communication, moving beyond linguistic competence to communicative competence (Larsen-Freeman, 2007). In other words, it is not enough to just know a language; one must be able to communicate in that language. When learning in a second language, students need instructional approaches that allow them to interact with and construct meaning from lessons presented in class. Effective communication is interactive, authentic, and meaningful, with plenty of opportunities to hear and respond in the target language and get feedback from native speakers (Echevarria et al., 2008; Hernandez, 2003).

It is critical for English learners that oral language be well-developed (Genesee et al., 2005; NRP, 2000). Thus, it is imperative for English learners to have plenty of opportunities to talk in the classroom to build their oral language abilities. Gone are the days when a classroom was considered to be successful if all the students were working quietly at their desks. For vocabulary acquisition, students must be able to discuss and interact with the vocabulary that has been introduced. Carlo and colleagues (2005) stressed the importance of discussing new vocabulary in authentic contexts. Discussions students have about new vocabulary need to be applicable and relevant to the vocabulary instruction to facilitate acquisition of vocabulary, which leads to progress in literacy.

Vocabulary instruction for English learners is important on more than one level. Reading comprehension is hindered without sufficient vocabulary knowledge, and content material cannot be accessed without adequate vocabulary. An effective way to teach vocabulary is in authentic contexts, where students have the opportunity to engage

in meaningful dialogue using and practicing the targeted vocabulary in relevant situations. This not only increases their oral language skills, but allows English learners to be successful in comprehension of content area instruction.

Special Challenges of English Learners in Learning Vocabulary

There are many challenges that English learners face daily in classrooms across the United States. Teachers may not be aware of the difficulties that are inherent when students lack proficiency in the language of instruction. Language demands of instruction are often invisible to mainstream teachers, because the role of language in teaching and learning academic content is assumed rather than made explicit (Harper & de Jong, 2004). There are not many resources for teachers to turn to for information on teaching vocabulary to this population. Teachers apply misconceptions in their classrooms as they grapple with the challenge of teaching English learners who are not proficient in the language of instruction. All of these factors contribute to challenges for English learners in the classroom. If teachers are not aware of the specific needs, as well as strategies to address those needs, these factors contribute to challenges for English learners in the classroom.

Lack of Research

Lack of research and resources for teachers on effective methods for vocabulary instruction for English learners creates a challenging situation for English learners. As the search of the literature for this study was conducted, one pervasive theme that surfaced was the lack of studies to guide educators in how to teach vocabulary to English learners

(August & Shanahan, 2006). When educators do not have enough information to effectively teach vocabulary to students learning English, the students suffer. As Graves (2006) reported:

> Unfortunately, while theory and logic suggest some very reasonable approaches to vocabulary instruction for English learners, there is very little research on vocabulary instruction with these students. In fact, a review of reading programs for English learners completed in 2003…included only two experimental studies of vocabulary instruction…. (p. 35)

The Report of the National Literacy Panel on Language-Minority Children and Youth (August & Shanahan, 2006) is a comprehensive review of the literature that focuses on second language literacy. First and foremost, throughout the report there is mention of the lack of research on this important topic in education today.

> The panel discovered that there is a paucity of research available on the topics the researchers and the community deemed most important. Where research reports did exist on a particular topic, they were few in number, compared to the volumes of research available on monolingual English-speaking children. (August & Shanahan, 2006, p. x)

Graves (2006) further noted that the report of the National Literacy Panel (August & Shanahan, 2006) included only four experimental studies of vocabulary instruction that were conducted since 1980. Slavin and Cheung (2003) performed a review of reading programs for English learners and found only two experimental studies of vocabulary instruction. Lesaux and Geva (2006), contributors to the National Literacy Panel, also reported that reading development of upper elementary and secondary school language-minority students has received scant research attention.

Fewer studies inform instruction for English learners than those that focus on teaching vocabulary to native English speakers. Underscoring the importance of

addressing the needs of English learners is the fact that although the achievement gap

between Hispanics and Whites in reading has been significantly reduced over the past 30

years, the achievement gap between English learners and native English speakers in

fourth grade in 2009 was higher than the gap between Blacks and Whites (NAEP, 2009).

The dearth of research creates a situation wherein teachers do not have research-based

methods for teaching vocabulary for English learners.

**Vocabulary Instruction Often Does Not
Meet the Needs of English Learners**

Teachers frequently express the belief that teaching English learners is just a

matter of good teaching, or implementing best practices, or the use of research-based

instructional strategies that produce positive outcomes on *native English speaking*

students' vocabulary acquisition (Gersten & Baker, 2000; Miller & Kohler, 1993).

Applying the same teaching practice for literacy learning to English speakers and English

learners is not always supported by the research (Foorman, 2007; Garcia & Beltran,

2003). The ways of using language that prevail in school discourse, such as asking and

answering questions, challenging claims, and using representations, are frequently

unfamiliar to English language learners and other students at risk of educational failure

(CREDE, 2002). Short and Fitzsimmons (2007) posited that English learners need

significantly more intensive and intentional vocabulary instruction than native-speaking

struggling readers.

Attitudes to the contrary, such as that the same instruction should be sufficient for

all students, often prevent teachers from delivering the kind of instruction that is most

beneficial to English learners (Harper & de Jong, 2004). Teachers may come away from professional development with the idea that acquiring a second language occurs the same way a first language is acquired. Although there are similar stages of language acquisition for a first and second language (Krashen, 1985; Vygotsky, 1978), there are many theoretical differences that need to be addressed when helping English learners in classrooms become proficient in a second language (August & Shanahan, 2006; Cummins, 1984; Harper & de Jong, 2004). This applies to vocabulary acquisition, and thus to vocabulary instruction.

The task of developing vocabulary can be quite different for English learners than native English speakers. At times English learners can use their skills from their native language to facilitate acquisition of vocabulary skills, but there can also be cross-language influences that result in students being unable to make connections between the native language and the second language, which may hinder their academic achievement in the target language (Genesee et al., 2005; Lado, 1964). English learners may experience cognitive overload as they try to acquire more language. Foorman and Moats (2004) analyzed several first-grade core reading programs where they found that a third of the words were taught holistically, that is with no instruction in using phonetic or morphological strategies. Students were required to memorize the words, which has the drawback of increasing demands on memory. Language learners can only assimilate so much before their attentional resources are depleted and their working memories have to dump information to accommodate more input (VanPatten, 2000, Verhoeven, 2000). Teachers need to be aware of these influences, and then work to mitigate them through

effective instruction.

Ultimately, English learners must learn the same words native speakers need to learn. The task of learning all the words necessary to comprehend grade-level text is enormous, with estimates that good readers learn approximately 3,000 new words a year (Nagy, Anderson, & Herman, 1987). Struggling readers or those who are educationally marginalized are likely to learn far fewer words (Kieffer & Lesaux, 2010), and the effort exerted to learn those words is great. For native speakers, there is automaticity in retrieving a word from the lexicon, but for an English learner, access to a word in the lexicon requires conscious attention to identify the correct term (Anthony, 2008). For example, the word *because* in a cause and effect context comes very easily and naturally to a native English speaker, while an English learner has to specifically think about what word to use in that situation. English learners may struggle to identify important terms, especially academic vocabulary, when the words appear amid large amounts of language, whether oral or written (Lewis-Moreno, 2007).

Although much vocabulary instruction for native speakers may be appropriate for English learners (Fitzgerald, 1995; Slavin & Cheung, 2003), there are specific needs and special factors that should be considered for English learners (Graves, 2006). Studies have shown that upper-grade students with limited vocabulary struggle to comprehend grade-level texts (Anderson & Freebody, 1981; Biancarosa & Snow, 2004; Chall & Jacobs, 2003; RAND Reading Study Group, 2002). They lack the academic language required to interact successfully with content area texts (Kieffer & Lesaux, 2010). The RAND Reading Study Group and the NRP (2000) both reported that vocabulary

instruction is one of the essential elements of literacy development for students determined to be at risk for school failure.

English learners have many more words to learn and may not have the same background as native speakers. Teachers need to be cognizant of these differences and adjust instruction accordingly (Graves, 2006). An example of a strategy often used for native English speakers that needs modification for English learners is the use of a K-W-L chart, a well-known and frequently recommended instructional strategy. Students list what they *know* about a topic (K), what they *want* to learn (W), and at the conclusion of the lesson what they did *learn* (L). Use of this chart assumes that students have the language skills to participate in the activity, such as stating facts, proposing ideas, and asking questions (Harper & de Jong, 2004). Similarly, in content area instruction, students must have a certain level of language skills to be able to describe, draw conclusions, hypothesize, or compare and contrast (Carrier, 2005; McKay & Low, 2012). Many functions of language use need to be explicitly taught to English learners before they can use them successfully (Dutro & Moran, 2003).

When learning in a second language, students need instructional approaches that allow them to interact with and construct meaning from the lessons presented in class (Hernandez, 2003; Kirylo & Millett, 2000). Traditional vocabulary instruction often relies heavily on worksheets or dictionary work (Kirylo & Millet, 2000; Wessels, 2011). This type of instruction produces only superficial understanding of vocabulary (McKeown, 1993). Bromley (2002) suggested that teachers stay away from lecture when teaching vocabulary, as lecture type instruction likely does not result in meaningful use of

new terms.

Classroom or instructional practices that may be sufficient for native English speakers may not significantly contribute to vocabulary acquisition for English learners, such as incidental vocabulary learning and the use of dictionaries. Lack of classroom practices that may not be necessary for native English speaking students may hinder learning for English learners. English learners' vocabulary acquisition may be affected by limited opportunities to practice new words, assumptions teachers make about the word knowledge of students, and lack of schema development.

Incidental vocabulary learning. The incidental vocabulary learning hypothesis maintains that native English speaking students learn words through a variety of literacy experiences, especially reading (Nagy & Herman, 1985). Because of the vast amount of vocabulary children need to learn, it is often thought that acquiring vocabulary through wide reading experiences is the best way for new words to be learned (Krashen, 1985; Nagy & Herman, 1985). This is based on the idea that the sheer number of words students need to learn would be overwhelming to try and teach (Marzano, 2004). Nagy and Herman (1987) asserted that even if the gains that come from wide reading are as small as 5% that it is possible a student could learn 750-1,500 new words in 200 days by reading for 25 minutes a day at a pace of 200 words per minute. Nation and Coady (1988) state there is value in reading to increase vocabulary, and Freeman and Freeman (2003) assert that preteaching vocabulary words is time that would be better spent in actual reading activities.

The curricular extension to this hypothesis would be to increase reading

opportunities for students to help with vocabulary acquisition. Cummins (2003) agreed that reading extensively in a wide variety of genres is essential for developing high levels of vocabulary knowledge, especially for English learners as they are trying to catch up to native English-speaking students who are continuing to develop their English academic language proficiency. There is no argument against the logic that reading extensively improves reading skills and vocabulary, but as Beck and McKeown (1991) noted, there has been no evidence in the research over the past few decades that report that word meanings are routinely acquired from context. It is questionable if this is truly an effective method for English learners to acquire new vocabulary. Incidental reading may not help English learners in the same way it does native speakers (Cooper et al., 2006).

One must consider that the probability of learning new words through wide reading is very low, approximately 15% (Swanborn & de Glopper, 1999). Children who have lower initial vocabularies are less likely to learn words incidentally during reading activities (Coyne et al., 2007). It may be that these students cannot make use of context clues to infer word meanings (Stahl, 1991). Swanborn and de Glopper reported that the chances of learning a word from context are influenced by the ability level and grade level of the student. If children have difficulty learning word identification skills, they are less able to develop their vocabulary knowledge through independent reading (Cunningham & Stanovich, 1998). A student with high literacy skills has a 19% chance of learning a new word in context, whereas a low-ability student has an 8% chance (Marzano, 2004).

There is a moderating influence on incidental vocabulary acquisition, that of text

density. Text density is often related to academic vocabulary or technical terms found in content areas. Swanborn and de Glopper (1999) indicated that acquiring vocabulary from context is influenced by the density of the text. Marzano (2004) reported that if the text is high-density (one new word for every ten words) the chances of learning new words in context are greatly decreased. Based on Marzano's definition of text density, text that is low density for a native English speaker may be considered high density for an English learner, depending on the number of words in the text that are unfamiliar to the English learner.

Another consideration is access to reading materials or resources. It cannot be assumed that all students have the books to participate in wide reading beyond what the school provides. In addition to reading materials, students may not have the luxury of time to engage in wide reading activities, especially if they are involved in child care while parents are working, or themselves are contributing to the income of the home by working after school hours. Jenkins, Stein, and Wysocki (1984) showed in their study with fifth graders that it takes 6 to 10 exposures to learn a word in context. Words can be learned incidentally during reading, but that learning does not come easily or in large quantities. They go on to say that if educators are interested in building vocabulary, wide reading may not be the answer. There are typically not enough exposures within most texts to even derive word meaning, let alone learn words well.

There are many factors involved with incidental vocabulary acquisition through wide reading that make this an ineffective strategy to apply to English learners. Coady (1997) identified *the beginner's paradox*: How can an English learner learn enough

words to acquire vocabulary through extensive reading when he/she does not know enough words to read well? Lack of grammatical knowledge and linguistic cues and features will affect incidental vocabulary acquisition in ways that are very different for English learners in comparison to their native English-speaking peers (Anthony, 2008; Proctor et al., 2005). Obviously, if a student reads a passage or story and does not understand a large percentage of words, or even does not understand the grammar or syntax, they will not glean as much as if they were being instructed in the vocabulary. Educators cannot rely alone on wide reading and incidental vocabulary acquisition for English learners.

Dictionary use. There are many ways that dictionaries are used in vocabulary instruction. Word definitions provided in reading programs may come from standard dictionaries. Most definitions found in dictionaries are highly technical and may be difficult for elementary age students to understand or reproduce. The definitions in dictionaries are concise because of limited space, which may contribute to making them harder to understand (Beck et al., 2002). Often the words in a dictionary definition are unfamiliar to students (Echevarria et al., 2008).

At times instruction includes looking up words in standard dictionaries. Sometimes this could refer to use of a glossary that has words specific to the text being read. Even when students looked up words to aid their understanding while reading, it was still not very effective, as shown in a study done by Laufer (2001) involving three groups of high school second language learners. One group read a text and looked up ten unknown words, one group wrote sentences with the target words, and the last group

filled in the target words in given sentences, one word in each sentence. The latter two groups received the list of the 10 words with their meanings. On both the delayed and the immediate tests, the reading only group performed significantly worse than the other two groups.

Use of an English dictionary implies a certain level of literacy in the English language. If a student's vocabulary knowledge is too low for a given text, dictionary use may not be of benefit, albeit students with low vocabulary knowledge are the students who might most need the help. Even a bilingual dictionary requires literacy in the native language, which many English learners do not have (Albus et al., 2005). Albus and colleagues found that using a simplified dictionary did not produce significant results for low and high language proficiency level learners during testing situations, although it did show significant results for intermediate language learners. In addition, there may be a number of languages for which it would be difficult to find bilingual dictionaries (Albus et al., 2005).

When using a dictionary or glossary for students, there may be a need for different words to be explained (i.e., Hmong students may need Latin-based words included, where a Spanish student would not; Diamond & Gutlohn, 2006). There may also be conceptual differences in general background and experiences between language groups that would need to be considered when looking at word definitions (August & Shanahan, 2006), as well as contextual differences relative to the native language (McKay & Low, 2012). Sometimes a word does not translate exactly, so the definition may not make sense for an English learner. For instance, Garcia (1991) found that

comprehension of certain words for fifth- and sixth-grade Latino students was adversely affected by the Spanish use of the word. The example she gave was the word *advantage*, which most Latino students related to the Spanish word *aprovecharse de*, which means "take advantage of."

Methods that provide only definitional information about vocabulary terms do not produce a reliable effect on comprehension (Irvin, 1990; Stahl & Fairbanks, 1986). When providing definitions for vocabulary terms, care must be given that the definitions are comprehensible and applicable for English learners. Archer and Hughes (2011) and Marzano and Pickering (2005) discussed the need to provide definitions which were easy for students to understand. Some studies showed the possibility that a mix of definitional methods combined with contextual approaches worked better than either approach alone. This was a combination of giving students the definition or a synonym of a term, teaching the word in context, and creating a balance between these two methods (Kolich, 1991; Stahl, 1983; Stahl & Fairbanks, 1986).

Limited opportunities to practice new words. Students need the opportunity to practice new skills they are learning, whether it is shooting a basketball, playing the piano, or learning new vocabulary. Opportunities to practice do not always happen in school settings. Studies have shown that classrooms are passive learning environments for students, where teachers do the majority of talking (Arreaga-Mayer & Perdomo-Rivera, 1996; Kirylo & Millet, 2000; Lopez-Reyna, 1996; Padrón, 1994; Ramírez, 1992). Ramírez found in his observations of bilingual transition elementary classes that student-initiated language use ranged from 3% to 10% of total student responses, and most often

student responses were comprised of one or two word utterances (see also Kirylo &

Millet, 2000; Lopez-Reyna, 1996; Pérez, 1994; Ruiz, 1995). This does not give English

learners many opportunities to use vocabulary or even any practice in their oral language

development.

Swain (2005) noted that despite an abundance of comprehensible input, input

alone is not enough for learning a second language. Comprehensible input includes

strategies teachers use to help explain a concept or a term that goes beyond stating a word

and its definition. Repetition is an important part of comprehensible input for English

learners, especially with academic words and concepts that are not part of everyday

conversation. Simply introducing a vocabulary word one time is insufficient; extended

and repeated opportunities to engage in activities that offer interactions with new words

are needed (Graves, 2006; Stahl & Nagy, 2006). Learning a new language is a

complicated process, and requires many opportunities for saying, reading and writing

new terms for retention to occur (Barcroft, 2004; Blachowicz et al., 2006; Crawford,

2003; Echevarria et al., 2008; Gersten, 1996).

Nation (1994) emphasized the importance of giving students many opportunities

to use the language to ensure vocabulary development. Repeated exposure to unfamiliar

words will result in an incremental effect on vocabulary learning (Cummins, 2003). Beck

and colleagues (2002) reported that students must continue to use the new words after the

initial introduction to integrate new vocabulary into their lexicon. If students are not

given the opportunity to put the vocabulary to use and develop skill in using it, growth

cannot be achieved. In a study with native English speaking kindergarten students, Coyne

and colleagues (2007) found that increasing encounters with target vocabulary in varied and meaningful contexts resulted in higher scores on vocabulary measures than embedded instruction, in which students were given only the meaning of the words as they heard a story read to them.

Conclusions from studies on native English speakers reviewed by the NRP (2000), which were conducted with prekindergarten through first-grade students, showed that repeated multiple exposures to vocabulary words resulted in gains. These studies showed that repeated reading of a story (Senechal, 1997) and frequency of target words in stories (Leung, 1992) contributed to higher vocabulary gains and more usage of the targeted words in story retellings. These studies were focused on native English speakers, but the results could possibly be extended to English learners as well.

Given the evidence that repetition is important in vocabulary acquisition, there still has been very little research on the topic of how many repetitions of a word are needed to ensure mastery (Foorman, 2007). There was one study done by Jenkins and colleagues (1984), which reported that it takes 6-10 exposures to a new word for it to be learned in context, but this is not specific to teaching words in a vocabulary lesson. Regardless, English learners need multiple opportunities to acquire new vocabulary terms. It takes much practice for a word to become a permanent part of a student's lexicon.

Word knowledge assumptions. There appears to be an assumption that if a student can read words proficiently, they can then comprehend the text. This is understandable, but for English learners this is an erroneous assumption. As Freeman and

Freeman (2003) noted, pronouncing a word and understanding its meaning are two separate operations. Phonics instruction can help with word level skills, but does not improve knowledge of vocabulary terms for English learners (Cummins, 2003). The NRP Report on vocabulary instruction explained that phonetic ability is beneficial as long as the word that is decoded is a known word in the reader's oral vocabulary (NRP, 2000). English learners in the middle grades often have good decoding skills, but are lacking in vocabulary (Lesaux & Kieffer, 2010), which affects reading comprehension or other aspects of second-language proficiency (Cummins, 2003; Reutzel & Cooter, 2005).

Two studies in middle schools in the same district found similar results (Lesaux & Kieffer, 2010). The first study involved 262 students, 201 who were English learners. These students had scored below the 35th percentile on a standardized measure of reading comprehension. The goal of the study was to determine which skill sets the students were lacking that could be targeted for specific instruction to improve reading comprehension. The researchers concluded that the native English speakers and English learners who exhibited reading difficulties generally had good foundational word reading skills, but read print without understanding what they read (Lesaux & Kieffer, 2010).

The second study followed a group of Spanish-speaking second language learners from fourth grade into middle school. These students had been enrolled in schools in the district since the primary grades. They found that the students had good word reading skills, but scored around the 20th percentile on vocabulary and reading comprehension tests (Kelley et al., 2010).

Word reading is not an accurate indicator or guarantee of vocabulary knowledge

or understanding. Teachers need to go beyond word-level knowledge to help students gain knowledge of the vocabulary terms themselves. Many times when students are struggling with comprehension, especially middle school students, interventions jump to word-decoding skills, which may not be what students need; they may need help acquiring the vocabulary (Gertsen et al., 2007; Kelley et al., 2010).

Differences in schema. All students have experiences and background knowledge, or schema, that they bring into the classroom with them which can contribute to learning. Some students have background and schema that are more relevant to instruction in United States classrooms. The discourse that happens in schools is familiar to them, or is easily assimilated.

Often the connections native English speakers make to a new concept or term comes automatically because they have the lexical background and schema from which to draw (Drucker, 2003; Kirylo & Millet, 2000). For English learners, that automaticity may not be as accessible because of either linguistic or cultural differences (Graves, 2006). Words that represent known concepts for some students will represent unknown concepts for others. If native English speakers have the schema to understand a concept, then applying a new label to that concept is not as demanding as it is for English learners, who may or may not have the concept in their schema, yet still have to develop word knowledge in a second language (Graves, 2006; Kirylo & Millet, 2000).

Cognates, or words in two different languages that are similar and have similar meanings, are one way for language learners to access their schema for vocabulary or concepts. There are some constraints to consider when discussing use of cognates. Care

must be taken when encountering false cognates, or cognates in which the background

knowledge or experiences of the students leads to a different connotation of the word

(Albus et al., 2005; Garcia, 1991; James & Klein, 1994). Some Latin-based words may

be false cognates for Spanish speakers, meaning that they may look like a cognate, but

have a very different meaning. An example may be the word *sopa*, which is spelled

nearly the same as the English word *soap*, but actually means "soup," or the Spanish

word *ropa*, which is similar to the English word *rope*, but means "clothing" (Diamond &

Gutlohn, 2006).

Languages may need to be typologically similar for transfer to occur (Saville-

Troik, 1984). Learners need to have metalinguistic awareness of cognate relationships,

such as between whole words or word parts, for transfer to happen (August & Shanahan,

2006). Cognate transfer may be influenced by the degree of orthographic, or spelling

overlap, between the cognates (August & Shanahan, 2006). James and Klein (1994)

found that German 12- to 13-year-old students learning English as a foreign language

struggled with cognate relationships involved with spelling. If an English word was

similar to a German word, students would often use the German spelling, such as for the

words *familie*/family, and *habe*/have. Problems also occurred when words were spelled

similarly, but were not cognates. Students would use the German spelling for the word

fahr, which means "drive," for the English word *far*.

Language transfer may not occur if the learner has the perception that the

languages are distant, or not closely related (Garcia, 1991; Jimenez et al., 1996). Cognate

use is also influenced by learners' ability to discern systematic relationships among

suffixes, such as the Spanish word ending –*idad*, which relates to the English suffix –*ity*. Vocabulary transfer is also related to students' reading proficiency (August & Shanahan, 2006).

In summary, there are many challenges faced by English learners in acquiring vocabulary. These include hypotheses about the way students acquire new vocabulary, as well as cultural diversity that may influence the schema students bring into the classroom. Even when cognates are available to help students transfer meaning from their native language to an additional language, there are still obstacles they may encounter. Teachers need to be aware of these areas of need, make no assumptions, and provide instructional settings and strategies that help English learners in acquiring new vocabulary words.

Evidence-Based Approaches to Vocabulary Instruction for
English Learners

There is a scarcity of research specifically concentrated on vocabulary instruction for English learners. Teachers often have questions about the best methods for teaching students who are English learners. Because of limited resources on this topic available to teachers, they often use the same vocabulary instruction for all of their students, regardless of student language proficiency. Much has been written about common practices that may be based on research for native English speakers, but these instructional methods are not always supported by a strong research base related directly to instruction for English learners. Many of these strategies may be similar to those found in basic vocabulary instruction for native English speakers, but require sensitive

modifications to be effective for English learners (Foorman, 2007; Gersten, 1996; Laturnau, 2003). There are a number of instructional strategies that may prove to be beneficial for English learners. Some strategies have become common practice even though there may not be a strong research base behind them, and some strategies are based on theories or theoretical analysis.

In their review of the research on effective literacy and English language instruction for English learners, Gersten and colleagues (2007) lamented the fact that there has not been sufficient research focused on understanding how to improve the quality of literacy instruction for English learners. They cited the fact that they found only about a dozen studies that met standards of rigor to determine which instructional practices have an effect on academic outcomes for English learners. In their review, the level of evidence was strong for using explicit vocabulary instruction and having students work in pairs on academic tasks in a structured environment.

Another area of focus that has been found in relation to instructional practices for English learners is that of building on the background knowledge of students, as well as encouraging teachers to provide background knowledge in unfamiliar content areas for English learners (Echevarria et al., 2008). Marzano (2004) stated that the relationship between background knowledge and vocabulary is prevalent in the research and has a strong connection to academic achievement. He also indicated that language interaction between students is a way to develop academic background knowledge, that to enhance academic background knowledge there should be "great emphasis" placed on language interaction (Marzano, 2004, p. 39). Although this information from Marzano did not

focus on English learners per se, the basic concepts may be applied to English learners, who often lack background with English vocabulary (Echevarria et al., 2008).

All of these considerations for vocabulary instruction may be dependent on the structure of the vocabulary lesson being taught. The lesson framework itself may contribute or detract from instructional practices that are necessary for English learners. There are questions as to how much time a lesson should take, how often vocabulary lessons should be taught, and how many words should be included in a vocabulary lesson.

Structure of Vocabulary Instruction
Lessons for English Learners

The format of a vocabulary lesson is something that needs to be considered when investigating vocabulary instruction. The structure can affect teacher instruction and student learning. There are two ways to look at the format of a vocabulary lesson: The cycle of instruction for a complete lesson over a period of time and the specific components of a single vocabulary lesson. Components include the length of a vocabulary lesson, the frequency of the lessons, and the number of words taught in a lesson.

Vocabulary lesson over a period of time. Vocabulary lessons can be extended over a period of time, in which the same words are studied for a number of days. In reading contexts, vocabulary lessons are usually tied to a weekly story cycle in which the words may be practiced several days. Beck, Perfetti, and McKeown (1982) outlined lessons over an extended period of time. In their study on vocabulary instruction they

followed a 5-day cycle to teach vocabulary words to fourth-grade students. On the first day, students were introduced to the words, wrote the words and definitions in a logbook, and performed activities with the words. The second day consisted of students generating sentences for each word, and then completing an activity reviewing word meanings. On the third day, students produced contexts in which the words could be used. Day 4 students participated in a game-like activity of timed trials of reading the words. The last day of the cycle, students took a multiple-choice test on the words for the week. Students taught vocabulary using this format learned the words better and did better on a timed semantic decision task in which students had to put a word into the correct category than students not instructed with this format. Instruction that included opportunities to interact with the vocabulary in a variety of ways produced higher vocabulary acquisition than instruction that did not accommodate many or varied interactions.

A single vocabulary lesson. There are a number of suggestions for components of a basic vocabulary lesson. Cooper and colleagues (2006) devised a framework for vocabulary instruction which is made up of five steps to be used prior to reading the text: (a) assess and diagnose; (b) teach/reteach; (c) practice; (d) apply, and (e) reassess. Beck and colleagues (2002) also used a five-step vocabulary instruction model based on identifying a word using context: (a) the text was read and paraphrased; (b) the student explained what the text was about; (c) the student provided an initial notion of the word's meaning; (d) the student considered if the context would allow for other potential meanings of the words; and (e) the information from this sequence was summarized.

Vocabulary instruction for English learners needs to be structured in a format that

meets their language needs. Carlo and colleagues (2004) posited that the format of vocabulary instruction should include direct instruction of particular vocabulary words, as well as strategies for English learners to use when they encounter new vocabulary in reading contexts. Their study involved a treatment for a 5-day cycle of instruction that included presentation of text and target words, inferring meaning by context, using cloze tasks, word association and synonym/antonym tasks, and morphology, Analysis was completed with a MANOVA. Because of the many variables investigated 31 eta-squared effects, ranging from .02 to .48, were reported. Marzano and Pickering (2005) used six steps to teach vocabulary for English learners. In the first step, teachers provided a description, explanation, or example of the new term, along with a non-linguistic representation. For the second step, students were asked to restate the description in their own words. The next step asked students to create a picture, symbol, or graphic to represent the term or phrase. Step four engaged students periodically in activities that helped them add to their knowledge of the terms in notebooks. The fifth step was to periodically have students discuss the terms with one another. The last step involved students in games that allowed them to play with terms. Many of these steps are applicable to instructional methods discussed previously, such as explicit instruction and peer-mediated activities. Archer and Hughes (2011) described four methods that could be used to help students learn the meaning of a word.

1. Presenting a "student-friendly" definition for the word.

2. Guiding students to determine the meaning of the word from a glossary or text definition.

3. Using prefixes, suffixes, and/or roots to help understand the meaning of the word.

4. Helping English learners to recognize and apply cognates.

These steps are also parts of explicit instruction, morphology, and the use of cognates, as mentioned previously.

Components of a single vocabulary lesson. The format of a vocabulary lesson needs to have specific components present that meet the needs of English learners. The lessons should be planned to provide multiple exposures to the vocabulary words, as well as opportunities to expand oral language with the vocabulary being taught. There are a number of aspects of vocabulary that can be addressed in a lesson, and usually there are recommended steps to ensure that these aspects are not missed.

Length of lesson. There are different ideas on how long a vocabulary lesson should be. In the Success For All reading program vocabulary is taught for approximately 15 minutes on days one and three, and for about 10 minutes on Day 2 (Madden et al., 2005). Other programs teach vocabulary for longer periods of time. It has been estimated that the instructional time required per vocabulary word learned is between 5 and 26 minutes (Jenkins, Matlock, & Slocum, 1989). Kamil and colleagues (2008) recommended that the amount of time dedicated to explicit instruction for vocabulary should be dictated by the vocabulary load of the content or text being introduced rather than having a set amount of time for each lesson.

In the study on the PALS strategy (Fuchs et al., 1997), the students engaged in three reading activities for approximately 35 minutes a day for 3 days a week. The

activities were partner reading with retell; paragraph summary; and prediction relay, in which the students made reasonable predictions, read half a page, checked predictions, and summarized the main idea. The minimal amount of time spent with these reading activities increased the likelihood that the differences found in the statistical analysis were from the intervention itself. Teachers in the study allocated approximately 90 minutes a day, or 450 minutes a week, for reading and language arts; the PALS activities required 35 minutes for 3 days, or 105 minutes per week. This amounted to 20% to 25% of the instructional time that the PALS teachers dedicated to the PALS activities. No additional reading instruction time was spent in the PALS treatment group than the control group.

In the study by Carlo and colleagues (2004), lessons for fifth-grade students were 30 to 45 minutes in length. These lessons varied each day. Some of the vocabulary activities students were involved in during the 30- to 45-minute lessons included previewing the list of target words, extracting definitions for the vocabulary words, completing cloze sentences in groups, and working on word roots and cognates.

These studies did not specify a certain amount of time for lessons; each study had a different amount of time dedicated solely to vocabulary instruction. The central consideration appeared to be the amount of time that was necessary to accommodate the activities that were considered important for the vocabulary to be learned. Content of the lesson appeared to be more critical than the actual amount of time spent in the lesson.

Frequency of lessons. There does not appear to be consistency in how often a vocabulary lesson should be taught. When a unit of study is begun, the relevant

vocabulary is typically taught at the beginning of the unit. In reading lessons, vocabulary words are taught throughout a weekly cycle, usually in conjunction with a story or topic. In core reading programs, vocabulary is taught two or three times throughout the weekly lesson (Afflerbach et al., 2011; August et al., 2011; Baumann et al., 2011; Beck et al., 2007). In the Success For All reading program, vocabulary is taught or reviewed three days of the 5-day cycle (Madden et al., 2005). In a study by Beck and colleagues (1982), students were instructed in vocabulary every day in a 5-day cycle. As described in a previous section, the PALS activity was conducted three times a week (Fuchs et al., 1997). Carlo and colleagues (2004) provided vocabulary instruction on specific vocabulary words 4 days a week.

There is no conclusive evidence regarding the frequency of vocabulary lessons, and what is the most effective number. The frequency ranged from three times a week to every day. Throughout the literature for English learners, there are studies extolling the importance of many encounters with words. English learners may need multiple exposures and frequent practice with new vocabulary. It seems that it is not enough to introduce vocabulary terms at the beginning of a story or content area unit of instruction and then not revisit the vocabulary again; it should be addressed consistently throughout the cycle of instruction. Thus it behooves teachers to provide regular and consistent vocabulary instruction throughout a content area topic or story cycle.

Number of words per lesson. It has been recommended that with native English speakers, only a few words should be taught intensively, as it is too time consuming and difficult to teach thoroughly a large number (Beck et al., 2002; Cooper et al., 2006;

Marzano & Pickering, 2005). However, researchers differ in what is the appropriate

number of words to be taught in a lesson. Some authorities recommended 8 to 10 words

per week to be taught in an intensive way (Beck et al., 1982; Biemiller, 1999; McKeown

& Curtis, 1987). Hiebert (2002) reported that for performance within an instructional

range of third graders, four to six words per 100 words to mentally attend to when

encountered in text is the desired number; more than that approaches a student's

frustration level. Cooper and colleagues (2006) recommended teaching six to eight words

in a lesson.

For English learners, there was also a disparity on the number of words

recommended for teaching. In a preliminary study reported by Manyak, Baumann, and

Blachowicz (Manyak, 2010), their lessons for fourth- and fifth-grade English learners

consisted of 12 words a week. Four or five of these words were less familiar high

frequency words, and the remaining words were from the specific text being read

(Manyak, 2010). Rance-Roney (2010) used 10 to12 new vocabulary terms for each story

in her study on the effects of digital stories on English learners. Donnelly and Roe (2010)

suggested choosing eight words to focus on for vocabulary instruction for fourth-grade

English learners. In their study on vocabulary instruction for English learners in fifth

grade, Carlo and colleagues (2004) taught 10 to 12 target words each week.

It was difficult to locate research that articulates the appropriate number of words

to be taught in a lesson for either native English speakers or English learners. These

studies referenced above state the number of words that was either used or recommended;

there was not explicit research on a specific number. As can be seen in these articles and

studies, there does not appear to be a set number. However, the average recommended for native English speakers appears to be around eight words, and for English learners, ten words taught for an individual lesson. In core reading programs, the average number ranges from 6 to 10 words taught for a story (Afflerbach et al., 2011; August et al., 2011; Baumann et al., 2011; Beck et al., 2007; Madden et al., 2005). The average number of words in the core programs was close to the same average as the number of words used in the studies cited above.

To review, there appears to be a wide array of suggestions or ideas for the quantitative aspects of a vocabulary lesson. The length of the lesson, the frequency of vocabulary lessons, and the number of words to be taught in a lesson are all important factors to be considered when teaching vocabulary. The most common amount of time for a vocabulary lesson appeared to be approximately 30 minutes. The average number of times in a week that vocabulary was taught ranged from three times a week to every day. Researchers presented positive results from the way vocabulary was taught; it did not seem to be dependent on the number of days the lessons were presented, although none spent less than three days on instruction. There was a wide discrepancy about the number of words that should be taught in a lesson, or what should actually determine that number. It could be determined by a certain amount of time for each word, or it could be dependent on the perceived difficulty of the words as the teachers decide how much time to spend on each new term. Regardless of these varying factors in a lesson, what needs to be stressed is the amount and depth of word learning that occurs for the English learners in the classroom.

The remainder of this section of the review of the literature will focus on those instructional strategies that research suggests may be beneficial for English learners. The areas of concentration will include explicit instruction, methods to increase background knowledge, peer-mediated instruction, and task-based activities. A connection between these strategies and vocabulary instruction will be investigated.

Explicit Instruction

Explicit instruction is an effective way to introduce and teach vocabulary to native English speakers (NRP, 2000). The Region IV Education Service Center (ESC; 2003) defined the following sequential components of an effective lesson based on an explicit instruction model: The first step was teacher modeling, where the teacher modeled the use of the skills and concepts. This consisted of telling students what to do and showing them how. Guided practice was the next step, and consisted of practicing the strategy or skill with the appropriate level of teacher support and scaffolding. The students then moved to independent practice. This step gave students multiple opportunities to apply the new knowledge or skill. The last step required the teacher to monitor and evaluate the students' independent practice, and adjust instruction based on that assessment. The authors from the ESC then applied this explicit instruction model to an effective vocabulary lesson. The first step was explicit instruction of vocabulary words in which the teacher provided a student-friendly definition and then made connections between the new vocabulary word and a known word. The teacher then demonstrated how to use word parts to determine the meaning of a word and how to make connections between new words and known words. The teacher provided guided practice by engaging students

in word-learning activities designed to increase the depth of knowledge of the

vocabulary, such as developing a word map. The word map in this step included the

students' own definitions of the words and examples and nonexamples of the word's

meaning. The independent practice came as the students read texts in which they could

apply word-learning strategies.

In this review of the literature in the context of vocabulary instruction, explicit

instruction tends to most often refer to providing clear and direct explanations of the

words. It is important that the initial introduction to new vocabulary provides students

with a clear understanding of the meaning of the word. When teachers work under the

assumption of natural language acquisition, that is, that a second language is acquired the

same as a first language, they may resist using explicit teaching of the language, and

instead use cooperative learning activities as a way to help with acquisition. Though the

positive effect of more interaction may occur, that is not enough to teach sufficient

language skills for academic success (Dutro & Moran, 2003). Even though there may be

many opportunities to learn language in a language-rich classroom, merely being exposed

to, and even being engaged in activity in English is not enough to develop full academic

proficiency (Doughty & Williams, 1998; Lane & Allen, 2010). Language can be

developed more quickly through explicit formal teaching (Gersten & Baker, 2000;

McLaughlin, 1985).

Evidence base for explicit vocabulary instruction. An evidence-based approach

for implementing vocabulary instruction requires explicit teaching of vocabulary

(Gertsen et al., 2007; Kieffer & Lesaux, 2007; Marzano & Pickering, 2005). Two studies

identified by the NRP (2000) found that using explicit or direct instruction for vocabulary acquisition was helpful. A study by Tomesen and Aarnoutse (1998) used explicit instruction in deriving word meanings from context in a program of reciprocal teaching with native English speaking fourth graders. This was found to be more beneficial for poor readers than average readers. White, Graves, and Slater (1990) investigated a similar idea when working with minority and disadvantaged children in grades one through four, and found that explicit explanations in meaning and decoding helped the children with vocabulary acquisition.

Stahl and Fairbanks' (1986) meta-analysis on vocabulary instruction found that there was a significant effect on student comprehension when vocabulary was explicitly taught, with a mean effect size of 0.97 ($SD = 0.81$, $N = 41$). They also found that explicit vocabulary instruction had a significant effect on measures of vocabulary knowledge (mean effect size = .26, $SD = .29$, $N = 17$).

Marzano (2004) discussed information gathered from the Stahl and Fairbanks (1986) meta-analysis on explicit vocabulary instruction. He compared three methods of delivering vocabulary instruction. One method required no specific vocabulary instruction, the second involved explicit vocabulary instruction on a list of high-frequency words, and the third utilized explicit content-specific vocabulary instruction. He came to the conclusion that the effect size for explicit vocabulary instruction was high, .32 for the typical instruction from the high-frequency word list, and .97 for the content-specific vocabulary instruction. He explained this by using the example of three students with equal levels of academic background knowledge and reading ability. The

first student received no vocabulary instruction, the second student received explicit vocabulary explanations on words from a high-frequency word list, and the third student received explicit instruction on words related to content, or academic vocabulary. If all three students took a vocabulary test, and the first student scored at the 50th percentile, then effect sizes would show that the student who received instruction from the high-frequency word list would score at the 62nd percentile, and the student with content-specific vocabulary instruction would score at the 83rd percentile (Marzano, 2004).

In a kindergarten research study, Silverman (2007) concluded that with explicit instruction of vocabulary, coupled with ESL techniques, English learners were able to close the gap of vocabulary words known by their English-speaking peers. Her study involved an author-developed intervention which she called the Multidimensional Vocabulary Program. The basis of this intervention was children's literature, in which English-only students and English learners were introduced to new vocabulary found in stories being read to them. The components of the instruction included providing clear definitions and explanations of the words, relating words to the students' own experiences, comparing and contrasting words, acting out words, and providing many opportunities to reinforce the word across various contexts.

One method of teaching vocabulary with explicit instruction is preteaching the words before they are encountered in text. In this method, students are given the definitions or other attributes of the words. Teaching the vocabulary words prior to reading the story or text was shown to be beneficial in studies examined by the NRP (2000). One study was done with fourth grade students (Brett, Rothlein, & Hurley, 1996)

and one with fifth-grade students using social studies content (Carney, Anderson, Blackburn, & Blessing, 1984). Both studies showed that pre-teaching vocabulary words, that is, teaching the vocabulary before the content instruction begins, had an effect on vocabulary gains. Jenkins and colleagues (1984) found similar results, that if words were taught before they were encountered in text, the ability to comprehend the words was greatly increased.

   Teacher explanations for new vocabulary words. How does explicit instruction apply to English learners in a classroom? Laturnau (2003) lists modifications in basic instruction that have proven to be beneficial for English learners, which include explicitly teaching key vocabulary. Teachers need to apply a number of strategies when they provide explanations of word meanings. One method of explicit explanation is a "think aloud" (Archer & Hughes, 2011; Gersten, 1996; Region IV ESC, 2003), in which the meanings, usage, and personal applications of the words were modeled for the students.

   Explanations must be clear and comprehensible, as learners rely on input to help them acquire new vocabulary (Barcroft, 2004). Krashen (1985) stressed the importance of providing language learners with meaning-bearing comprehensible input. Techniques for comprehensible input include using a slower rate of speech, using short sentences and repeating words and phrases, paraphrasing, and using gestures (Barcroft, 2004; Echevarria et al., 2008).

   Krashen's (1985) $i + 1$ hypothesis posited that students learn language when the input they receive is just beyond their current level of language proficiency. A new vocabulary term may be learned if the learner comprehends the input surrounding the

new term. Barcroft (2004) gave the example of an English learner learning the word *wax*.

If the word *wax* is used within the context of *Candles are made of wax*, rather than *Wax is an unctuous and viscous substance*, students will have a better chance of understanding the word *candle* than the adjectives *unctuous* and *viscous*. This makes learning the word *wax* easier for an English learner. This hypothesis leads to the idea of using explanations for new vocabulary terms that are easier for English learners to understand.

  Student-friendly definitions. "It is often difficult for students to get comprehensible input from a world that is not aware of their need for it" (Richard-Amato, 1996, p. 34). The Region IV ESC (2003) indicated that explicit vocabulary explanations are essential and involve a variety of techniques that promote active engagement with the words, one of which was using "kid-friendly" definitions and explaining the words in everyday language. Student-friendly definitions are those that are stated in terms that are easier for students to understand than formal dictionary definitions. Beck and colleagues (2002) reiterated the same idea; the word should be explained using its typical use, and should be expressed in everyday language.

  It is important to make meanings of vocabulary terms clear and comprehensible for English learners. They will not understand teacher explanations unless they are delivered with definitions stated in terms understandable to the students (Archer & Hughes, 2011; Gersten, 1996; Region IV ESC, 2003). Comprehensible input is an important element of instruction (Echevarria et al., 2008).

  There were few studies that looked specifically at the effect of using what is termed student-friendly definitions. Studies that did not specifically investigate the

effects of using student-friendly definitions, but used student-friendly definitions as part of their vocabulary interventions suggested that English learners will benefit most from intensive vocabulary instruction that emphasizes student-friendly definitions (Carlo et al., 2004; Pérez, 1981). Even when student-friendly definitions were not the focus of the research, they were used or recommended often. Part of the vocabulary instruction in a preliminary study reported by Manyak (2010) included providing student-friendly definitions for the words being taught. Donnelly and Roe (2010) also suggested developing student-friendly explanations for new vocabulary terms. Archer and Hughes (2011) also use student-friendly definitions as a method in explicit vocabulary instruction. In a study conducted by Sobolak (2011), she used reading instruction taken from a commercial reading program in which student-friendly definitions were used. Graves (2006) recommended that vocabulary instruction include having students put word definitions into their own words, automatically creating kid-friendly definitions.

Although these studies did not focus on the viability of using student-friendly definitions when teaching vocabulary to students, it seems intuitive that teachers would present information in a way that students would understand, providing comprehensible input. This is especially important for English learners, who may find it very difficult to sort out a variety of technical terms to find the basic meaning of a word important to the subject. They need to be able to demonstrate both knowledge of the word and produce it in appropriate contexts. Using kid-friendly or simplified definitions may also create a basis or foundation for which English learners can build on to attain higher levels of linguistic complexity (WIDA Consortium, 2007). Asking English learners to copy words

from the board and look up definitions is of little benefit to them; many of the words in

the definitions may be unfamiliar to them (Echavarria et al., 2008). It follows that

teachers may need to deviate from the meanings of words provided in a glossary or

dictionary to make the word more comprehensible for English learners.

Visuals. Another aspect that can be included in explicit explanations for English

learners is the use of visuals (Barcroft, 2004). A visual is a representation of an object or

concept that students can look at to help them learn vocabulary words. Visuals are an

important part of building vocabulary background knowledge. English learners may not

have the language skills to understand a detailed explanation of an object or concept, but

images can help clarify understanding quickly (Garcia & Beltran, 2003).

There are a number of visuals that can be used in classrooms such as actual

photos or sketches to illustrate a term or concept. Other visuals can be graphs, charts,

symbols, graphic organizers, videos or movie clips. Anything that creates a visual

representation for students can lend itself to increased understanding.

Research supports the notion that visuals are important for English learners,

because isolated explanations of words are often hard for them to understand due to lack

of linguistic skills and language proficiency. Hernandez (2003) suggested using pictures,

photographs, diagrams, and graphic organizers for vocabulary acquisition, in addition to

having students write vocabulary words in journals and illustrate them. Media such as

videos, DVDs, or examples from the Internet are tools that can be used to tap into

students' background experiences, and are good ways to introduce vocabulary (Garcia &

Beltran, 2003). Students need to learn vocabulary in context and with visual clues to help

them understand concepts or terms (Green, 2005). The use of multimedia visual tools should not be considered a privilege, but a necessity for English learners (Garcia & Beltran, 2003).

In their six steps for teaching vocabulary to English learners, Marzano and Pickering (2005) suggested providing what they call a "nonlinguistic representation" in the first step. This provides students a way to understand the meaning of a term that is not dependent on understanding English. These nonlinguistic representations could be a simple sketch for a concrete term, or a picture of something that would relate to an abstract term. An example they gave was the word *slavery*, which would be hard to explain, yet a variety of pictures showing people in slavery conditions could help English learners understand. In step three, students created their own nonlinguistic representation of the words being taught. This gave them the opportunity to connect the term to something they were familiar with, or something from their culture. When a student may not be able to verbally provide a verbal explanation of the term, they can usually create a drawing that represents the term. Drawings could be the actual object, a symbol, an example, or a dramatization of the term where the picture involved cartoon bubbles where the idea was explained (Marzano & Pickering, 2005).

Findings from studies noted by Kamil and colleagues (2008) in an Institute of Education Services (IES) report were that while some students benefited from reading and writing activities, others learned best from visual experiences, such as watching short documentary videos. Tonzar, Lotto, and Job (2009) investigated the effects of using a picture-based approach vs. a word approach in which fourth and eighth grade Italian

students learning English and German were given either the second language (L2) words with pictures or the L2 word was presented with the native language (L1) word. The picture treatment groups outperformed the word-word group in both fourth and eighth grades.

In a preliminary study reported by Manyak (2010), teachers included visuals of the vocabulary words they were teaching. They stressed the importance of the pictures for their English learners. In her study on increasing vocabulary of English learners, Pérez (1981) used packets of pictures to help explain concepts from the basal reader or core reading program. Although the focus of the study was the impact of oral language practice on reading skills, the pictures she used played a part in the interventions which showed increases in the English learners' reading and vocabulary skills.

Visuals play an important part in helping English learners comprehend instruction. Having pictures or nonlinguistic representations to help them understand the meaning of a new word, and then connect words or concepts to their own background knowledge seems to increase their understanding. Taking that one step further, and having them create their own visuals supports the idea that the more involved a student is with the task or with the word, the more learning and retention that will occur (Laufer, 2001).

Practice. After the vocabulary words have been explicitly introduced and explained, the next step is practice. It has been well established that practice helps master a skill (Marzano, Pickering, & Pollock, 2001). Maranzo (2004) explained that the more times a student processes information, the more likely it will be stored in memory, and he

cited research that students need a minimum of four exposures to new content to learn it. Students, and especially English learners, need much practice in new concepts and words that are being learned (Echevarria et al., 2008; Swain, 2005). Redundancy in practice and application opportunities for English learners is important; they need more repetition than struggling readers and native English speakers (Garcia & Beltran, 2003).

Effective vocabulary instruction for English learners occurs in a language-rich environment (Blachowicz & Fisher, 2006; Graves, 2006; Rekrut, 1996) and includes opportunities for students to have fun with words (Blachowicz & Fisher, 2006). Although not many studies looked specifically at the impact of games on achievement, play can provide a motivational value for students. When students are motivated, they are engaged (Au, 1997) and are socially interactive (Guthrie & Wigfield, 1997). This engagement and enjoyment is highly correlated with achievement in all areas of literacy (Campbell, Voelkl, & Donahue, 1997). Blachowicz and Fisher (2004) related research-grounded statements about word play, which required students to be active learners and provided possibilities for social construction of meaning. In addition, they reported that word play engaged students in practice of vocabulary terms.

Games have a distinct pedagogical value, particularly for second language learners (Richard-Amato, 1996). Games can lower anxiety, are often highly motivating, relevant, interesting, and comprehensible (Marzano, 2004). Games are sometimes used to reinforce concepts, and are a great tool to provide practice in communication skills (Richard-Amato, 1996).

Games can also be a useful tool for vocabulary practice. There are various games

that can be used to promote vocabulary use and growth (Blachowicz & Fisher, 2004). These include card games, board games, memory games, adapted commercial games, puzzle games, computer play, word riddles, guessing, drama, and drawing games. In Marzano and Pickering's (2005) six-step process for teaching vocabulary, the sixth step was to involve both native English speakers and English learners in games that allowed them to play with the new terms.

Several studies on native English speakers used games as part of their work. Beck and colleagues (1982) conducted research demonstrating how vocabulary instruction affects comprehension with fourth grade students, and part of the instructional process included using game-like activities in the classroom as well as extending a game into home situations. Rekrut (1993) used a group memory game in an informal research study of new vocabulary words and found it to increase both accurate recall and long-term recall (30 days) in content areas. Bloodgood and Pacifici (2004) used word play and game-like activities to reinforce word study skills in a study done with intermediate grade students. In one of the first studies done to measure vocabulary instruction for English learners, Pérez (1981) included competitive games as part of the activities used to increase oral vocabulary. Teachers in a preliminary study used playful and engaging language activities, as well as word games to increase enthusiasm for learning new vocabulary with English learners (Manyak, 2010).

Games can be a non-threatening and enjoyable way to increase oral language skills, as well as vocabulary acquisition for English learners. It may be highly engaging for students when a review for a test is done by playing a game of some sort. Students

may not realize the benefits they are getting, but teachers are aware that with well-structured game-like activities students are participating in practice that will increase retention of material that has been taught.

Methods to Increase Background Knowledge

The knowledge a person has about a topic is commonly referred to as "background knowledge" (Marzano, 2004). The relationship between background knowledge and academic achievement has been established in the research, and is one of the strongest indicators of how well a student will learn new information about a topic. Students who have a great deal of background knowledge in a certain subject are likely to learn new information readily; students who lack background knowledge in that subject are likely to have difficulty learning new information (Marzano, 2004). Marzano speculated that given the relationship between academic background knowledge and academic achievement, providing background knowledge should be a major part of enhancing student achievement. Without this provision, academic background could create great advantages for some students and great disadvantages for others.

Building background knowledge becomes even more critical for English learners. They come to school with much background knowledge, but it may be different than that necessary to be successful in schools (Echevarria et al., 2008) which has a bearing on many future endeavors (Marzano, 2004). Background knowledge needs to be connected to the personal experiences English learners bring with them as well as connected to their prior learning (Echevarria et al., 2008). This will help students build from where they are to higher levels of understanding (Vygotsky, 1978).

Making connections. When students are learning new words, it is imperative that they make a personal connection to the word. How many times do students study for a test, and then do not retain the information afterwards? The information was stored in short term memory, long enough to answer questions on an exam, but then was quickly forgotten (Irvin, 1990). However, if students can relate the new information to something that happened in their own lives, or that takes on a personal meaning, it tends to be retained for longer periods of time. When students make connections between new vocabulary and personal experiences, it assists in establishing necessary background knowledge (Echevarria et al., 2008; Region IV ESC, 2003).

Graves (2006) listed some guidelines for vocabulary instruction, which included examining ways new vocabulary words relate to students personally. The educators at Region IV ESC (2003) reported that linking new words to related words and other words the students already know was an effective technique to be used for vocabulary instruction. An example they gave for creating personal connections to words during independent practice time suggested students use a vocabulary notebook in which they write the word, illustrate it, and write their own definition or sentence for the vocabulary term. In research done by Manyak, Baumann, and Blachowicz, teachers made modifications to an intervention, which included having the students make personal connections with the words (Manyak, 2010). An example was for the word *weary*, students were told to relate something that makes them weary. Beck and colleagues (2002) described the importance of the same concept of helping students create word associations and relationships, as did Kirylo and Millet (2000).

There are a number of areas in which background knowledge of English learners can be accessed for vocabulary development, including the basic idea of helping students make connections between new words or concepts and their personal experiences (Beck et al., 2004). Connections may focus on previous learning, whether it be from the day prior or the year prior, and connecting that with the new learning (Echevarria et al., 2008). Although there are not many studies that have been conducted on this topic, it is found throughout the literature as a common practice with the understanding that it brings about positive results. Making these types of connections is a component of the Sheltered Instruction Observation Protocol, which protocol has recently been shown through empirical research to impact academic achievement for all students (Echevarria et al., 2012).

Making connections to new vocabulary can assist English learners in vocabulary acquisition. Lane and Allen (2010) stressed the need for students to do more than just have encounters with new vocabulary words. Teachers need to ensure that there is opportunity for students to make connections with their prior knowledge and experiences. Cooper and colleagues (2006) indicated the importance of using interactive instruction to build these connections.

Part of making associations with the new words is for students to explain the connections they make (Beck et al., 2002). When students explain the association they have developed, it leads them to reflect on the meaning of the word in particular contexts (Anthony, 2008). The idea of using notebooks to record personal connections was advocated by Marzano and Pickering (2005) in their steps for teaching vocabulary for

both native English speakers as well as English learners, to assist in developing personal connections to words.

Bromley (2002) suggested calling attention to the use of new terms in context, helping students make meaningful connections in their own lives. When students make connections, they see that the new word has personal application for them (Anthony, 2008). Along with the associations, connecting new vocabulary to personal experiences of the students helps them pay attention to the new word or the word form, and possibly see times they have used the word incorrectly (Richard-Amato, 1996), or gives them a new word in their lexicon to use at will (Anthony, 2008).

Physical connections. Many concepts that are important to understanding and learning vocabulary terms can be developed through activities that physically involve students, helping them to make a kinesthetic connection to the word or concept. One of the major interactive language acquisition techniques used for English learners is Total Physical Response (TPR). This method involves students acting out vocabulary words or commands. According to Asher and colleagues (1974), hundreds of vocabulary words can be learned through the use of imperative sentences by the instructor.

Garcia and Beltran (2003) gave an example of physical activities to help develop vocabulary. They suggest, for example, that when teaching about the concept of a race, have students race each other on the playground, and emphasize the key vocabulary or academic language that a race involves: The starting line, the finish line, the distance (in yards or miles or meters), the duration of the race (in time), and the order of finish (first, second, third, etc.). Meaningful involvement in physical activities can facilitate a wealth

of vocabulary acquisition (Archer & Hughes, 2011) as students become personally involved in the activities.

When English learners are introduced to new vocabulary, teachers need to find ways to build background for new content, and to assist students to make personal connections with the words being taught. These connections can be associations that relate to prior learning, or that involve personal experiences of the students. The connections can be expressed through movement, through oral explanations to a partner, or written in a notebook. Whichever method a teacher chooses to use, it is important that he or she facilitates the connection of the term to the background of the English learner.

Language transfer. There are other areas that can be used to help build the vocabulary background English learners may need. English learners bring a background in their native language that can be built on; this is an area where background knowledge can be tied to vocabulary development through the use of language transfer skills between a student's native language and the second language (August & Shanahan, 2006). As they learn new vocabulary, that L1 language can be influential. Understanding how a first and second language interact, and helping students use that interaction to make connections between their first and additional languages can help build vocabulary background knowledge (August & Shanahan, 2006).

Studies have sought to determine the extent to which students' first- and second-language vocabulary use was parallel with respect to measures of lexical complexity. Lanauze and Snow (1989) found that cross-language transfer of enriched vocabulary in writing occurred when students were poor in English but had well-developed language

skills in their first language, Spanish. This transfer did not occur with students who had poor language skills in both Spanish and English, or had good language skills in both languages.

Two studies reviewed by the National Literacy Panel (August & Shanahan, 2006) investigated reverse transfer, in which complex vocabulary knowledge in the second language was transferred to the first language. Francis (2000) contended that verbs are linguistically more complex than nouns, and their use gives insight into the application of higher order thought processes. In the Francis study, significantly more students used the complex vocabulary of at least one cognitive verb (verbs that demonstrated intentional use of higher level thinking skills), in both languages, than used no cognitive verbs at all, and more were used by the fifth graders than third graders, suggesting that the use of cognitive verbs is developmental. Davis, Carlisle, and Beeman (1999) found no cross-language relationship in the use of complex words. The disparity between these two studies could be accounted for by the fact that the Davis et al. study was performed with students in grades one through three, while the other two involved students from grades three to six. However, in the Lanauze and Snow (1989) study, they found transfer of complex words occurred only in certain situations, and was not age-dependent.

Ordóñez, Carlo, Snow, and McLaughlin (2002) reported that cross-language correlations were moderately high and significant for higher order vocabulary knowledge, while lower order vocabulary knowledge correlations were low and non-significant in grade four and five Spanish-English students. Higher order vocabulary knowledge involved stating words in terms of a category they could belong in. Lower

order vocabulary knowledge used definitions that were nonhierarchical in nature, defining words in physical or functional terms.

Davis and colleagues (1999) found a similar trend with Spanish-English bilinguals in grades one to three. There was a significant correlation between languages ($r = .36, p = < .05$) when quality of formal definitions was examined. There were nonsignificant correlations when examining informal definitions. Formal definitions may refer to *academic language* skills.

English learners need to develop a rich vocabulary to be successful in academic areas. It should be recognized by teachers that the knowledge of their native language which they bring with them may be a foundation teachers can build on to develop new vocabulary. Providing opportunities for students to use a variety of methods to interact with the words may contribute to more vocabulary acquisition than giving them a basic definition.

Cognates. One vocabulary connection that is available for English learners is the use of cognates. Cognates are words that are similar in both spelling and meaning between languages. As reported by August and Shanahan (2006), English has an interesting mix of languages from which cognates may originate. English is basically from Germanic roots, but historical events have influenced English to the point that approximately 40% of English vocabulary is of Romance origin. For this reason, there are many cognates between English and other Romance languages, including Spanish (Cummins, 2003), as well as cognates between English and other Germanic languages.

For native Spanish speakers, there are a large number of cognates available to

them to connect concepts and words to their schema (Bear, Templeton, Helman, & Baren, 2003). It is estimated that twenty to 30% of English words have Spanish cognates (Kamil & Bernhardt, 2001; Kamil & Hiebert, 2005). Graves (2006) recommended using these cognates to help students understand vocabulary terms. Through identifying cognates, students can then connect the words to words they are familiar with in their native language if the first language shares a cognate with the English language (Bear, Helman, Templeton, Invernizzi, & Johnston, 2007).

Morphology. The study of morphology can help students make connections between words they may be familiar with and words that can be created from those familiar terms with the use of affixes (Echevarria et al, 2008). Morphology is the study of word parts, and includes a system of word structure by which word parts, such as roots and affixes, can be combined to create new words (Carlo et al., 2004; Cooper et al., 2006; Diamond & Gutlohn, 2006; Larsen & Nippold, 2007). Analysis of word roots and affixes is a way to build background knowledge by connecting prior knowledge of vocabulary with related words that may be new to the student (Echevarria et al., 2008). For students, learning to understand and use prefixes and suffixes is a word-learning strategy that can help them with reading comprehension (Region IV ESC, 2003; Keiffer & Lesaux, 2007). Nunes and Bryant (2006) posited that children need more explicit morphological knowledge to become fluent readers and spellers. For English learners who struggle, morphology can be a powerful tool to accelerate their English word learning (Kieffer & Lesaux, 2010).

Kieffer and Lesaux (2007) gave a step-by-step cognitive strategy that addressed

morphology instruction. The first step was for a student to recognize that he or she does not understand the meaning of a word. The second step was to analyze the word for morphemes that may be in the student's schema or background knowledge, both affixes and roots. Step three involved hypothesizing a meaning for the word based on the word parts, and in step four the hypothesized word was checked against the context. Word study can play a part in vocabulary and concept development for English learners, and word knowledge can be influenced by learning word roots (Bloodgood & Pacifici, 2004).

Studies performed by Graves and Hammond (1980); Nicol, Graves, and Slater (1984); and White, Sowell, and Yanagihara (1989) showed that students in grades four through seven who were taught prefixes outperformed uninstructed students on various measures of word knowledge. In the Nicol and colleagues (1984) study, results indicated that high-, middle-, and low-ability students in grades four through six all benefited from morphology instruction. The fact that even low-ability students benefitted from morphology is an indicator that it may be helpful to English learners who are not considered low ability, but have limited vocabulary knowledge. In a study with urban fourth- and fifth-graders conducted by Kieffer and Lesaux (2007), they concluded that breaking down words into meaningful parts is essential for English learners. Bloodgood and Pacifici (2004) reported in their study that students benefited from expanded vocabulary, and were able to discover word meanings from roots and by using common prefixes and suffixes.

An argument for the importance of explicit teaching of morphemes came from Archer and Hughes (2011). They pointed out that the morphology of words needs to be

explicitly taught, as some words broken down morphologically do not have the same meaning as the word parts. They used the example of the word *manufacture*, which technically means "made by hand." However, that is not the meaning of the word as it is used most often in society today. Teaching about word parts may be most successful when it is combined with explicit instruction in specific words and is tied to the background knowledge of the students (Kieffer & Lesaux, 2010).

Studies have shown that there may be benefits to explicitly teaching morphology. With practice, English learners can learn the patterns of prefixes and suffixes which may aid them in identifying root or base words and increase vocabulary acquisition. Understanding word parts, affixes, and base or root words may add to the lexical knowledge of students, as well as help them acquire new words independently. Teaching morphological rules may provide students with strategies for them to become independent vocabulary users and help them build new words from words already found in their background knowledge (Cooper et al., 2006; Gersten et al., 2007; Kamil et al., 2008).

Graphic organizers. Among the modifications Laturnau (2003) listed in basic instruction that have proven to be beneficial for English learners is the use of graphic organizers. Kirylo and Millet (2000) stated that graphic organizers help build background knowledge and foster understanding of conceptual relationships. Graphic organizers are visual representations of a word or concept. They can be used during instruction by the teacher to help with explaining a word or concept. However, they can also be used by the students, which help them tie new vocabulary into their prior learning and background

(Echevarria et al., 2008). Graphic organizers may include basic webs, Venn diagrams, and T-charts, among others. They require input to complete them, and are a way for students to visually demonstrate and organize information for a concept or a word.

Cooper and colleagues (2006) suggested using linear or hierarchical arrays to visually show relationships among vocabulary terms. Synonym webs are another example of graphic organizers mentioned. Two types of graphic organizers that are used often in classrooms are the Frayer model of concept attainment and semantic mapping.

Frayer Model. One graphic organizer that has shown to be beneficial for students is the Frayer Model of concept attainment (Frayer, Frederick, & Klausmeier, 1969). This is a systematic approach to teaching a concept. It is a square that has four sections and an oval in the middle where students write the word or concept (Figure 2.1). Each section of the square has a different task. In one section, students write the definition of the term,
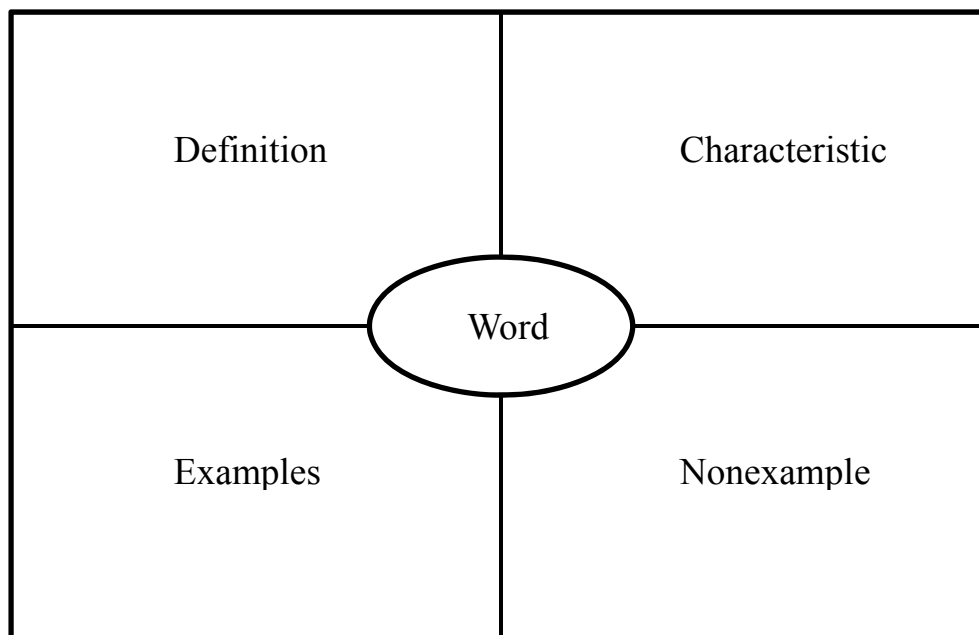
Figure 2.1. Frayer model concept map.

and then in another section they list the characteristics of the term or concept. In another

section the students give an example of the term, and in another they give a nonexample.

It was found in two studies that the Frayer Model showed significant effects in helping

ninth grade students with their comprehension skills in social studies texts, whether they

were classified as good or poor readers (Peters, 1974-1975, 1975-1976).

Semantic mapping. Semantic mapping is another graphic organizer used for

concept development. It is a visual representation of a word or concept that gives a

learner a concrete picture of terms and concepts being learned. This graphic organizer has

been incorporated in language learning and is a type of concept method approach to

vocabulary instruction. Figure 2.2 shows an example of a semantic map, called a Concept

Definition Map, as described in Echevarria and colleagues (2008). In semantic mapping

the semantic relations among words is shown graphically, as may be found in a clustered

map of synonyms for a given word (Laturnau, 2003). This gives students a concrete

What is it?

What is it like?

Concept

What are some examples?
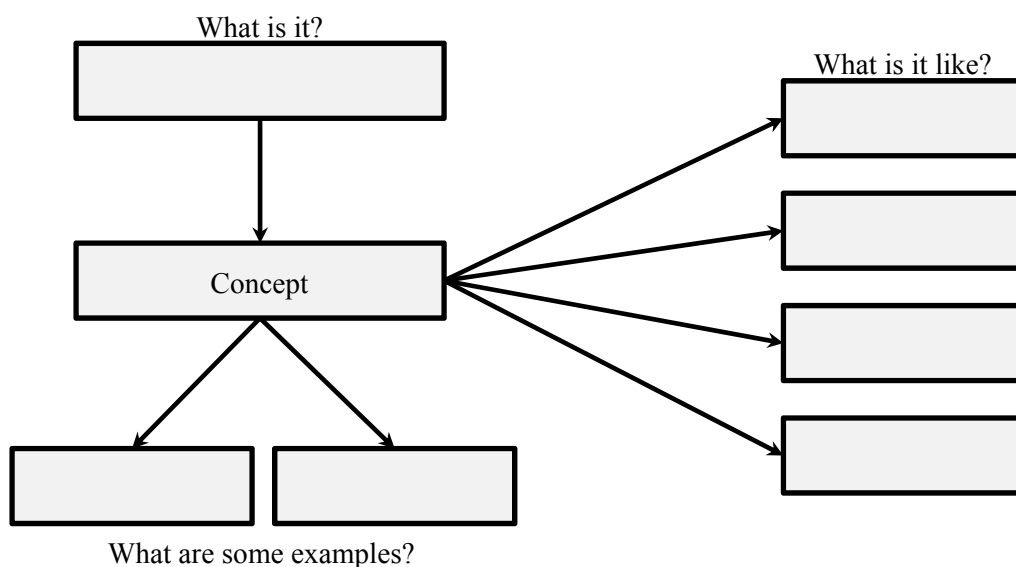
Figure 2.2. Concept definition map.

system to integrate vocabulary concepts (Gersten & Baker, 2000).

Research has shown the benefits of using semantic mapping for vocabulary learning over studying definitions (Englert & Marriage, 1991; Finesilver, 1994; Schewel, 1989). In a study with native English-speaking students in third, fourth, and fifth grades, Johnson, Toms-Bronowski, and Pittelman (1982) found that students receiving semantic mapping instruction significantly outperformed students in a context group on both immediate and delayed measures. Margosein, Pascarella, and Pflaum (1982) reported that low achieving Hispanic junior high school students showed greater gains in word knowledge when using semantic mapping over context-rich or target-word instruction. I a study done with fifth-grade German students in a science class, Gerstner and Bogner (2010) determined that the use of a concept map positively affected the increase of knowledge.

One concern with using these types of supports identified by Gersten and Baker (2000) was the weak and inconsistent implementation demonstrated in some of the studies focusing on natural language use. In spite of any concerns, graphic organizers can help English learners organize their thoughts in a visual, more concrete way. Benefits are varied. Concept mapping has been thought to promote cooperative activities (Flick, 1993), is an appropriate tool for the recall of textual information (Halimi, 2006), and even fifth graders are ready for the concept mapping procedure (Gerstner & Bogner, 2010; Poveda, Sanzol, & Oneca, 2006).

Nonexamples. While there are not many studies on using nonexamples for vocabulary instruction, research has shown that a good strategy for comprehension is

having students identify similarities and differences in concepts or words (Baumann, Kame'enui & Ash, 2003b; Beck & McKeown, 1991; Graves, 2006; Marzano & Pickering, 2005). Marzano and colleagues (2001) referred to this strategy as the basis of all learning. In the Frayer Model of concept development (Frayer et al., 1969), one of the strategies employed is having students identify not only what the concept is, but what the concept is *not*, or using what could be called a *nonexample* of the concept. This helps students deepen their understanding of a word.

Graves (1985) created a modification of the Frayer Model in which he had students distinguish between a concept and similar concepts, and also included the use of nonexamples, where students presented their own nonexamples. In his guidelines for vocabulary instruction, Graves (2006) again discussed giving examples and nonexamples of situations in which the word could be used, as well as recognizing similarities and differences between the new word and words they already know. Donnelly and Roe (2010) suggested including examples and nonexamples in the explanations of vocabulary words for fourth grade English learners.

Sobolak (2011) used a commercial reading program which employed examples and nonexamples in a study she conducted to investigate the use of accurate and inaccurate terms during vocabulary acquisition. The Region IV ESC (2003) recommended giving nonexamples of vocabulary words as an effective technique in vocabulary instruction and suggested that this may be done during the guided practice step of explicit instruction. Beck and colleagues (2002) also used examples and nonexamples in an activity which encouraged students to look at all facets of a word's

meaning. Archer and Hughes (2011) also recommended using nonexamples in vocabulary instruction.

In summary, background knowledge is what students use to develop, expand, and refine word meanings (Kirylo & Millet, 2000; Rupley, Logan, & Nichols, 1999). Teachers of English learners need to provide structured opportunities to build the background knowledge necessary for their students to understand a new term or concept (Echevarria et al., 2008). When students have access to lexical concepts in their first language, their ability to learn a new word in the second language is enhanced (DeKeyser & Juffs, 2005), and they can begin to make new connections to known words and ideas in their long-term memory (Wessels, 2011).

Peer-Mediated Instruction

"Literacy is a social phenomenon. Individuals become literate…from what they read and write about and who they read and write with" (Smith, 1995, p. 57). Interaction is an essential element of all instruction (Garcia & Beltran, 2003). Effective communication is interactive, authentic, and meaningful, with plenty of opportunities to hear and respond in the target language and get feedback from native speakers (Hernandez, 2003). Carlo and colleagues (2005) stressed the importance of discussing new vocabulary in authentic contexts. Gersten and colleagues (2007) recommended areas in which it would be beneficial for peer-assisted learning to take place, which included vocabulary development, syntax, and comprehension strategies.

Likewise, the communicative approach to language learning, based on constructivist theory, says learning occurs in social contexts, and furthermore, learning

and the context within which it occurs cannot be separated (Cambourne, 2002; Trueba, 2001; Vygotsky, 1978). Part of this social learning includes negotiation, where students are able to communicate in order to clarify meaning, ask for repetition, or get needed information (Ballman et al., 2001). The emphasis is on interactions between students, teachers, and text (Duke & Pearson, 2002).

An environment that is conducive to vocabulary growth is one in which students are constantly engaged in language activities (Green, 2005), with many and varied opportunities to read, hear, use and talk about new vocabulary (Blachowicz & Fisher, 2006). In an effective vocabulary instructional program, learners are actively involved in the learning process, rather than being merely receptors of information (Blachowicz et al., 2006). The classroom environment that encourages and promotes social interactions has a powerful effect on students' motivation to read (Region IV ESC, 2003).

One key part of peer mediated learning is not just the interaction that occurs, because mere interaction does not necessarily provide for learning academic skills (Dutro & Moran, 2003). There need to be structures in place that ensure academic success. These structures may be based in the communicative approach, and include instructional activities that require student collaboration, varieties of groupings based on mixed academic ability, language, projects, or interests to promote interaction, and monitoring and supporting student collaboration in positive ways (CREDE, 2002). Older elementary students can use sophisticated strategies for both comprehension (Gertsen et al., 2007; Liang & Dole, 2006) and vocabulary, as well as help clarify meanings of words in English in pair work. Students of all ages can effectively use peer tutoring when it is

structured well. In this review of the literature, it was found that there are different peer-mediated instructional forms, and some of those are related to vocabulary instruction.

Student collaboration. One way to achieve optimal language transactions is through student collaboration. Collaborative dialogues occur when students work together to discuss and solve problems. Psychological theorists believe that learning takes place in these types of situations; that is, that children internalize knowledge acquired in group learning experiences (Anthony, 2008; Kirylo & Millet, 2000).

Structures in peer-mediated activities need to ensure academic success. Highly structured cooperative learning groups with specific techniques can lead to beneficial student outcomes (Gersten & Baker, 2000). Palinscar and Brown (1984) developed a collaborative reading system to improve reading comprehension, which they called "reciprocal teaching," and included group work in which students predict, question, clarify, and summarize. A study was conducted with reciprocal teaching and its impact on English learners in a fifth-grade class (Klingner & Vaughn, 2000). They found that students performed better on comprehension tests when this system was used with classes that had a mix of English speakers and English learners. It appeared that when student roles and task demands were more clearly defined and monitored, there were better results (Klingner & Vaughn, 1996).

Peer tutoring. There are a number of different forms of peer tutoring. The tutors and tutees can be of similar age, or can be cross-aged pairings. Tutor responsibilities can be one-sided, meant only to benefit the tutee, or the responsibilities can be reciprocal between the tutor and tutee (Fuchs et al., 1997). In contrast to pull-out peer tutoring,

class-wide peer tutoring is a system in which all students in a class are paired and work simultaneously (Delquadri, Greenwood, Whorton, Carta, & Hall, 1986). Partner work should be used to extend what the teacher has taught during regular instruction (Gersten et al., 2007). It is a good strategy for tasks in which correct and incorrect responses are clearly determined, as well as tasks in which correct and incorrect responses are more difficult to determine. Peer-mediated learning techniques can be used from kindergarten students all the way to upper elementary students (Gertsen et al., 2007), and may even be effective in secondary settings. Two studies carried out on cooperative learning and peer tutoring found that both procedures showed positive effects on reading achievement, but some evidence indicated that peer tutoring appeared to be more effective, and both were more effective than the basal reading approach (Gertsen et al., 2007; Klingner & Vaughn, 1996; Muniz-Swicegood, 1994).

Kourea, Cartledge, and Musti-Rao (2007) conducted a study on an intervention called total class peer tutoring to determine its effect on improving reading skills in a class with second and third graders. They looked specifically at sight-word acquisition and fluency. Six students were the target students for the study; these students were a combination of minority and special education students, but were not English language learners. The study compared sight-word gains between teacher instruction and peer tutoring. Five of the six students showed gains with peer tutoring over classroom instruction.

One structured method of peer tutoring is called peer-assisted learning strategies (PALS), which focuses specifically on reading skills. This is a peer-mediated method that

has been shown in research to be effective for teaching reading for low-, average-, and high-achieving students in both upper elementary grades and secondary schools (Fuchs et al., 1997; McMaster et al., 2006). Some of the components in PALS are those of pairing higher and lower ability students, providing frequent verbal interactions and opportunities to respond, and reciprocating the roles of the students, so each student takes the role of tutor or tutee in turn. The PALS' structured, reciprocal, one-to-one interaction between partners permits frequent opportunities to respond, facilitates immediate feedback, increases time on task, and offers social support; all features that comply with generally accepted principles of effective instruction (Fuchs et al., 1997). While PALS focuses on comprehension, First Grade PALS and Kindergarten PALS (K-PALS) uses the same format, but focuses on reading development skills such as phonological awareness, beginning decoding, and word recognition. K-PALS was also found to be effective in schools with a large percentage of minority children (Fuchs et al., 2001).

Regardless of the method, there is evidence that interaction is a vital part of learning. English learners need the opportunity to practice and use the language in meaningful ways in academic settings. Setting up structures to ensure successful interaction in classrooms is an important part of language learning for English learners.

Connection to vocabulary instruction. The NRP reported on research that showed that child-initiated analytic talk is important for vocabulary gains (NRP, 2000). Marzano and Pickering (2005) included student discussion of new vocabulary terms as one of the six steps in the process of teaching vocabulary to both native English speakers and English learners. They posited that when interaction with others centered around

discussion of the new term, everyone experienced a deeper level of understanding. Two studies from the NRP (2000) showed that working with partners when reading increased vocabulary acquisition; Eldredge (1990) found that third-grade students working in dyads had greater vocabulary gains than students reading independently. In a study with seventh- and eighth-grade students, Malone and McLaughlin (1997) reported that reciprocal peer tutoring resulted in significantly higher scores on weekly vocabulary quizzes.

Peer-mediated strategies provide many benefits for English learners, specifically that of oral vocabulary development. Studies showed that students learned vocabulary through rich discussions of the text (Kamil et al., 2008). Discussion and interaction gave students the opportunity to organize vocabulary as they participated, provided opportunities for repeated exposure to words (Kamil et al., 2008), and gave students the opportunity to receive feedback as they practiced (Gertsen et al., 2007). Peer-mediated activities can replace independent seatwork or round-robin reading that often occurs in classrooms (Fuchs et al., 1997), which does little to enhance vocabulary acquisition.

Benefits of peer-mediated instruction for English learners. There have been many studies done on the advantages of peer-mediated learning opportunities for students with different abilities in reading. This has also extended to English learners (Calhoon, Al Otaiba, Cihak, King, & Avalos, 2006; Saenz, Fuchs, & Fuchs, 2005). In the IES report on effective language instruction for English learners, compiled by Gertsen and colleagues (2007), the evidence for the recommendation of using peer-mediated tasks was strong, based on the number of studies that found the positive effects of implementing this

strategy. There were also a variety of peer-mediated interactions that were researched that were effective in classrooms (Gersten & Baker, 2000), and had the same positive benefits for English learners as native English speakers. These benefits included active student response, opportunity to respond, positive feedback, and reinforcement (Heron et al., 2006), as well as increased on-task behavior, individualized instruction, immediate error correction, and improved academic and social skills (Kourea et al., 2007).

Wong-Fillmore (1991) created a model of second language learning, and in that model she identified three components that contributed to student progress. Two of those components included proficient speakers who support and interact with second language learners, and an environment that supports relationships between learners and proficient speakers. Group discussions and small-group vocabulary activities can support and expand English learners' understanding of the target words while simultaneously exposing them to rich language from their peers (Wessels, 2011).

English learners need many opportunities to interact in social and academic situations in order to become proficient and productive students (Mohr & Mohr, 2007). One of the main benefits of peer-assisted learning is that all students can participate, regardless of language level or reading ability. It benefits English learners as well as average and above-average students when structured properly. English learners benefit from reinforcement of linguistic structures and modeling through peer interaction (Hernandez, 2003), and cooperative activities that promote collaboration between students are staples of English language instruction (Garcia & Beltran, 2003). A variety of groupings, such as pairs, triads, and small groups, can facilitate learning and meet the

linguistic demands of all learners. Peer-mediated strategies have been used to impact

learning of English learners in reading (Klingner & Vaughn, 2000; Williams, 2010), and

in math (van Garderen, 2004).

Working together allows conversation, which teaches language and meaning in

the context of immediate issues (CREDE, 2002; Kirylo & Millet, 2000). Providing for

peer interaction allows for the academic and language success of English learners

(Hernandez, 2003). Children best learn the language when they are actively involved in

communication with others (Andrews, 2006; Gersten & Baker, 2000; Green, 2005;

Hernandez, 2003), so activities should include joint participation of speakers of the target

language with English learners whenever possible (Crawford, 2003; Vygotsky, 1978).

In sum, giving English learners opportunities to improve their oral vocabulary

acquisition is essential for optimum growth to occur. In addition to a long list of benefits,

allowing conversation and interaction during vocabulary instruction will aid in learning

and retention of words. Students will be able to clarify and explain when discussion of

terms is included during vocabulary lessons. Using peer-mediated activities provides a

level of interaction that is essential in vocabulary growth for English learners.

**The Communicative Approach to
Language Learning**

Exposure to English is necessary, but is not sufficient for acquiring advanced

levels of vocabulary proficiency (Genesee et al., 2005; Peregoy & Boyle, 2008).

Producing positive oral language outcomes involves more than simply pairing students;

careful consideration must be given to the method of delivery during instruction and the

tasks or activities the students engage in (Kim, 2008). Students need to be actively involved in learning.

Although many different approaches to teaching language throughout the 20th Century used a linguistic-centered approach that focused on learning the grammar of a language or memorizing and reciting set responses (Larsen-Freeman, 2007), there was also concern and discussion that these methods did not achieve the desired outcome of communicative competence (Ballman et al., 2001). The communicative approach to language learning places emphasis on creating situations in the classroom which encourage interaction and activities that facilitate authentic use of language. The communicative approach aligns to Vygotsky's theory of social learning, that there must be interaction in social contexts for learning to occur.

Some principles evident in the communicative approach as outlined by Larsen-Freeman (2007) included the following.

- Authentic language is used in real contexts. The social context is essential.

- The target language is not just the object of study, but is the means by which classroom communication occurs.

- Students work with language at the discourse level.

- Games are included to create authentic communicative events in which there is purpose to the exchange and the speakers receive immediate feedback as to whether or not communication has been successful.

- Small group work maximizes the amount of communicative practice.

- Students are given the opportunity to express their ideas and can choose what

to say and how to say it.

- One of the teacher's main responsibility is to establish situations likely to promote communication in which they act as facilitator during the activities.

- The communicative interaction encourages cooperative relationships among students.

There is more than one approach that can be taken when implementing a communicative course of lesson delivery. Ballman and colleagues (2001) situated their communicative language instruction in classes that were centered on teaching the Spanish language using task-based activities. These activities required social interaction as students did several intermediary tasks that lead to a final task, which incorporated the communicative goal for the students. The tasks usually involved an information gap in which students must exchange information in order to complete the task. An example of an information gap activity from Prahbu (1990; as cited by Larsen-Freeman, 2007) was that of a student describing a picture for another student to draw. The goal of the class was for students to use the target language to complete a particular task. An example of a communicative series of activities Ballman and colleagues provided involved three intermediary tasks that led to the culminating task of interviewing someone in order to draw his/her nuclear family and label with names, ages, and professions in the target language. The intermediary tasks leading to this culmination goal were: (a) to ask a classmate to identify the members of his/her nuclear family; (b) report the ages of a classmate's family members; and (c) to discover the professions of the parents of two of the classmates' family.

There are a number of syllabi that may be used in a communicative approach Ballman and colleagues (2001) discussed using a grammar-based syllabus in which the task to be accomplished focused on a particular grammar point in the target language. Another syllabus in a communicative language teaching class described by Larsen-Freeman (2007) was that of a functional syllabus in which the focus was on a language function. She described an observation of a communicative language teaching classroom where students were involved in several interactive activities using the function of predicting. For the first activity, the teacher had the students read a newspaper article in which the reporter discussed who he predicted would win the World Cup. The students underlined sentences with predictions and then the class rephrased the predictions under the direction of the teacher. One activity was a game in which students made predictions about what students in their group were going to do for the weekend. For another activity, the students were in small groups and used a picture strip story with six frames. The students could only see one frame at a time and were required to predict what would happen in the next picture frame. The students then did a role play in groups in which they made predictions about a situation the teacher presented to them. The last activity was a homework assignment to watch a political debate on television and write a prediction about who they thought would win the election and why they thought that, which they would report on at the next class. Each of these activities provided interaction in social situations and authentic purposes for conversation in the target language. Regardless of the syllabus being used, the goal of the communicative approach was for students to learn a language through authentic uses of interaction and discussion.

Hulstijn and Laufer (2001) researched student-involvement tasks and activities to test the *Involvement Load Hypothesis*, which supported the benefits of using communicative tasks for vocabulary acquisition in the classroom. Their study was done with young adult English as a Foreign Language (EFL) learners in Israel and the Netherlands. Three tasks with differing involvement loads, or amount of involvement or processing of the vocabulary words, were selected for groups of students. Task 1 involved reading a comprehension passage with ten unknown words glossed in the margin in L1, and then answering ten comprehension questions. Task 2 had the same text and questions as in task 1, but also included filling in blanks in sentences with the unknown words. Task 3 was to write a composition incorporating the ten target words. The students who were required to use the words in a composition scored higher on a vocabulary test of the ten unknown words in which they were asked to provide the definition of the words. The group that did the fill-in-the blank activity scored lower than the composition group, but higher than the reading group. Tasks that required more student involvement increased vocabulary measures for these students.

Laufer (2001) performed two additional studies involving EFL university students, which showed similar results. She found that involvement in word-focused tasks resulted in significantly more word meaning retention than control groups that only read text. She conducted three studies with similar word-focused tasks. In the first study, two groups of EFL university learners were compared on incidental acquisition of ten unfamiliar words. The first group read a text in which the unfamiliar words were glossed in the margin. The second group was given the ten words with the meanings, and then

asked to write a sentence for each word. The group that wrote sentences had significantly higher scores on both an immediate and delayed test.

In the second study reported in the same article (Laufer, 2001) there were three conditions for learning ten unfamiliar words. The first group read a text and looked up the words in a dictionary. The second group received the meanings of the ten words and wrote a sentence with each word. The third group did both tasks: reading the text, looking the words up in a dictionary, and then producing sentences for each word. On an immediate vocabulary test, the group that read and wrote sentences performed significantly better than either of the other groups. However, in the delayed test, the group that wrote sentences and the group that read the text and wrote sentences both outscored the reading/dictionary only group.

Laufer (2001) also reported on three studies that compared groups of students who read a text, looked up any unknown words in an electronic dictionary, and answered comprehension questions with groups who were asked to write a composition on the same topic, and were told to look up any words they needed to know in an electronic dictionary. On both immediate and delayed vocabulary tests, the groups that wrote a composition remembered significantly more words than the reading groups.

Even when working independently, there appeared to be more benefit when students were actively involved in a task. Simply reading a text and looking at the meaning of the words did not carry the same impact as doing something with the reading. This involvement load hypothesis may extend to students working in pairs or groups to accomplish a task, which may produce even higher levels of language and vocabulary

acquisition. As learners worked together to complete a task, they had a natural context for language use and abundant opportunities for negotiation and interaction (Larsen-Freeman, 2007). Effective interactive tasks were designed so that students had to rely on each other to complete them. Students were be more focused on interactions if they were required to do something with the information they were sharing, such as complete a chart or graphic organizer of some kind (Ballman et al., 2001). From a pedagogical perspective, there was a need to identify the types of learning activities that provided optimal opportunities for second language vocabulary acquisition (Kim, 2008). There must be real-world connections and students need to be able to collaborate and work together to complete tasks. This has an added benefit for English learners; when the learning is relevant to the student and has authentic application, understanding and retention is enhanced and vocabulary is acquired at a deeper level.

Connection to vocabulary acquisition. Cooper and colleagues (2006) recommended that students participate in activities that require them to think about words and their meanings. In a study on tasks for acquiring a second language, de la Fuente (2006) concluded that learners' receptive and productive vocabulary acquisition was greater when they had the opportunity to negotiate and produce the target vocabulary than when they were only exposed to it.

Vocabulary tasks requiring a high degree of generative process, or more involvement by the student, resulted in more efficient incidental vocabulary acquisition than tasks that involved memorization or no generation at all (Joe, 1998). Tasks that required students to practice new words in exercises focused on vocabulary led to greater

retention than exposure to target words in text (Paribakht & Wesche, 1997). Retention of unfamiliar words is conditional upon the amount of learner involvement while processing the meaning of those words (Kim, 2008; Laufer, 2001).

Benefits of communicative activities for English learners. CREDE (2002) has five standards for effective pedagogy for culturally and linguistically diverse students. Standard 1 promotes student-to-student collaboration toward a common product or goal. CREDE contained ideas on the benefits of interactive tasks that align with the communicative approach on its website which were called "joint activities." They posited that learning occurs most effectively when experts and novices work together for a common product or goal, and are therefore motivated to assist one another. To facilitate joint activities, teachers should design instructional activities which require student collaboration to accomplish a joint project. The classroom should be arranged for seating to accommodate students' individual and group needs to communicate and work jointly. Students should be organized in a variety of groupings, such as by friendship, mixed academic ability, language, project, or interests, to promote interaction.

Teale and Gambrell (2007) conducted a study on the use of authentic activities in schools with high diversity and low socioeconomic status. They found that a reading program that incorporated authentic reading and writing tasks resulted in significantly higher reading scores on a standardized test for culturally diverse students than for those students who did not participate in the authentic tasks. In their study they used a program called In2Books. The program had second- through fourth-grade students and adult pen pals read the same book and then discuss it at depth through letters. One part of the

experiment they found noteworthy was the format of using authentic tasks for the students to accomplish. They had a defined purpose in reading the story, and a meaningful audience to write to about their reading. Students involved in the program performed better on criterion referenced tests and other reading performance measures. The authors credit the fact that there was a task to complete with a partner (a pen-pal) for the higher performance of the students.

Communicative activities help English learners be involved by providing authentic opportunities for oral language development. Vocabulary that is pertinent to the task at hand is fostered and may assist English learners in acquiring technical content area vocabulary if the task is centered in a specific subject area. The activities place an emphasis on language learning through communication. As stated previously, oral communication is the basis for language learning, vocabulary acquisition, and reading comprehension. The communicative activities provide the medium by which oral communication is facilitated as students focus on particular language skills during oral interaction.

Core Reading Programs

Core reading programs have been used in the United States since the advent of the McGuffey Eclectic Readers in the early 1900s (DeWitz et al. 2009; Foorman, 2007). It has been estimated that core reading programs are used in over 73% of United States elementary school classrooms (DeWitz et al., 2009). Core reading programs continue to be a driving force in reading instruction in U.S. classrooms (Brenner & Hiebert, 2010; Hiebert, 2002). When the Reading First program was implemented after the NRP (2000)

recommendations, the emphasis was on using scientifically based reading research to guide instruction, and core reading programs became the focal point of that directive (DeWitz et al., 2009; Foorman, 2007). This further validated the continued use of core reading programs.

Reasons to Use Vocabulary Words
from Core Reading Programs

Reading instruction in American schools is dominated by the use of basal readers, or core reading programs (Vacca, Vacca, & Gove, 2000). Since a large number of teachers use core reading programs during their literacy instruction, it makes sense that they would use the vocabulary words that are already outlined and prepared for instruction. Thus, the core reading program used in the classroom is a good place to begin to identify the words to be targeted in vocabulary instruction specific to the context of the stories being read (Gersten et al., 2007). Additional words may need to be identified for English learners to ensure comprehension of the stories being read (Gertsen et al., 2007), but most teachers will focus instruction on the words identified in the core reading program.

Selection and Type of Words

The types of vocabulary words in core reading programs differ, depending on the type of vocabulary being emphasized. Some reading programs may focus only on content words or teach words that are found in the story but may not be familiar to students (Baumann et al., 2011; Beck et al., 2007; Madden et al., 2005). Others focus on academic vocabulary, stressing the functions of language, as well as the words specific to the

stories (Afflerbach et al., 2011). Specific words may have been chosen for a number of

different reasons. One may be that the words are assumed to be unfamiliar to the

students. Another reason may be that the words could be useful or important. The words

may be words which are seen across texts (Beck et al., 2002) or content areas (Coxhead,

2000). Foorman (2007) cited several researchers who have developed methods to

quantify vocabulary words in teacher and student editions of core reading programs. One

of those is Hiebert (2002), who reported in her study on text difficulty that vocabulary

may be basic sight words, or words from different word-frequency zones, such as the

1,000 most frequently encountered vocabulary in text.

Pearson Longman editors, publishers of the Scott Foresman basal program

"Reading Street" (V. Sutherland-Tabb, personal communication, April 28, 2010) draw

their corpus of vocabulary words from writing samples of students learning English in

several countries around the world. Students and teachers send in essays and exam scripts

that are written entirely by students of English to help create what is called the Longman

Learners' Corpus. They claim that every nationality is represented in this corpus, and it is

used as a resource to produce textbooks that address students' specific needs. They

identify words that tend to be difficult for students in their writing, and then highlight

those words as the vocabulary words in their stories that should be intentionally taught.

Vocabulary serves a basic role in core reading programs (Pearson et al., 2007).

Each core reading program may use different criteria for choosing vocabulary words to

focus on. Whatever the method, students are tested and held accountable for the

vocabulary words identified in the reading program. Even though those words may not be

deemed by some as the most important terms for students to learn, they are still a part of

the reading program. If the teacher is going to use the components of the core reading

program, it is important that the identified words be taught so English learners can be

successful on the assignments and assessments given in class.

Challenges for English Learners When Teachers Use Vocabulary
Instruction as Outlined in Many Core Reading Programs

It has been found that there is very little intentional, teacher-directed vocabulary

instruction taking place in schools (Baumann et al., 2003b; Becker, 1977; Lesaux et al.,

2010; McKeown & Curtis, 1987). It is also rare to find a core reading program that

includes adequate guidelines for vocabulary instruction for English learners (Gersten et

al., 2007; Kirylo & Millet, 2000), and is as frequent or as robust as it should be (Durkin,

1981; Ryder & Graves, 1994; Walsh, 2003). Durkin (1978-79) noted that in her

observations of 4,469 minutes of core reading programs (basals), only 19 minutes were

spent on direct vocabulary instruction. In an analysis of two reading programs conducted

more recently, it was found that over the year one program devoted approximately 13%

of the time to vocabulary, and the other 14% of the time (McGill-Franzen et al., 2006).

Many core reading programs target vocabulary words that are not used frequently

in the stories (Hiebert, 2002). Hiebert found in her study of words in four of the largest

reading basals that 40% of the unique words appeared only one time in the first 10 texts

she looked at. In six primary grade core reading programs, it was found that 70% of the

words in text were singletons, meaning they only appeared once in the text. Only 20% of

the words in the text were repeated two to five times (Foorman, Francis, Davidson, Harm, & Griffin, 2004).

Concerning words that appear only once or twice in text, there may not be adequate amounts of practice to learn a word completely (Kamil et al., 2008). Because of the lack of multiple exposures, those words may need to be taught more often and more explicitly, especially if they fall into the Tier Two words as described by Beck and colleagues (2002). These are the words that may be more problematic for English learners, words that are at a slightly higher level of complexity but are not often used in everyday communication or to which English learners are not exposed to except in academic settings (WIDA Consortium, 2007), but are acquired by English speakers often before they enter school (Gersten et al., 2007).

Stein, Johnson, and Gutlohn (1999) analyzed seven first-grade reading programs and compared the instructional strategies for the lessons with the vocabulary words that were needed to understand the story. They found that when looking at the instructional strategies provided by the teacher's edition to teach the words included in the story, only one had a 98% accuracy rate, meaning the instruction provided the skills necessary to read the words in the story. The other six reading programs had accuracy ratings of 43-68%. The instruction in these core reading programs was not sufficient for students to learn the vocabulary necessary for successful reading and comprehension of the story.

Ryder and Graves (1994) compared the vocabulary instruction in two core reading programs for grades four and six. One program provided instruction on six to eight words critical to the story. Instruction began with the teacher displaying a chart that

contained the word, its definition, and the word used in a sentence. The teacher

pronounced each word on the chart and then read its definition and the sentence

containing the word. Next the teacher initiated discussion of each word by asking

questions about the word's attributes, morphology, or context. The discussion included

questions such as asking the meaning of a suffix, or a question of the meaning of the

word as applied in a sentence, *why would a club be **dissolved?*** Or *under what conditions

would a person be **eligible** to vote?* After the discussion, two optional worksheets were

presented for independent practice. The worksheets called for the students to formulate a

definition for words in context, or match vocabulary terms to a synonym, definition, or an

analogy. There was an optional activity on the worksheet which suggested a theme to

write a composition about and use the vocabulary words in that composition. Sometimes

the lesson began with a semantic mapping activity, but the focus was on general concepts

rather than on the vocabulary. There was no evidence of requiring students to relate their

prior knowledge to the words or to use the new words in diverse or familiar contexts.

In the second core reading program evaluated by Ryder and Graves (1994), the

average number of words being taught per lesson was five. Some of the lessons focused

on definitions, in which the teacher wrote the word and its definition on the board, and

then asked students to memorize the definition. The majority of the lessons had the

students generate the definitions, which became similar to an assessment of word

knowledge rather than vocabulary instruction. Next the students completed a worksheet

which required them to match words with their definitions and complete a cloze activity

with the vocabulary words. There were a small number of activities in which students

constructed meanings and word associations based on contexts constructed from students' prior knowledge. The vocabulary instruction as presented in these studies did not deepen an English learner's vocabulary knowledge.

Many of the same challenges addressed in a prior section in this review on special challenges for English learners may apply to the instruction in core reading programs. Graves (2006) gave a summary of several studies he examined; he stated that considering both basal vocabulary instruction as well as that in content area classrooms, there has been some improvement over the past 25 years. However, there still remains much room for improvement. Most vocabulary instruction still consists of mentioning meanings and assigning vocabulary to be learned rather than providing explicit explanations as described in this review of the literature.

Teaching procedures need to be more extensive and richer than the vocabulary instruction that is usually found in core reading programs (Gersten et al., 2007). That was the basis for the study conducted by Pérez (1981). She felt that given English learners' lack of background in the English language, there were too many concepts in the basals that were confusing to them. She devised a packet of activities intended to develop the vocabulary skills of the English learners that would help them be successful in the core reading program being used in their third grade classrooms. The experimental group participated in 20 minutes a day of activities which introduced a specific English concept that was likely to be difficult for English learners. The control group participated in the publisher's basal activities. The two groups had similar scores on an initial achievement test, differing only by four points. At the end of the three months of the study, the

experimental group outperformed the control group on a posttest using the Prescriptive

Reading Inventory, with a mean of 104.70 (SD = 20.50), compared to a mean of 75.63

(SD = 30.04), p = 0.000. Effect size was not reported for this study.

To illustrate some of the challenges for English learners inherent in recent

editions of core reading programs, following is an example of the vocabulary cycle for a

fifth-grade story from a core reading program (Afflerbach et al., 2011).

Day 1: Display the new vocabulary words, and have students look them up in a

dictionary or glossary. Use a categorizing activity to help students acquire word

knowledge, pointing out homonyms, and reminding students to use context clues to

determine meaning of the tested vocabulary words from the story. In a guided practice

activity, have students create analogies. The support for English learners is to provide

them with a multilingual vocabulary list.

Day 2: The schedule this day follows an explicit instruction model. The focus of

the vocabulary lesson is on homonyms, using words that are not necessarily the tested

vocabulary words. The teacher is instructed to model a think-aloud strategy of using

homonyms to determine meaning of a word in context. During guided practice, students

practice determining word meanings using homonyms. It is suggested that vocabulary

picture cards be used to help during this homonym lesson. The next step is independent

practice, in which students are directed to read a one-page passage with all vocabulary

words in it. Students are told to use context clues to determine meaning. If students need

additional practice, a worksheet is provided in which students match the vocabulary word

to the definition and complete a cloze activity with the vocabulary words. For English

learner support, three of the nine vocabulary words are targeted for instruction. Pictures

depicting three of the vocabulary words are found on an introductory page of the story in

the basal, and English learners are to write the three words on sticky notes and use them

to label images of the words on an ESL poster provided in the core reading program.

If a teacher chooses, there is one vocabulary lesson for English learners in a

supplemental section of the teacher's manual. The routine included three components:

preteach, reteach, and writing.

Preteach: An example of this lesson involved preteaching the vocabulary with

word cards and the ESL poster which came with the program. Using the poster, the

teacher models using homonyms to explain the meaning of a word.

Reteach: For reteaching the vocabulary, students use the word cards and blank

cards. They write a clue or a picture for each of the word cards, and then they use these

cards to play a memory game.

Writing: The writing section involves using a T-chart on which students write the

vocabulary word at the top and then the meaning or clue below. Many of the materials

needed in this supplemental section are found in a separate resource, which schools have

the option to purchase.

In this core reading program, two days had time committed for vocabulary

instruction on the words that were tested. On Day 1, that time was shared with other

activities such as listening comprehension, a comprehension skill, a comprehension

strategy, fluency rate practice, spelling, conventions, and writing. On Day 2, in addition

to the vocabulary practice, topics taught include word analysis (which is not directly

related to the tested vocabulary terms), literary terms, story structure, fluency rate, reading the story, research and inquiry, conventions, spelling, and writing. This is common among core reading programs. There is much curriculum to be taught each day during a 90-minute block of time. There are other vocabulary activities, but they are not focused on the tested vocabulary terms. See Table 2.2 for a comparison of vocabulary instruction from four core reading programs (Afflerbach et al., 2011; August et al., 2011; Baumann et al., 2011; Beck et al., 2007).

It is imperative that vocabulary instruction be an integral part of teaching English learners to read, as it is rare to find a core reading program that includes adequate guidelines for vocabulary instruction for English learners (Gersten et al., 2007). Teachers must take the initiative to go beyond the scope of the core reading program to ensure that English learners have opportunities to be exposed to and practice the vocabulary words presented in the reading program. The vocabulary practice may be adequate for students with foundational English language skills, but it is not adequate for those students learning English.

Limited Opportunities to Practice and Apply
New Words in Core Reading Programs

The NRP (2000) reported that repetition and multiple exposures to new vocabulary words are important for vocabulary acquisition. Exposure of new vocabulary through meaningful, concrete experiences in a variety of contexts is one way to reinforce vocabulary knowledge (Asher et al., 1974; Beck et al., 2002; NRP, 2000; Region IV ESC, 2003). Simply introducing vocabulary words one time is not sufficient. Extended

Table 2.2

Comparison of Vocabulary Instruction in Four Core Reading Programs

Day	Program 1 Grade 5: Average 6 words per lesson	Program 2 Grade 4: Average 10 words per lesson	Program 3 Grade 6: Average 8 words per lesson	Program 4 Grade 6: Average 7 words per lesson

Day 1	- Display words
	- Look words up in dictionary or glossary
	- Categorizing activity: homonyms, context clues
	- Create analogies
	No explicit explanation of vocabulary; looking up words in a dictionary may not be an effective means of learning definitions for ELs.
		- Teacher read-aloud with vocabulary words explained
		- Lesson based on context cards:
		  - read the word
		  - Explain the word
		  - discuss word in context
		  - discuss a question with the word
		  - do a partner activity with the word in different contexts
		- Teacher reviews context cards
		- Students silently read passage with vocabulary words
		- Teacher asks questions to help students build background for each word
			- Define the word
			- Give an example of the word
			- Ask question about each word to build background
			- Read passage with the words
			- Worksheet
			  - match word with clue
			  - write sentences for four of the vocabulary words
			The worksheet does not provide active engagement with the words, no communicative purpose..
				- Read passage with vocabulary words on transparency
				- Use affixes and roots to determine meaning of some words
				- Explain meaning of other words
				Worksheet
				  - fill in the blank
				  - match word with its antonym
				No explicit explanation vocabulary; worksheet does not provide active engagement with the words, no communicative purpose..

Day 2	- Read passage with vocabulary words, using context clues for meaning
	- Worksheet
	  - matching
	  - fill in the blank
	Not enough support to use context clues to determine meaning. Worksheet does not provide active engagement with the word, no communicative purpose.
		None
		Lacking reinforcement, opportunity to practice words
			- Review vocabulary words
			Minimal interaction with the words
				- Read passage with vocabulary words in book
				- Answer questions about each word
				Minimal interaction with the words.

Day 3	None *Lacking reinforcement, opportunity to practice words*	- Two vocabulary words are discussed in context of story *Not much practice of all words*	- Cloze activity for four words on a transparency - Word family exercise with some vocabulary words *Not much practice of all words*	None *Lacking reinforcement, opportunity to practice words*
Day 4	None *Lacking reinforcement, opportunity to practice words*	- Review context cards	None *Lacking reinforcement, opportunity to practice words*	None *Lacking reinforcement, opportunity to practice words*

(*table continues*)

Day	Program 1 Grade 5: Average 6 words per lesson	Program 2 Grade 4: Average 10 words per lesson	Program 3 Grade 6: Average 8 words per lesson	Program 4 Grade 6: Average 7 words per lesson
Day 5	None	None	None	None
EL support	Day 1: multilingual vocabulary list Day 2: review of 3 of 9 vocabulary words pictured in the book; sticky notes with 3 words placed by students on EL picture chart - Supplemental optional lesson	- Suggested scaffolding strategies	- Sentence frames	- EL worksheets

Note. Activities listed in four core programs for tested vocabulary word instruction with explanation of areas that may not provide support for English learners.

and repeated opportunities to engage in activities that provide interactions with the new words are necessary (Kirylo & Millet, 2000; Stahl & Nagy, 2006). Reitsma (1983) found that with proficient English readers, four to six repetitions of unfamiliar words was sufficient to increase the speed of word recognition a few days later. In contrast, it is estimated that it could take up to 17 exposures for an English learner to learn a new word (Ausubel & Youssef, 1965). They often do not have the same opportunities to practice and apply new concepts as native speakers, even though these numbers would indicate they need more practice to acquire new vocabulary (Lesaux et al., 2010).

Fuchs and colleagues (1997) reported on a corpus of research that indicated that teachers tend to focus on students who they consider "teachable" and away from students they regard as difficult to teach. When interacting with lower-achieving students they tend to provide less wait time for answers, correct responses rather than try to improve incorrect responses, criticize more often for failure, interact less frequently and in a less friendly manner, provide briefer and less detailed feedback, and make few substantial modifications in instruction. They also reported that low-achieving students received less instruction and practice than more accomplished classmates. In one study by Delquadri and colleagues (1986), a low-performing fourth-grade student was permitted less than 10 seconds of reading practice in a 2-week period. Since English learners are often low-performing students as they transition into fluent English speakers, these findings indicate difficulties they may face in vocabulary instruction. Core reading programs may provide some structure for practice, but as indicated above the practice may still be minimal for the last days of the story cycle.

Definitions Only in Core Reading
Programs

As discussed previously in this review of the literature, definitions provided for

students for new vocabulary words are not conducive to the limited vocabulary an

English learner may have. In reading instruction using core reading programs, it is not

unusual to use a definition-only method for teaching vocabulary. This method has

students write the definition of vocabulary words either from a glossary or a dictionary,

which tends to be minimally effective (Albus et al., 2005; Irvin, 1990; Stahl & Fairbanks,

1986). Retention of material is temporary, and often results in student disengagement and

inadequate meaning of text (Irvin, 1990).

Many studies involving the use of dictionaries have been conducted in settings

with English as a foreign language (Albus et al., 2005). O'Malley and Valdez-Pierce

(1996) found that the practice of giving students a word list to look up in a dictionary,

followed by practice with definitions or synonyms, and then a test, did not work well for

English learners. Albus and colleagues reported results of a study done on using a

dictionary accommodation in testing situations with Hmong eighth-grade English

learners and non-English learners. They used only a simplified English dictionary, as

most of the Hmong students in their study were not literate in Hmong. Results showed

that the dictionary only proved to be useful for intermediate language proficiency level

English learners. Analyses for low language proficiency and high language proficiency

level English learners did not show significance.

Cooper and colleagues (2006) suggest that copying definitions from a dictionary

has no place in vocabulary instruction. Beck and colleagues (2002) reported four

characteristics of dictionary definitions that interrupt understanding of the meaning of the word: Weak differentiation means that there is no differentiation between the target word and other words. They give the example of the word *conspicuous*, which they found defined as "easily seen." This definition is too close to the word "visible," when the word *conspicuous* actually has much more precise definition than just being seen easily. Another characteristic is that of vague language where there is not enough information provided for clear understanding. On the other hand, there may be too much information, leaving students unable to figure out the relationships in the information. The fourth characteristic is that the definition may have a more likely interpretation of meaning than what was intended. The example given is the definition for the word *devious*. The definition is "straying from the right course; not straight-forward." Elementary-age students may interpret that at a concrete level, and think that it means something about walking crooked or getting lost (Beck et al., 2002).

An example of what may be considered an ineffective definition from a third grade story in a core reading program was the vocabulary word *cotton;* the definition included the word *fiber* (Afflerbach et al., 2011). Other examples from the same core reading program fifth-grade level included the following words and definitions: for the word *sinew*, the definition was *tendon;* for the word *tweezers,* the definition was *small pincers for pulling out splinters or hairs;* the word *vein* had the definition of *membranous tubes forming part of the system of vessels that carry blood to the heart.* The words *fiber, tendon, pincers, splinters, membranous, system,* and *vessels* could be problematic for English learners.

Using formal definitions from glossaries or dictionaries does not contribute to word learning for English learners. They need to be able to have definitions in language that is direct and understandable to them. This may require the teacher stating word meanings in terms that are clearer for English learners to comprehend.

Ineffective Use of Morphology

Although there are studies that indicate it may be beneficial to use morphology to help with vocabulary acquisition, there are also studies that demonstrate that this instruction must be done strategically or results are not effective. A study investigating the effects of morphemic instruction on vocabulary acquisition found mixed results (Baumann, Edwards, Boland, Olejnik, & Kame'enui, 2003a). The study was conducted with fifth-grade English-speaking students during social studies instruction, in which the intervention group received direct instruction on specific prefixes and suffixes related to vocabulary taken from the adopted social studies text, while the control group received direct instruction on the vocabulary terms identified in the social studies text. Results showed that the students receiving instruction on morphemic analysis performed better on an assessment of specific prefixes and affixes, but performed less well on a textbook vocabulary assessment. The students who were taught the specific vocabulary words were able to provide more accurate and descriptive definitions of the vocabulary terms from the text.

Freeman and Freeman (2003) contributed their perspective on teaching roots and affixes. Although they concurred with the usefulness of knowing word parts, they pointed out difficulties inherent in such an approach. These include deciding how to break the

word into its parts, recognizing assimilated prefixes, recognizing roots that change their spelling when a suffix is added, and knowing which meaning of a prefix to use. When root words come from Latin or Greek bases, students may not know the meaning of those bases. The concern of not knowing the meaning of the roots played out in a study referenced above by Baumann and colleagues (2003a) in which fifth-grade students were taught specific affixes for vocabulary words in a social studies context. They found that even though students performed well on measures of morphological knowledge, when asked to give the meanings of words, the students erred in the basic root of the word. Examples they cited were "loca again" for the word *relocation*, and "not able" for *undesirable*.

One consideration from the Baumann and colleagues (2003a) study may be the difference between using morphological functions with **base** words in contrast to **root** words. With base words, the linguistic roots of the word do not need to be considered or analyzed. The task is to look at affixes on words that do not have great changes in spelling or pronunciation with the use of those affixes. Examples of such affixes would be inflectional, where only the number or tense of the word is affected, such as *house, houses, eat, eating; happy, unhappy.* The contrast of this situation would be derivational morphemes, in which the word changes its class with the addition of an affix. With derivational morphemes, the word class changes, as does also pronunciation of the base or root word, such as *major* (adjective)*, majority* (noun).

These types of pronunciation changes may cause confusion for English learners, especially if the words are not written out for students to see the relationships in the

derivations (Avery & Ehrlich, 2010). Kieffer and Lesaux (2007) acknowledged that their cognitive strategy for morphological instruction, referenced in a previous section, may be difficult if the word is not transparent, especially if the word requires a change in both sound and spelling, as Baumann and colleagues (2003a) reported in their study.

There are several challenges inherent in teaching aspects of morphology to enhance vocabulary acquisition. Examples of word analysis in one core reading program could cause the difficulties described above. In one lesson, students were asked to find the common roots in word families. The words used were *magnified, magnifier*, and *magnification*, all of which require a spelling change from the initial root word of *magnify*. The second list of words was *revolution, revolt,* and *revolutionary.* These words require a change in pronunciation from the word *revolt* to the other two words (Afflerbach et al., 2011). In a lesson on identifying the suffix *-ous*, students were directed to identify the root words. One word used in the lesson was *generous.* In a lesson on the prefix *-con,* students were asked to identify the root word, and one word in the lesson was *concert* (Afflerbach et al, 2011). These are words that could be a source of confusion for English learners. If morphology is used to help with vocabulary acquisition for English learners, the instruction needs to be explicit, as it may be difficult to parse out root words and affixes in unfamiliar vocabulary.

Assessment of Vocabulary Growth

For vocabulary assessment, it is important to first define what it means to actually know a word. There are many ideas and different descriptions of word knowledge that

have been established throughout the past few decades. It is important to be able to ascertain what comprises word knowledge before it can be appropriately assessed.

Types of Word Knowledge

There has been an effort in the past century to determine what it really means to "know" a word. Cronbach (1942) described the dimensions of knowing a word. He identified five levels of knowledge: (a) generalization—the ability to define a word; (b) application—the ability to select or recognize appropriate situations for a word; (c) breadth: knowledge of multiple meanings; (d) precision—the ability to apply a term correctly to situations and to recognize when a word is used inappropriately; and (e) availability—actually using a word in thinking and discourse. Dale (1965) described the extent of word knowledge in four stages: Never saw the word before; heard the word, but does not know what it means; recognizes it in context or its relationship to something else; knows the word well. Similarly to Cronbach (1942) and Dale (1965), Beck, McKeown, and Omanson (1987) described word knowledge as falling on a continuum, which consisted of: No knowledge; general sense, meaning that the connotation of a word is understood; context-bound knowledge, where the word is understood in the present context, but cannot be applied in another context; having some knowledge of a word but not being able to remember it well enough to use it in appropriate situations; rich, complete knowledge of a word, which includes being able to describe its relationship to other words, and its metaphorical uses.

Miller (1978) added a dimension to these descriptions, that of the relationship of a word to other concepts. This is defined as knowing the topics to which the word may

apply and the kinds of discourse in which the other words may appear (see also Folse, 2004). Calfee and Drum (1986) added the idea of facile access and understanding of metaphor, analogy, and wordplay. Kameenui, Dixon, and Carnine (1987) included a definition they called "derived knowledge," which is the situation where a student may derive enough information about a word to be able to comprehend it in a certain context, but the information is forgotten afterwards, so the word was not actually learned.

In addition to the basic descriptions of knowing a word, there are many types of word knowledge that appear throughout the literature. These include factors that may affect or contribute to a student's word knowledge. They also describe the types of words students may know, as well as facets of the word that affect understanding, especially for English learners. Some of these facets include polysemy, connotation, parts of speech, and collocation, which is especially important for English learners to understand (Folse, 2004). These will not be discussed in this review of the literature. Other types of word knowledge include morphological knowledge, or knowledge based on root or base words, as well as cognates. Many cognates can be found in base words, especially more technical or content specific terms, as many words have either a Greek or Latin base that often crosses into a variety of languages.

One well-known type of word knowledge that is referenced often is the three-tiered word system described by Beck and colleagues (2002). Tier One words are those that would be considered basic vocabulary, such as *car, bread*. Tier Two words are those that are a little more sophisticated, but are used frequently. They would be words such as *character*, *request,* or *frightened*. The way to determine a Tier Two word is if the student

already has in her/his schema a way to express the meaning of an unfamiliar word. If so, then the new word provides a more precise way to communicate the concept. For example, a student may know the word *scared*, but *frightened* is a word that would be used by a more mature language speaker. Tier Three words are those words that are technical or specialized in nature. An example of the levels of these words would be something like *knee* being a Tier One word, *kneecap* being a Tier Two word, and *patella* being a Tier Three word (WIDA Consortium, 2007).

Ryder and Graves (1994) had a basic system of word knowledge levels: unknown words, words with which students are acquainted, and words whose meaning is firmly established. If an English learner can share knowledge of vocabulary words by explaining the meaning to a partner, as well as give examples and nonexamples, that would fall into the level of having the word meaning firmly established. If English learners can relate the words to their own lives, this shows that they have internalized the meaning, rather than having it derived and forgotten within a short period of time. This demonstrates a deeper knowledge than marking a synonym on a worksheet. Explanation and internalization of vocabulary terms would fall on the word knowledge continuums listed above into approximately level three, indicating the student knows the word in context, and can give some information about the relationship of the word to other concepts. Part of the power of having English learners confer about word meanings with classmates is the oral language development that occurs along with vocabulary acquisition as students discuss the words together.

How to Assess Vocabulary

It is difficult to know exactly how to assess vocabulary knowledge or vocabulary growth. In the past, assessment has been driven by tradition, convenience, psychometric standards, and economy of effort. Instruments used to measure vocabulary may be too insensitive to the differing vocabulary loads of a variety of genres (Pearson et al., 2007). Expository text can be divided into subcategories, such as literary nonfiction, which has a very different vocabulary load than a scientific expository text, but assessments often do not discriminate between these differences (Pearson et al., 2007). Instruction may be improving vocabulary learning, and this may be improving comprehension overall, but assessments may not be able to document that this is occurring. One of the challenges of teaching content vocabulary is the paucity of available classroom-friendly vocabulary assessments that can be used to inform instruction and to measure vocabulary growth, especially with English learners (Stahl & Bravo, 2010).

Vocabulary assessment has been used in this country since the early 1900s. Tests were first administered to students individually, and consisted of asking students to define or explain words that were likely to be found in the texts they would be reading (Pearson et al., 2007). At the onset of World War I, the need came about to have a more efficient, easily administered and easily scored assessment, so a standardized, multiple-choice assessment was developed. This type of assessment remained in use until the 1970s, when a more contextualized vocabulary assessment emerged. This press for contextualization increased systematically, especially in the area of English learners (Pearson et al., 2007)

In analyzing vocabulary assessments for English learners, Read (2000) identified three continua for evaluating existing vocabulary assessments: discrete-embedded; selective-comprehensive; and contextualized-decontextualized. For the discrete-embedded distinction, vocabulary has its own separate set of test items and its own score report, where at the other end of the continuum, vocabulary is embedded in, and is not separate from, the larger construct of text comprehension. The selective-comprehensive continuum ranges from a test that measures words learned from a particular chapter or story, to a larger corpus of words that may be included in an entire science textbook, for example (Pearson et al., 2007). The smaller the set of words from which the test sample is drawn, the more selective the test (Stahl & Bravo, 2010). The contextualized-decontextualized continuum refers to the degree that textual context is necessary to determine the meaning of words (Pearson et al., 2007).

Another approach to vocabulary assessments is measuring either vocabulary breadth or depth. Vocabulary breadth refers to the quantity of words for which students may have some level of knowledge (Anderson & Freebody, 1981). Multiple-choice tests at the end of units tend to measure breadth only, and that breadth may be very selective if it is testing only the knowledge or words from a particular story (Stahl & Bravo, 2010). Vocabulary depth measures how much a student knows about a word (Anderson & Freebody, 1981).

August and Shanahan (2006) reported that assessments cited in the research to gauge language-minority students' language proficiency are inadequate in most respects. Some of these inadequacies include that assessments often do not assess development

over time. Some of the difficulties found in assessing English learners include linguistic and cultural issues that should be addressed. It may be difficult to assess the total vocabulary of an English learner because different words may be known in each language. English learners may comprehend text in a second language, but find it difficult to communicate that understanding in that language (August & Shanahan, 2006).

In core reading programs, the vocabulary assessments often consist of multiple-choice questions that assess word breadth; the assessments focus only on words that are taught for each particular story. They may provide information on retention of words if there is a unit test at the end of a certain number of stories. Typically there is not a pretest given on the vocabulary words for the story cycle, only a test given at the end of the story to assess vocabulary knowledge of words which were taught (Afflerbach et al., 2011; August et al., 2011; Baumann et al., 2011; Beck et al., 2007; Madden et al., 2005).

Types of Assessments

Dochy, Segers, and Beuhl (1999) identified several types of assessments that are used in many settings for all learners, including multiple choice tests, cloze tests, association tests, recognition tests, matching tests, open question tests, and free recall tests. Language proficiency tests usually include an oral speaking section as well, where English learners either point to a picture when given a word, state the term for a picture, or repeat items the tester orally presents to them (Utah State Office of Education, 2010; WIDA Consortium, 2007; Williams, 2006).

When testing culturally diverse students with standardized tests, there are a number of concerns that are manifest. Culture, language, home and community

environments can influence test results, as well as interpretation of those results. The tests do not distinguish if low results are from language or a disability (Ernst, 1994). For this reason, informal assessments and data collection can give a more accurate picture of an English learner than a standardized test (Ernst, 1994). Informal assessments could be as simple as teacher observation using a criteria checklist, or assessing student learning with a physical signal as a check for understanding, such as "thumbs up" if they understand. Informal assessments could also include quizzes that teachers develop to measure a concept that was just taught, or unit or chapter tests at the end of an instructional section. Whichever format is used for assessing vocabulary, it is important that it gives English learners the opportunity to show what they have learned from the instruction provided.

Purposes of Assessment

Gottlieb (2006) cited several purposes for assessing vocabulary for English learners. One of these is to monitor progress of English language proficiency as well as academic achievement. The types of measures for academic achievement include classroom assessments in the language of instruction, as well as student portfolios. Classroom measures are usually formative in nature, and occur on an ongoing basis, such as every week. They are individualized for classrooms, and are often teacher created and teacher scored. They can use a variety of approaches and response formats, including categorizing or classifying, drawing based on written text, matching activities, and sequencing. Students may produce original work for assessment, such as illustrated biographies, brochures, descriptions, labels, or notes. These may occur within an extended time frame, such as projects or units of instruction (Gottlieb, 2006).

With all of the information gathered on types of assessments that are useful for assessing English learners, the reality is that when using a core reading program, there are not separate assessments for English learners. All students are assessed the same way when asked to demonstrate vocabulary knowledge from core reading programs that are used. English learners must take the same vocabulary tests at the end of each story and unit as every other student in the class (Afflerbach et al., 2011; August et al., 2011; Baumann et al., 2011; Beck et al., 2007; Madden et al., 2005).

Frequency of Assessments

The frequency of assessments is determined by the purpose of the assessment itself. If it is formative, that is, being used to guide instruction, then the assessment is administered quite frequently, even daily if needed (Gottlieb, 2006). Teachers may administer a formative assessment weekly or biweekly to determine if a concept needs to be retaught or if students are ready to move on to the next concept. Summative assessments, or those that are used to measure knowledge, are given less frequently. They may be unit tests given every few weeks, or standardized assessments, which typically occur once a year. There may be additional assessments, or interim assessments, that are specifically geared to measure growth. These may be given quarterly, or biannually.

It is important that progress monitoring assessments be tied to instruction. The more closely the assessment matches the instructional context, the more accurate the conclusions will be concerning the instruction provided (NRP, 2000). Independent practice opportunities can also be used to evaluate student progress (Region IV ESC, 2003). The Region IV ESC listed three key elements for determining the appropriate

assessment method: Assessment should be related to good instruction; should happen continuously, as part of instruction; and should provide information about the levels of understanding of the students. The NRP report (2000) stated that because of the difficulty of measuring an individual's complete vocabulary, we often measure only specific vocabulary items in the context of a specific lesson, such as reading. Most core reading programs use this format of weekly testing a group of words that were targeted in the story for the week (Afflerbach et al., 2011; Madden et al., 2005).

Vocabulary assessments can take on many forms, but when assessing English learners, the tests need to show in a meaningful way what students have learned. They need to be tied to the vocabulary instruction that has taken place in the classroom. When tests are discrete embedded, as are many tests that are specific to a lesson or a story cycle, they must be able to show the specific vocabulary acquisition of the English learners. The major consideration is that instruction is delivered in such a way as to ensure that English learners will be successful on the assessments they are required to take.

Conclusion

Many aspects of vocabulary instruction have been presented in this review of the literature. There is a significant foundation of research on vocabulary instruction for native English speakers; far less on instruction for English language learners (Graves, 2006). There often appears to be a contradiction between vocabulary instructional practice and research, as well as a lack of connections between practice and research. Many articles written for English language learner instruction focus on ideas that seem to

make sense, but may not be proven by research. Some examples are the use of student-friendly definitions, nonexamples, and cognates. It seems to make sense to apply these strategies, but there is not much research to support them, and the scant research that is available often shows mixed results.

There are many components to teaching vocabulary to English learners. In an IES report by Gersten and colleagues (2007), there is evidence that suggests that English learners will benefit from intensive vocabulary instruction. This review of the literature has touched on many instructional strategies and ways to purposefully and strategically incorporate techniques situated in the communicative approach to language learning. However, in all areas of vocabulary instruction there is a definite need for more research as it applies specifically to the instruction for English learners (August & Shanahan, 2006; Graves, 2006).

CHAPTER 3

METHODOLOGY

Vocabulary acquisition has again become a focus of research in the past few decades. While there are studies that have investigated factors influencing second language vocabulary acquisition, there are few studies that look specifically at delivery of instruction and its impact on vocabulary acquisition, especially in the middle grades (August & Shanahan, 2006). The present study addresses areas lacking in the research base, those of delivery of instruction and the effect instruction can have on vocabulary acquisition for middle-grade English learners. The purpose of this study was to investigate the effectiveness of using purposeful and strategic instructional techniques situated in aspects of the communicative approach to language learning (Ballman et al., 2001) to teach vocabulary to English learners. Specifically, this study examined communicative techniques with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth- grade students to aid acquisition of vocabulary from core reading programs.

The goal of the communicative approach is to ensure communicative competence is achieved. Because this is an approach and not a method, there are no specific guidelines or steps for implementation. Teacher application of this approach in a classroom depends on how the basic tenets and principles are interpreted and applied (Larsen-Freeman, 2007). Teacher talk should be kept to a minimum. However, this is not to say that teachers do not provide instruction. Teachers must guide the initial explanations of the concepts to be learned (Ballman et al., 2001). Then the teacher

facilitates activities and learning experiences with a variety of interactions in which the students practice and acquire the concept that was taught.

Design

This study could be referred to as a psychometric investigation, which, according to Nunan (2004), in the realm of language learning, is typically an investigation that seeks to determine language gains from different methods and materials through the use of the experimental method. In the current study, a quasi-experimental design was used to investigate vocabulary acquisition of English learners in fifth-grade classrooms. Quasi-experimental designs are sometimes referred to as *naturally occurring group designs*, and are similar to the experimental/control group approach in that they make comparisons between the mean performance of groups that occur normally (Brown, 2002). The classes/teachers in this study were randomly assigned to either the treatment or comparison group, but students themselves could not be randomly assigned, as they were nested within the classroom.

This chapter will give a detailed description of the study, and will include the elements of a psychometric study as discussed by Brown (2002) and Nunan (2004). These elements include the following.

Description of participants: This description explains who the participants were and how many were involved in the study. It is noted if participants dropped from the study. Demographic information is included in this section such as: students' age, students' level of proficiency in a second/foreign language, and teachers' education level

and experience. The selection of the participants is delineated. The description of the criteria used to select participants for this study is explained.

Materials used: The materials are described and included in the appendices as necessary. These include teaching materials that were employed and tests that were administered.

Procedures: This section explains how the materials were used and what the participants did with the materials. An explanation is given of how the materials were prepared, administered, and scored. The dependent and independent variables are identified.

Type of data: The type of data collected should result in providing the desired information. In quasi-experimental studies, the data are often in a form that will give a score such as multiple choice questions on an assessment. At times a researcher may need to choose between multiple types of relevant data. These may be data from observations or from materials completed by participants. Data may change during the study, and the researcher must manage that data effectively.

Analyses: The purpose of this section is to describe how the data was arranged and analyzed. Assumptions of the analyses should be checked and met, and explained (Brown, 2002). Considerations for the analysis need to include factors that will result in the researcher's ability to determine reliable and valid interpretations. Analyses may include distribution measures and t tests to determine differences between groups.

An important part of a study is the location of the investigation. Participants can be studied in a natural setting or in a laboratory setting. There is a paucity of language

research that uses participants in genuine classroom settings; many endeavor to create classroom environments in a laboratory. Nunan (2004) reported that of 50 widely cited studies he reviewed from the classroom research literature, only 15 were conducted in an actual classroom setting.

The study began the first week of school and covered a span of 17 weeks, which included 3 weeks of training prior to the beginning of data collection. It was planned that data collection would begin by the third week of the study, but because of unforeseen circumstances, teachers had to be trained individually; as a result, data collection started the fourth week. Teachers began instruction from the core reading program the second week of school. No data was collected for the first two weeks while individual and in-class training was completed. There were 15 selections that were planned to be used in the study (see Table 3.1 and 3.2).

Setting

This study took place within a public school system. It was conducted in the natural setting of regular classrooms during reading instruction.

District

The district in which this study was conducted is an inner-city district situated in the western part of the U.S. According to the U.S. Census Bureau (2011), almost 66% of people who speak a language other than English at home, speak Spanish. This district closely reflected this percentage. At the time of the study, approximately 53% of the total student population in this district was influenced by a language other than English in the

Table 3.1

Timeline of Study

Week	Date	Procedures for the duration of the study
1	Aug. 23	Initial trainings for all teachers [Teachers 3 and 6 (treatment) attended] Individual training: Teacher 5 In-class training: Teachers 3, 5, 6 School started mid-week, Aug. 25
2	Aug. 30	Letters home to parents Individual training: Teacher 2, 4 (treatment), 7, 8, 11 (control) In-class trainings: Teacher 4 Selection 1 taught, no data collected
3	Sept. 6	Individual training: Teacher 1 (treatment), 9, 10 (control) In-class trainings: Teachers 1, 2 Selection 2 taught, no data collected
4	Sept. 13	Mastery Pretest administered Selection 3 taught, pre- and post quizzes administered to begin weekly data collection
5	Sept. 20	Classroom observations begin Weekly data collection: Selection 4
6	Sept. 27	Classroom observations Weekly data collection: Selection 5
7	Oct. 4	Classroom observations Weekly data collection: Selection 6
8	Oct. 11	Shortened week for fall break Weekly data collection: Selection 7; Some teachers did not teach a selection during this shortened week
9	Oct. 18	Classroom observations Weekly data collection: Selection 7 or 8
10	Oct. 25	Classroom observations Weekly data collection: Selection 8 or 9
11	Nov. 1	Classroom observations Weekly data collection: Selection 9 or 10
12	Nov. 8	Classroom observations Weekly data collection: Selection 10 or 11
13	Nov. 15	Classroom observations Weekly data collection: Selection 11 or 12; teachers who had not reached selection 12 were told they could skip that selection to get closer to being on schedule since there were no words from selection 12 on the final mastery test.
14	Nov. 22	Thanksgiving Break on Wednesday through Friday this week Teacher 11: regular teacher back to class this week
15	Nov. 29	Classroom observations Weekly data collection: Selection 13
16	Dec. 6	Classroom observations Weekly data collection: Selection 14
17	Dec. 17	Weekly data collection: Selection 15 Mastery posttest administered

Table 3.2

Words Tested on the Mastery Test by Weekly Schedule

Week	Weekly date	Selection #	Words on mastery test
1	Aug. 23	none	None
2	Aug. 30	1	None
3	Sept. 6	2	daintily
4	Sept. 13	3	lair, shellfish, kelp
5	Sept. 20	4	unique, outfield
6	Sept. 27	5	None
7	Oct. 4	6	algae, concealed, hammocks, sternly
8	Oct. 11 (short week)	7 or none	None
9	Oct. 18	7 or 8	(8) astonished, procession, distribution, behavior, sacred, recommend
10	Oct. 25	8 or 9	(9) None
11	Nov. 1	9 or 10	(10) None
12	Nov. 8	10 or 11	(11) None
13	Nov. 15	11 or 12	(12) None
14	Nov. 22 (short week)	None	
15	Nov. 29	13	erected, occasion, proportion, workshop
16	Dec. 6	14	appreciate, released
17	Dec. 13	15	landscape, miniature, reassembled

home, with over 95% speaking Spanish. Just over 30% of the total school district

population was classified as Limited English Proficient (LEP), indicating that they

required language services of some kind. There was an average of 13 different languages

spoken in the district, with Spanish being the primary one.

The district was economically impacted with 75% of the students qualifying for

free and reduced lunch. The district had a 40% mobility rate and the highest migrant

population percentage in the state (S. Roberts, personal communication, August 10,

2010). This district qualified to receive Title I funds based on a high number or percentage of students in poverty, based on census poverty estimates (U.S. Department of Education, http://www.ed.gov).

Schools

Recruitment of teachers began at the school level, based on the procedure outlined and agreed upon by the school district public relations liaison and the investigator. The stipulations required by the district included (a) a letter from Utah State University (USU) IRB on file at the district; (b) contact with all principals done by the investigator, giving them the right to accept or decline the invitation to have their school involved in the study; (c) a written letter from all principals who agreed to support the study stating that they approved the study to be conducted in their school; and (d) assurance that the research would not take away from instructional time, nor require extra preparation time for teachers.

The district had a total of 14 elementary schools. The factor that was most salient in identification of possible schools for inclusion in this study was the number of English language learners in the school. The goal was to have over 100 English learners involved in the study. Six schools were identified as possible candidates for the study which would provide over 100 student participants. Four of the schools considered had approximately 50% or more of their population identified as English learners, and the other two schools had approximately 35% to 45% of their students identified as English learners. The other schools in the district had an English learner population of less than 35%.

The principals of the six schools were initially contacted by email early in the

summer to set up an appointment to discuss the possibility of their fifth-grade classes participating in the study. All but one principal accepted the invitation to meet. This principal, from a school with one of the highest counts of English learners, indicated she would contact teachers and ask them; she replied within a short time that all teachers declined to participate. The other five principals were given information about the study and asked if they would be willing to have their schools participate. Each agreed and gave their consent for teachers to participate. Three principals asked the investigator to contact the teachers, two said they would talk to their teachers about participation in the study. All teachers contacted by the investigator consented to participate.

Of the two principals who indicated they would contact their own teachers, one did make contact and followed up to make sure teachers were ready to go at the beginning of the school year. As the time grew nearer for the study to be implemented, there was no return communication from the other principal who was going to contact her teachers. The investigator tried numerous times to contact this principal and the teachers. The fact that it was summer break may have played a part in the lack of communication. It was determined late in the summer that another school would need to be contacted, as there was no response from this principal or teachers, and it was assumed by the nonresponses that this school was no longer interested in participating. They did reply several months into the study, but it was too late to add them at that time.

The school with the next highest number of English learners was contacted and the investigator met personally with the principal. She indicated that she was willing to have her fifth grade involved and the investigator was asked to contact the teachers.

During the conversation with the principal it was determined that only one teacher out of three in the fifth grade had an English as a Second Language (ESL) endorsement, so all English learners were put into that classroom. Consequently, only one class from this school was involved in the study. This gave a total of five schools included in the study.

All schools involved in the study were considered highly impacted by risk factors that affect academic success. The state definition and accompanying qualifications of highly impacted schools include the factors of (a) student mobility; (b) free school lunch qualification; (c) the number of English learners with a language proficiency rating of Intermediate or below on the state English Language Proficiency (ELP) exam; (d) the number of ethnic minority students; and (e) the number of students from single parent families (Utah State Office of Education, 2010). The language proficiency rating was based on scores from the state ELP assessment which operated on a 5-point scale: pre-emergent, emergent, intermediate, advanced, and fluent. The number of English learners in the schools ranged from 35% to 59% of the school population. All schools in the study had a free and reduced lunch percentage greater than 75% (see Table 3.3).

Participants

There were two levels of participants in this study. The students were one level, and the teachers were a second level.

Random Assignment of Teachers

Prior to implementation of the study, 12 participating teachers were assigned randomly to treatment or comparison group, resulting in six classrooms in the treatment

Table 3.3

Overview of Highly Impacted Status of Schools Participating in the Study

School	% of school population who are ESL students	% of school population with language proficiency intermediate or below	% free or reduced lunch	% of ethnic minorities
1	56	20	100	75
2	59	28	100	82
3	49	20	100	84
4	38	16	78	58
5	35	10	77	53

group, and six in the comparison group (see Table 3.4). Random assignment of teachers resulted in two of three teachers in School #2 assigned to the treatment condition and one to the comparison. This team of teachers worked closely together, and they were concerned that they would not be consistent in teaching if two used the intervention and one did not. Changing the group for any of the teachers at this school would have violated the random assignment, so the decision was made by the investigator to drop the one comparison teacher at that site. This decision resulted in 11 participating teachers: six teachers in the treatment group and five teachers in the comparison group. There was an average of 26 students in each classroom with a range of 24 to 30 and an average of seven English learners per classroom ranging from four to 13.

Of the teachers participating in the study, eight of the teachers had earned an ESL endorsement and three were in the process of earning one. Teachers in this district were required to earn an ESL endorsement within three years of being hired in the district because of the high number of language learners in the population. An ESL endorsement prepares teachers to work effectively with students who are learning English and qualifies

Table 3.4

Number of Treatment and Comparison Classes in Each School

Variable	School #1	School #2	School #3	School #4	School #5
Total classes	2	3	3	3	3
Participating classes	2	2	3	3	1
Treatment classes	1	2	1	1	1
Comparison classes	1	0	2	2	0

them to teach ESL classes. The ESL endorsement program in the district where the study was conducted required classes in second language acquisition, phonology and syntax, culturally responsive teaching, assessment, parent involvement, and methods and strategies for ESL instruction. Five of the teachers who had earned their ESL endorsement received it through the school district endorsement program. Two of the teachers received theirs during their college education, and one received an endorsement from another state (see Table 3.5).

The range of teaching experience was one year to 30 years. The mean years of teaching experience was 11.8, *SD* = 9.8. The differences between years of experience by group was not significant, *p* = .643, with a mean difference of 2.97 (see Table 3.6). One teacher in the comparison group was a first-year teacher. The teacher with the most experience was from the comparison group with 30 years of experience. Five teachers had less than 10 years of experience, two in the treatment group and two in the comparison group. The teachers had a wide range of experience in teaching different grades with the majority of experience in the upper elementary grades (see Table 3.7). One teacher began his teaching career at the secondary level. Another teacher was

Table 3.5

Teacher Demographics

Random assignment	Teacher	Years of experience	ESL endorsement	Reading endorsement	Advanced degree	Gender	Ethnicity
Treatment	1	2	Yes	Yes	No	F	White
	2	15	Yes	Yes	Yes (MEd)	F	White
	3	3	Yes	Yes	No	F	Hispanic
	4	20	Yes	No	Yes (MEd)	F	White
	5	24	In progress	Yes	Yes (Speech Pathology)	F	White
	6	15	Yes	Yes	No	F	White
Comparison	7	1	In progress	No	No	F	White
	8	10	Yes	Yes	Yes (MEd)	F	White
	9	7	Yes	Yes	Yes (MEd)	F	White
	10	3	In progress	Yes	Yes (MEd)	M	White
	11	30	Yes	No	No	F	White

Table 3.6

Teacher Demographics Summary

Group	Years of experience	ESL endorsement	Reading endorsement	Advanced degree	Gender	Ethnicity
Treatment $n = 6$	$M = 13.1$ $SD = 8.9$	5 In progress = 1	Yes = 5 No = 1	MEd = 2 Speech Pathology = 1 None = 3	F = 6 M = 0	White = 5 Hispanic = 1
Comparison $n = 5$	$M = 10.2$ $SD = 11.6$	3 In progress = 2	Yes = 3 No = 2	MEd = 3 None = 2	F = 4 M = 1	White = 5

certified to teach special education. At least one teacher had an early childhood endorsement as she had taught kindergarten.

One teacher in the comparison group was a permanent substitute teacher for a teacher on long-term leave for 13 of the 17 weeks of the study. The substitute teacher was

Table 3.7

History of Grades Taught by Participating Teachers

Grade	Kindergarten	1st	2nd	3rd	4th	5th	6th	Secondary	Special education
Treatment									
1						X			
2		X	X	X		X			
3						X			
4					X	X			X
5						X	X		
6	X	X			X	X			
Comparison									
7						X			
8				X	X	X	X		
9			X		X	X			
10						X		X	
11		X		X	X	X	X		

a certified teacher who had retired the previous year with 30 years teaching experience. The teacher who was on long-term leave returned the short week of Thanksgiving, and participated in the study for the last 3 weeks, so data and information from these two teachers were reported as one class.

Students

The participating fifth-grade classes included native English speakers and English learners at different stages of English language acquisition. For this study, only fifth-grade English learners were included. It was determined that English learner participants in the study must be classified as limited English proficient (LEP), based on their proficiency ratings from the Utah Academic Language Proficiency Assessment (UALPA).

The UALPA was given statewide to every LEP student once a year. The testing window was from January to April, with results reported to the schools in late summer, and disseminated to teachers in September. There were four sections in the test: speaking, reading, listening, and writing. The speaking section was given individually to each student. The other three sections were given in groups. There was also a comprehension score on the UALPA report that was determined by combining the reading and listening scores. Results of the UALPA placed students in five categories: pre-emergent, emergent, intermediate, advanced, and fluent (see Appendix A for descriptions of each proficiency level).

Students were included in this study if they scored at the proficiency level of Emergent, Intermediate, or Advanced on the UALPA. Pre-Emergent were not included in the study because students who score at this language proficiency level are typically new to the country or have learning disabilities. In these situations, vocabulary acquisition requires more intensive instruction than this study investigated. Students who scored Fluent are no longer considered to be English learners; they have reached proficiency in the English language. The purpose of this study was to investigate the effects of vocabulary instruction on students who are in the process of learning English. For this reason, fluent students were not included in the study.

Parental permission was sought for a total of 93 English learners in all participating classrooms during the first full week of school. Parental permission was received for all but one student. Five students who were determined to be Fluent after UALPA results were obtained at the beginning of the school year were not included,

leaving 87 participants. Nine students identified as receiving special education services were not included in the study, resulting in 78 participants. One student moved before the study was completed.

Of the 77 remaining participants, 73 student scores were analyzed. Four students' scores were dropped at the end of the study due to problems with their mastery posttest. Of the 73 students, 72 had Spanish as their native language or had a Spanish language influence in the home. One student had a native language of Hindi. The majority of the students in this study scored at the Intermediate level of the UALPA, $n = 63$, Advanced level $n = 6$, Emergent level $n = 3$. One student was missing the UALPA score. This may be because she had not taken the UALPA the previous year. However, she was receiving ESL services based on previous scores or school records, so she was included in the study (see Table 3.8).

Table 3.8

Students with UALPA and DIBELS Scores

Variable	Treatment students	Comparison students
UALPA		
Hispanic	46	26
Non-Hispanic	1	0
Hindi	1	0
Spanish	46	26
Advanced language proficiency	3	3
Intermediate language proficiency	42	21
Emergent language proficiency	1	2
DIBELS		
Average score	74	67
Intensive	41	23
Strategic	3	3
Benchmark	3	0

Note. One treatment student did not have a UALPA score.

Prior random assignment of teachers resulted in 47 participating students in the

treatment group, and 26 in the comparison group. Analyses were completed to determine

comparability between the treatment and comparison groups at the beginning of the

study. A chi-square analysis showed there was no relationship between gender and

treatment condition: χ^2 (1, n = 73) = 0.983, p = .321. A t test was used to determine if

there was comparability between groups on the DIBELS oral reading fluency (DORF)

test (see Table 3.9). An independent t test showed that the difference between the groups

was not significant (t = -1.176, df = 71, p = .244, two-tailed), treatment group (mean =

73.85, SD = 22.12) and the comparison group (mean = 67.27, SD = 24.28).

Description of Intervention

The purpose of this study was to investigate the effectiveness of using purposeful

and strategic instructional techniques situated in aspects of the communicative approach

to language learning to teach vocabulary to English learners. Specifically, this study

examined communicative techniques with explicit teacher explanations to introduce new

vocabulary and communicative tasks completed by fifth-grade students to aid acquisition

Table 3.9

Comparability of Group by Gender and DORF

	Treatment		Control				
	n	%	n	%	χ^2	p	t
Male	27	57	18	69	.983	.321	
Female	20	43	8	31			
Total number of students participating	47		26				
DORF						.244	-1.176

of vocabulary from core reading programs. These techniques were situated within the context of social learning using modifications of the communicative approach to language learning. The communicative approach is typically used in a class specific to learning a new language. Although the study took place in classrooms that included both language learners and native English speakers, the focus continued to be learning through active and authentic communication. Often the communicative approach focuses on function or form of the target language (Larsen-Freeman, 2007). However, in this study vocabulary, rather than grammar or other linguistic elements, was the focus of instruction.

This study was conducted in schools that used a newly adopted core reading program for the district, "Reading Street," by Scott Foresman Publishers (Afflerbach et al., 2011). Core reading programs are used in over 70% of elementary schools, and teachers typically use the vocabulary words from the core reading program for instruction (DeWitz et al., 2009). Thus, use of the vocabulary words from the core reading program increased authenticity of vocabulary word selection. In addition, materials and vocabulary tests were already prepared and available for use. Finally, this made it easier to compare differences based on instruction between the treatment and comparison groups because all teachers were using the core reading program and the same vocabulary words.

The reading program had three categories of vocabulary for possible inclusion in this study. The words that were referred to as "tested vocabulary" were the words used in this study. These words were highlighted in the text of the selections and were taught for

the purpose of being assessed each week. The core program assessment handbook had vocabulary tests for each selection in the reading program and these were the words that were used for the study weekly quizzes.

The second type of vocabulary in the program was called "academic vocabulary." As used in the basal, this term referred to language functions, such as *paraphrasing, summarizing*, and *determining cause and effect*. These were not used in the study because they were not highlighted in the reading selections and were not assessed as were the tested vocabulary words.

There was an additional section of vocabulary called "amazing words." These were words that were conceptually related to the reading selection but were not necessarily included in the passage; they were used specifically for oral vocabulary development. For instance, for a passage about special effects in making movies, there were 10 amazing words that were used during a listening comprehension activity, and also for discussion throughout the week. They included the words *digital effects, illusion, props, gruesome, realistic, three-dimensional, image, re-create, graphics,* and *simulation*. None of these words were found in the text of the reading selection, nor were they tested. For these reasons, they were not appropriate to be used in this study.

Information about how the "tested vocabulary" words in each selection were determined was obtained from communication with a Scott Foresman company representative. The vocabulary words used in this reading series were chosen from two main sources, Coxhead's Academic Word List (2000) and a database compiled of thousands of commonly used words gleaned from student essays written by English

language learners from different countries with differing levels of English proficiency. The essays were evaluated, and words were chosen based on needs the material writers saw in their evaluations. These words are used to create dictionaries produced by the Pearson-Longman Company and words to target in basal instruction (V. Sutherland-Tabb, personal communication, April 28, 2010). Because the vocabulary words used in the reading program were in part based on observed needs of English learners from a number of different linguistic backgrounds, these vocabulary words were appropriate for use in this research study.

Vocabulary instruction in the core reading program followed the schedule for reading passage lessons. The teachers used the reading program systematically, starting at the beginning and going through each selection in the order they were presented. The reading selections used by the participating teachers from September to December, the length of this study, were from the first three units of the core reading program, which consisted of 15 reading selections. Thus, the vocabulary words used for the study were from the selections in the core reading program in the order they appeared in the program. Nine selections from the core reading program from which weekly quizzes were scored were completed by all study classes but one. The weekly quiz data analysis was taken from these nine selections (see Table 3.10). Teachers began instruction from the core reading program the second week of school, but the individual and in-class training were not completed until the third week. Thus collection of the weekly quizzes began with selection three. There were seven "tested vocabulary" words in all selections except selections 5 and 11, which had six and five, respectively.

Table 3.10

Weekly Tested Vocabulary Words from Selections

Selection 3	Selection 4	Selection 5	Selection 6	Selection 7	Selection 8	Selection 9	Selection 10	Selection 11
lair	confidence	barren	driftwood	Union	astonished	bandana	somber	project
ravine	windup	deafening	algae	Confederacy	gratitude	hogan	fate	fabulous
gnawed	fastball	prying	concealed	quarrel	procession	mesas	steed	browsing
sinew	mocking	lurched	tweezers	stallion	distribution	Navajo	fearless	inspecting
shellfish	unique	previous	hammocks	canteens	behavior	jostled	magnified	applauds
kelp	weakness	surveying	sternly	glory	sacred	turquoise	glimmer	
headland	outfield		lamented	rebellion	recommend	bracelet	lingers	

Treatment Group Instruction

The treatment group was provided a vocabulary instruction intervention designed by the researcher. The intervention was based on a 5-day schedule that emphasized explicit teacher explanations of vocabulary terms and communicative student tasks (see Appendix B). This intervention was designed to take no more than 20-30 minutes of the reading time, and was compatible with the suggested schedule for vocabulary instruction in the core reading program, as it was also based on a five day implementation plan.

Several techniques were used in the instructional intervention designed for this study, relative to recommendations from research discussed in the review of the literature. The techniques were implemented within the context of social learning and the delivery method found in the communicative classroom and a variety of interactive activities to provide numerous opportunities for language interaction. These included explicit teacher explanation of vocabulary and communicative student tasks (graphic organizers, word associations, nonlinguistic representations, examples and nonexamples,

word analysis, peer-mediated activities, games for review, and vocabulary notebooks).

Some of these techniques were closely aligned with Marzano and Pickering's (2005)

steps for teaching vocabulary to English learners. Each is briefly discussed below.

**Explicit Teacher Explanations of
Vocabulary**

A major emphasis in this study was the use of explicit explanations when teachers

provided the meanings of new vocabulary words. English learners require explicit

explanations that address their linguistic and cultural needs (Goldenberg, 2008; Harper &

de Jong, 2004; Marzano & Pickering, 2005). Because English learners process

information through the lens of a second language, instruction needs to include input that

is presented in a comprehensible way for them (VanPatten, 2000). Thus, vocabulary

words need to be introduced through deliberate, purposeful and strategic explicit

explanations (Archer & Hughes, 2011; Cambourne, 2002; Collins, 2010; Flynt & Brozo,

2008; Goldenberg, 2008; Marzano 2004; Pearson & Dole, 1987; Tran, 2006).

In this intervention teachers used explicit explanations of the new vocabulary

terms. They explained the meaning of the words using clear descriptions, nonlinguistic

representations, and students were guided to use the descriptions presented to them to

modify or create their own descriptions. Students had the opportunity to practice applying

the meaning of the words in their notebooks through writing their own descriptions and

visual representations of their choice.

Communicative Student Tasks

Research on vocabulary instruction includes recommendations for instructional

techniques that may be effective for English learners to acquire vocabulary. The communicative approach provides a medium that extends discourse and oral communication in which those recommendations may be implemented. Students must negotiate meaning as they discuss and complete the vocabulary activities. Through this process of negotiation for meaning, feedback on their communication is immediate as they complete the vocabulary activities in this treatment.

Graphic organizers. The use of graphic organizers can enhance the learning of vocabulary for English learners (Freeman & Freeman, 2009; Townsend, 2009). Graphic organizers present information in a format that is not solely text; they are communication tools that use visual symbols to express or categorize concepts and ideas and the relationships between them. The framework of a graphic organizer may include shapes, lines, or arrows to help visually organize the content being studied. They may be used in instruction or students may use them during practice situations. Terms or concepts can be presented in this visual form that is easier for students with limited linguistic proficiency to understand.

The graphic organizer used in this intervention provided activities for students to learn the meanings of words and work with the terms in a variety of ways (see Appendix B). There were several purposes for the activities used in the graphic organizer. It was hypothesized that doing several communicative activities would provide meaningful and authentic practice with the vocabulary words (Larsen-Freeman, 2007), as well as increase the number of exposures to the terms (Beck et al., 2002). The completion of the organizer built on the foundation already established for the students, using their own descriptions

and nonlinguistic representations that they had developed on the first two days of the intervention. It also gave them rigorous practice by requiring an example and a nonexample of the word. The over-arching goal was for students to collaborate to complete the graphic organizer as indicated in the communicative approach. Oral language is developed as students interact with each other, which was required for students to complete the organizer. Framing the collaboration as necessary to complete the graphic organizer also created an authentic situation in which interaction was required to complete the task. Multiple opportunities to work with the word, develop word associations, and interact with a partner increased the likelihood the word would be learned.

Word association. Word association is another means of promoting in-depth word knowledge (Beck et al., 2002). Word association is a method in which students connect the meaning of a familiar word to an unfamiliar word using associations between the words, not just the meanings of the words. For instance, the word *mechanic* would have an association with the word "engine," or "motor." Students are led through a discussion to associate that unfamiliar word with something they understand which is related to the unfamiliar word.

Associations can be created using the background knowledge of students. For instance, students being introduced to the word *weary* could be told the meaning of the word, and then would be asked to associate that word with a task which would make them weary, such as completing a large amount of homework. Students benefit from developing word relationships which tie into their personal backgrounds, rather than just

learning the meaning of the word (Collins, 2010; Peregoy & Boyle, 2008).

Teachers led students through the communicative word association task on Day 2 of the weekly cycle. Treatment teachers were asked to help students make word associations between each new vocabulary word and concepts that were familiar to the students. Each word was associated with something with which the students were familiar. Students were asked to contribute to the classroom or partner discussion by relating ideas from their own backgrounds. Using word association also helped students review the words that were introduced and prepared them to construct their own nonlinguistic representations.

Nonlinguistic representations. When introducing new vocabulary, a nonlinguistic representation must be present to provide a way for English learners to understand the new term without being constrained by limited linguistic skills (Goldenberg, 2008; Marzano & Pickering, 2005). A nonlinguistic representation can be presented in several formats: photographs, charts, models, diagrams, and sketches. Even abstract concepts can be represented through a picture or diagram that students can use to make connections (Ballman et al., 2001; Townsend, 2009).

In the intervention nonlinguistic representations were used by both teachers and students. Teachers used them when they introduced the vocabulary to the students on Day 1. These were provided for them on the flash drives, and there was a nonlinguistic representation for every vocabulary word.

Students participating in the intervention created nonlinguistic representations on two occasions. After they had been introduced to the new terms and had written their

descriptions in the composition notebook, they drew their own nonlinguistic

representation for each term (see Appendix C). In the graphic organizer they drew the

nonlinguistic representation that was described by the partner for each word. The graphic

organizer had two additional sections (example and nonexample of the word) in which

partners could choose to use words or a nonlinguistic representation.

Examples/nonexamples. One of the most effective methods to teach any topic in

an in-depth way is to help students see differences and similarities (Beck et al., 2002;

Marzano, 2004). This idea may be extended to vocabulary instruction by providing

opportunities for students to implement words that are different and similar to a

vocabulary term (Beck et al., 2002; Vaughn & Linan-Thompson, 2004). In this

intervention students completed the examples and nonexamples section of the graphic

organizer. When doing the peer-mediated task, students drew a nonlinguistic

representation of the word and gave an example and a nonexample of the word, providing

opportunities for deeper thought, analysis, and discussion of each vocabulary term (see

Appendix C).

Word analysis. Analyzing parts of the word is an opportunity to increase

knowledge about the word and help determine its meaning through understanding affixes

(Freeman & Freeman, 2009; Manyak & Bauer, 2009; Marzano & Pickering, 2006; Nilsen

& Nilsen, 2004). Word analysis occurred two times during the intervention instructional

cycle. Teachers completed a chart with the students during a whole class activity in

which they broke the words into word parts, identifying affixes and the base word and

writing the parts on the graphic organizer.

Students completed the same task for each word during partner work. The end goal of this section of the graphic organizer was to help students understand the meaning of a word by looking at the prefixes or suffixes that may affect the meaning. As students worked with partners to analyze the meaning of the affixes and how they affected the base word, they developed a better understanding of the term itself (Appendix A and C).

Peer-mediated activities. Being able to communicate requires more than linguistic competence, it requires communicative competence, or the capability of using the language in social situations (Ballman et al., 2001; Larsen-Freeman, 2007; Moll, Sáez, & Dworin, 2010). Oral communicative competence infers that a person can say what they would like to say in a proficient manner to be understood and to understand others in the setting. It is the exchange, interpretation, and expression of meaning in all language modalities, reading, writing, listening, and speaking. Language should be looked at as "…a real activity used in real society by real people for authentic and real purposes…" (Andrews, 2006, p. 59). Implementing activities that encourage, or even require, communication between students increases opportunities to use language in authentic situations and contributes to oral vocabulary acquisition. Peer-mediated activities offer the opportunity for students to be involved in discussions and situations in which they can be verbally active.

Students worked in peer-mediated activities on three days of the intervention. On the third and fourth days, they worked with partners to complete the graphic organizer in the Vocabulary Book. They had to communicate with each other as one partner instructed the other partner on what to place in each section of the graphic organizer. On the last day

they worked with partners or teams during the review game. One partner would give clues while the other partner guessed the vocabulary word from that clue. In teams students were given a clue about the vocabulary word and then together decided on the correct answer (Appendix C). In each activity, they were able to work together to complete a task or determine answers to clues about the words.

One goal of the intervention was to help students acquire a deeper understanding of the meaning of vocabulary words by using communicative activities. This was facilitated by students completing a task together on the third and fourth day of the intervention. The task was the joint completion of a graphic organizer. Each student had only enough graphic organizers in their Vocabulary Book for half the words in that selection, so for all words to be completed they had to work together. This was achieved with the recorder/reporter roles. One student playing the role of "reporter" directed the "recorder" student what to write in each section, which created an information gap situation in which students provided information to each other as described by Prabhu (1987), leading to more purposeful conversations.

Games

Not only is it important for students to interact with each other in authentic situations, it is also important that they have enjoyable activities and play with the language (Blachowicz & Fisher, 2006; Diamond & Gutlohn, 2006; Marzano & Pickering, 2006; Townsend, 2009; Vaughn & Linan-Thompson, 2004). Marzano (2004) described seven characteristics of vocabulary instruction, and giving students the opportunity to play with the words was one of those characteristics. One way this may be accomplished

is through the use of games, as was observed in the communicative classroom example cited earlier.

Two PowerPoint review games from templates based on the games Jeopardy and $100,000 Pyramid were played interchangeably the last day of each weekly instructional cycle in the intervention (see Appendix D). For the Pyramid game, students worked in pairs. One gave clues to the partner as the vocabulary word was displayed on the screen. The partner had to guess the word from the clues provided. In the Jeopardy game, teams of three or four students worked together to identify the word from the clues provided on the screen. By the last day of the intervention, students had been provided multiple exposures to the words through whole-class instruction and partner and independent work in notebooks.

Vocabulary Notebooks

Vocabulary notebooks were an integral part of this intervention. The use of notebooks helps students personalize their vocabulary learning (Echevarria et al., 2008; Freeman & Freeman, 2009; Marzano, 2004; Tran, 2006). Writing in a notebook also assists students' memories (Peregoy & Boyle, 2008).

There were two types of notebooks students used during the weekly schedule in the study. One was a regular composition notebook with a space at the top of each page with no lines where pictures could be drawn, which is called the "composition notebook," for clarification purposes in this research. The second notebook was created by the investigator of this study, and had the title on the front cover, "Vocabulary Book." The pages were structured to provide students with the graphic organizer printed on each page

for words in the selection, as well as a template for the teacher-directed word analysis part of the instruction. The book was spiral bound to eliminate loose and lost pages and to facilitate ease for the teachers in implementing the Vocabulary Book (see Appendix C).

Implementation of the Intervention

The treatment group was given a weekly schedule with the purposeful and strategic communicative techniques directly linked to teaching the core reading program tested vocabulary. Following is a description of the structure for each day.

Day 1: The first day the teacher administered a pretest of the vocabulary from the selection, and then taught the five to seven new vocabulary terms. Explicit teacher explanations were provided using descriptions or examples of the words along with nonlinguistic representations. Descriptions of the words were used rather than a basic definition as that was easier for students to relate to and to produce on their own (Beck et al., 2002). The nonlinguistic representations were in the form of pictures, diagrams, or symbols, and a representation of the words was provided to the teachers on a flash drive they were given at the beginning of the study (see Appendix B). All teachers in the study had access to computers and networked LCD projectors to project the representations for the words onto a screen. Students wrote their own description of the word in their composition notebooks after the teacher had explicitly introduced and explained the new words.

An example of the first day of the intervention used the following format:

- The teacher administered the quiz, which took approximately 5 minutes for

the students to answer between five and seven multiple choice questions.

- The teacher provided an explicit explanation or description of each vocabulary word, using the picture displayed through the LCD projector. For example, the teacher projected a picture of an animal den, and explained the word *lair*. The explanation was that a *lair* was the home of a wild animal.

- After each word was introduced, the students wrote their own description of the word in the composition notebook based on the explanation from the teacher (see Appendix C). Students could write what the teacher had described, or they could put that explanation into their own words. For example, in one composition notebook for the word *shellfish,* the student wrote: *fish with shells or hard covering.* A second student wrote: *It's hard shells and lives at sea.* The first student may have used a very similar description to what the teacher had said, where the second student used her own wording.

Day 2: There were three tasks completed on the second day. The first was a word association activity, which was done through a class discussion led by the teacher. There was also a word analysis activity, using a graphic organizer in the Vocabulary Book, and then a task using the composition notebook in which students illustrated the meanings of the words that had been written the previous day.

- For the word association activity, teachers helped students relate the word to a term or phrase they were already familiar with. For example, if one of the new words in a given list was *lair*, the association was created by the teacher

explaining, "The word *lair* relates to a wild animal." The teacher then led a

discussion about how the word *lair* was related to animals, coming to the

conclusion that wild animals live in *lairs* (Beck et al., 2002). Connections

were made with the new word by posing the question "Have you ever seen a

lair? If so, where?" Or, the discussion could be tied to the students'

background: "What do we have that is similar to a *lair*? Yes, our homes

provide similar things for us that a *lair* provides for an animal." A word

association could also be created by applying the word directly to the

students' lives. For instance, for the word *weary*, the teacher may have asked

the students to describe a time they had felt *weary*. Through these discussions,

the students were able to make connections between the new word and their

background knowledge.

- For word analysis the teacher directed the instruction to determine if the

  vocabulary words contained prefixes or suffixes that could aid in the

  knowledge of the word (Appendix A and C). This was done as a class using

  the word analysis chart located in the Vocabulary Book. If the word contained

  an affix, such as the word *gnawed,* the teacher wrote that word on the board or

  on the chart using a document camera, then helped the students determine the

  base word and the suffix, *-ed.* On the word analysis chart the teacher modeled

  completing the chart by writing an X in the box for prefix, writing the base

  word *gnaw* in the appropriate box labeled "base word," and writing *–ed* in the

  box labeled suffix. If the word had no affix, as in the word *lair*, the teacher

wrote the word *lair* on the board, and then helped the students determine that

there was no prefix. On the word analysis chart, the teacher would model and

the students would put an X in the box for prefix. They then determined that

the base word was *lair,* which would be written in the box labeled "base

word." They would then put an X in the box for suffix. Each student

completed the word analysis chart for the current selection as the teacher led

the discussion. There were 37 words in the selections used in the intervention

that contained an affix.

- Students worked in the composition notebook completing the definition

  process for the new vocabulary which was started on Day 1. On Day 1 they

  had written the definition of the vocabulary word in their own terms. On Day

  2, they created a picture or symbol to illustrate the vocabulary word in their

  notebooks.

Day 3-4: On days three and four, students completed a peer-mediated activity.

This was the activity of partners working together to complete a graphic organizer for

each of the vocabulary words (Appendix C). There were five tasks to be done on each

page for each vocabulary word, and a section in which each of those tasks were to be

completed. All tasks were to be completed in a peer-mediated situation, in which students

helped each other complete the graphic organizer.

In one section of the graphic organizer, students were to write a description of the

vocabulary term. There was also a section for the student to draw a picture or a non-

linguistic representation of the word. In another section students cited an example of the

word, and in another they cited a nonexample, which could have been either written or nonlinguistic representations. At the bottom of the graphic organizer, there was a space for analysis of that particular vocabulary word, to determine if the word had a prefix or suffix. There were two days given for the completion of the interactive graphic organizer so teachers did not have to spend more than approximately 20 minutes on vocabulary instruction each day.

There were only enough pages of the interactive graphic organizer in the Vocabulary Book for the students to complete half of the vocabulary words. For instance, if there were six vocabulary words for that particular selection, there were only three graphic organizer pages in an individual Vocabulary Book. The purpose for this was to facilitate student interaction, or peer mediation, to complete the pages. The partners were required to tell each other what to write in each section. One partner was called the reporter, the other the recorder. The reporter would tell the recorder what to write in each of the sections on the graphic organizer. The reporter gave the description/explanation in his/her own words, and told the recorder what to draw for a representation of the word. The recorder would complete the graphic organizer in his/her own Vocabulary Book by writing or drawing what the reporter said. The reporter determined examples and nonexamples of the word, which could be linguistic or nonlinguistic representations, and dictated to the recorder what to put in the example and nonexample sections. The reporter also analyzed the word to determine if the word had affixes, but the recorder continued to be the one doing the writing.

At any time, the students could discuss the words together. For example, if the

reporter could not think of a nonexample, the recorder could discuss ideas with the reporter. But the reporter would make the final decision, and the recorder would write what the reporter decided. Then the roles reversed, and the student who was the recorder became the reporter, and told the partner the information to complete a page in his/her Vocabulary Book for the next vocabulary word. The roles continued to alternate between the partners until a graphic organizer had been completed for each vocabulary term.

This interaction looked something like this.

- Student one was the reporter. The word *lair* was written in the section at the top of the graphic organizer. The reporter told student two, the recorder, to draw a picture of a cave where a mountain lion lived. She told the recorder to write the words "a place where animals live" in the section labeled "description." She told the reporter to either write or draw a tree in the section labeled "nonexample." For the section labeled "example," she would tell the reporter to draw or write about a place where a tiger might live.

- After the first word was completed, the students switched roles. So the student who was the recorder then told the partner what to write or draw in each section. This rotation continued for about 20 minutes a day for two days until a graphic organizer was completed for each word.

Day 5: The last day of the week consisted of a review game and the quiz for the week's vocabulary words. Review games were one of two PowerPoint template games, derived from the television game shows Jeopardy and $100,000 Pyramid. Students worked with partners or teams to participate in these games, creating a situation of peer

mediation once more.

The Pyramid game was completed as a partner activity. The PowerPoint was projected onto a screen at the front of the room. One student faced the screen and the other student faced away from the screen. When a vocabulary word from that week's story appeared on the screen, the student facing the screen described the word to the partner, and the partner guessed the vocabulary word. The screenshots were timed for 20 seconds, and the team earned a point for each word they guessed correctly within the time limit. After all of the words had been described and guessed, the roles were reversed, and the student who had been guessing the word became the one who described the word to the partner (see Appendix D).

The Pyramid game would proceed as follows.

- Students placed their chairs in pairs. One student turned his/her chair away from the screen at the front of the room. The other student's chair faced the screen. A picture of an animal's den and the word *lair* came up on the screen. The student facing the screen gave clues to the partner, such as, "a place where wild animals live." The partner guessed which vocabulary word was being described.

- The screens were timed, so if the partner did not guess the word before the screen changed, no points were earned.

- For the second part of the game, the partners changed positions. The last part of the PowerPoint included a review screen which contained numbered boxes with no pictures. The teacher asked a student to pick a number. When the

number was picked, the teacher clicked on that number, and a vocabulary

word came up for the students to describe to their partners. The partner had to

describe it in the allotted time to earn points.

The students were in teams of three or four for the Jeopardy game, again creating

a peer-mediated situation. Each team had a white board and marker to write their

answers. If white boards were not available, students used paper to record their answers.

When the description of a vocabulary word came up under each dollar amount, the

students discussed as a team what the word might be, and then they wrote that word on

the white board and held it up. The PowerPoint was timed for the answer to display on

the screen after 30 seconds, and if the teams had the correct word, they received the

points based on the dollar amount of the square in which the word was found. Jeopardy

could accommodate 20-25 words, and each story unit had five to seven words, so

Jeopardy was played intermittently. Jeopardy was played three times during the study,

and each time it was played it included words from the current lesson and previous

lessons (see Appendix D).

The Jeopardy game was played as follows.

- The teacher divided the students into teams of three or four students. Each

   team had a marker and a small whiteboard on which to write their answers.

   They also had a piece of paper on which to keep their score.

- The Jeopardy game template was projected onto the screen. The teacher

   picked one team to begin the game. They decided on a category across the top

   and a dollar amount. The categories at the top were letters, so the team said

something such as "B for $200." The teacher clicked on that square, and a description of one of the vocabulary words came up.

- The team discussed together which word they thought was being described, and they wrote that word on their whiteboard, then held up the whiteboard until the answer appeared on the screen. If the team had the correct answer, they earned the amount of points listed as the dollar amount. For the example above, the team earned 200 points. Each team kept their own score.

After the review game was played, the students were given the weekly quiz from the selection for that week. This quiz was identical to the quiz given on the first day of the vocabulary instructional cycle. The pre- and post-quizzes were collected weekly by the investigator.

Teacher Training for Treatment
Group Instruction

All treatment teachers were invited to a two-hour training prior to the beginning of the school year. This training provided an explanation of how each treatment group would use the core reading program with the intervention. Emphasis was on the implementation of the treatment, with some information on the reasoning behind the treatment. The rationale for the study was explained to the treatment teachers, which included basic information on the importance of vocabulary, what the research says, and the relationship between vocabulary and comprehension. Part of the discussion related to the fact that this district was struggling to meet the needs of English learners as evidenced in the gap between proficient students and English learners on standardized tests.

Training was offered to the treatment teachers on two different afternoons from which teachers could choose to attend. A meal was provided to thank them for attending the training and for their willingness to participate in the study. The training included a PowerPoint that explained the purpose of the study (see Appendix E). After the introduction of the study, the treatment teachers were given the explanation of steps to be used in the intervention. However, most had a difficult time attending the trainings because of demands of workshops and preparation for the new school year. Only two treatment teachers attended the complete training.

For those treatment teachers who could not attend, the training was provided individually. The investigator met with each of these teachers at their individual schools before or after school hours and explained the intervention to them over the next 3 weeks. They were told how to provide the explicit vocabulary explanation, implement the weekly schedule, and reinforce the purposeful and strategic communicative techniques using the core reading program. During each meeting the investigator provided a weekly schedule for the treatment teachers to follow, as well as the flash drive with the nonlinguistic representations and PowerPoint game templates. This meeting lasted approximately an hour for each teacher.

Training for the treatment classrooms included one in-class session in which the investigator visited each class and presented an overview of components of the intervention with the students. This lasted approximately an hour. It was expected that this training would be accomplished within the first full week of school. However this process took 3 weeks to complete as classes could not be trained until the teacher had

been trained and most teachers were trained individually because of the lack of

attendance at the initial scheduled trainings. Thus, a shortened version of each component

of the intervention was modeled with the students by the investigator. This helped the

teachers understand what was expected, and familiarized the students with the process to

minimize confusion when the teacher began implementation of the intervention. This

overview included the following.

- Demonstrating explicit explanations using nonlinguistic representations for

  words, which were shown one by one on a screen (all teachers had LCD

  projectors, so the images were projected onto the board).

- Helping students make associations and personal connections with the terms;

- Using the template for word analysis.

- Practicing the recorder/reporter section of the graphic organizer with the

  students.

- Briefly playing both of the review games.

The words used in this demonstration were from a different core reading program, so

there was no chance of preteaching any of the words to be used in the study. The purpose

was to demonstrate procedures for each part of the intervention for the students and the

teachers.

Throughout the study, treatment teachers were sent additional copies of the

schedule, the observation checklist, and email reminders to include all parts of the

intervention in the manner outlined. These reminders were sent out as clarifications for

everyone if the investigator observed something that needed to be addressed in the

implementation of the intervention.

**Instructional Materials for Treatment
Group**

Several kinds of materials were provided for the treatment group. Much effort

was made to ensure that there was minimal preparation or time required of the teachers,

and that all materials were supplied for them. Teachers were provided with all of the

mastery tests and weekly quizzes for each student in the class. Teachers had access to the

weekly quizzes in the assessment handbook that came with the core reading program, but

the investigator provided copies of these for the pre- and post-quizzes so the teachers did

not have to make any copies on their own, thus minimizing the work of implementing the

intervention (see Appendix F). Only the English learners' materials were analyzed for

this study, but materials were provided for each student so the teacher could administer

the intervention class-wide during reading instruction time. Each teacher was given a

flash drive with descriptions of all the tested vocabulary words and a picture associated

with each word to use in the explicit explanation portion of the intervention by projecting

it onto a screen. The flash drive contained the two PowerPoint template games used

during the review part of the intervention each week (see Appendix B and D).

Two books were provided for each student: a basic composition notebook in

which the students wrote the definitions of the vocabulary terms in their own words and

drew pictures that represented the meaning of the word, and a "Vocabulary Book" that

contained several parts of the intervention, including the following.

- The word analysis chart used when the class worked together on determining

affixes and the base word.

- A set of graphic organizers for each selection which were to be used during the peer-mediated activities (see Appendix B).

The composition notebooks and the Vocabulary Books were collected by the investigator in December at the end of the study.

Comparison Group Instruction

The comparison group used the vocabulary lessons from the core reading program for vocabulary instruction. Following standard practice, teachers were free to determine how to implement the core reading program. They also had the option of bringing in supplemental materials at their discretion, if that was something they would normally do. Comparison group teachers were not made aware of any part of the vocabulary intervention being implemented by the treatment teachers.

Comparison teachers were free to implement the core reading program vocabulary instruction according to their standard practice. The core reading program provided various recommendations for vocabulary instruction for each of the selections. If teachers followed the instructional recommendations presented in the core reading program, an example of a week of vocabulary instruction for the comparison group would have included the following.

Day 1: Introduce lesson vocabulary. In an example from one selection, this is the lesson plan for introducing the lesson vocabulary. *Use a categorizing activity in which students relate familiar words with new words. Give oral clues to help students think*

about the categories in which the lesson words belong. Have students check a dictionary or glossary for the meanings of any unknown words. Explain analogies to students, and incorporate lesson words into oral analogies, focusing on antonyms and synonyms. Have students produce analogies with known antonyms and synonyms.

Day 2: Students read a passage that contains the tested vocabulary words. Remind students to use context clues to clarify the meaning of the words, and/or a dictionary or glossary. *Have students create analogies with the words from the passage using known antonyms.*

Day 3: No instruction or practice of tested vocabulary.

Day 4: No instruction or practice of tested vocabulary.

Day 5: Review lesson vocabulary using antonyms to create analogies with the tested vocabulary. Test the vocabulary words.

Some supplemental materials available in the core reading program were purchased by the district and were used at the discretion of the teachers. These included internet links with animated segments to teach aspects of a lesson. One comparison teacher was observed using the animated segment called "Grammar Jammer," which had a cartoon character explaining a grammar feature. Other materials were picture cards of the tested vocabulary words and posters meant to reinforce concepts for English learners, called ELL posters. Some supplemental materials were not purchased by the district. Some schools had the ELL Handbook, others did not. It was not known if they were not purchased for every school or if there was confusion in the delivery of the materials. Other core reading supplemental materials included a reader's and writer's notebook,

leveled readers, ELL and ELD readers, practice stations flip charts, baseline group tests,

the weekly tests book, the *Fresh Reads for Fluency Comprehension* book, and the unit

and end-of-year benchmark assessments. Other than the weekly tests book and the unit

and end-of-year benchmark assessments, it was not known by the investigator which of

these additional materials were purchased, but they were not observed being used in the

comparison classrooms.

Teacher Training for Comparison
Group Instruction

Because none of the comparison teachers attended the initial training, they were

all instructed individually on the procedure for the study and what they would be required

to do. The investigator met with each teacher for approximately 30 minutes before or

after school. They were instructed to teach the tested vocabulary words as they normally

would, using the district-adopted core reading program, and any other strategies or

materials they may have wanted to use. There were six requirements for comparison

group teachers: (a) administer the mastery pretest to their students prior to the beginning

of the study; (b) give the weekly vocabulary quiz prior to teaching the words for the

selection; (c) give the weekly quiz at the end of the instructional cycle; (d) complete

weekly logs giving a basic summary of their vocabulary instruction for the selection (see

Appendix H); (e) administer the mastery posttest at the conclusion of the study; and (f)

allow the investigator to observe vocabulary instruction in their classrooms.

Instructional Material for Comparison Group

The comparison group teachers had access to the core reading program, and it was expected that comparison group teachers would use those materials for their vocabulary instruction. They were free to use the components as they saw fit in their own classrooms. The materials provided for the teachers by the investigator were the mastery pretest and posttest and weekly quizzes for the students, enough for every student in the class.

Fidelity of Implementation

To gauge the degree to which instructional procedures were delivered as planned, four components of fidelity of implementation were included in the study: researcher observations, teacher logs, student composition notebooks, and student Vocabulary Books. All classrooms were observed by the investigator throughout the study. All teachers were asked to complete a teacher log to record information about the vocabulary instruction during each week (see Appendix G). The notebook and Vocabulary Book were used by the treatment students only. Each of these components used to measure fidelity will be presented below.

Observations

The investigator observed teachers in both the treatment and comparison group during their vocabulary instruction. A form was developed by the investigator that listed the days of the instructional cycle and the components of the treatment that would be

taught each day if the teachers followed the treatment schedule. The goal was to record those features of the treatment that were found in either the treatment or comparison classroom instruction to understand how vocabulary instruction was implemented. These observations were to measure the fidelity to the intervention in the treatment group classrooms and to determine how the vocabulary was being taught by the comparison group teachers. Each teacher in the study provided the investigator with a schedule of the times vocabulary would be taught. It was the investigator's goal to observe on different days of the 5-day intervention schedule to ascertain the fidelity of the intervention procedures. All teachers were observed periodically to document vocabulary instruction implemented throughout the study (see Appendix H).

The majority of observations were unannounced. If there were scheduling concerns, the teachers may have been notified prior to the observation time that it would occur. There were 88 classroom visits conducted or attempted from September 20 to December 7. They typically lasted between 15-30 minutes (see Table 3.11).

A checklist for the components of the treatment was used in both the treatment and comparison classroom observations (Appendix H). The checklist consisted of the components that should have been found if the teacher was following the daily schedule for the intervention. In addition to the checklist, notes were also made for each observation to describe other methods of vocabulary instruction used by the comparison teachers. The same checklist was used for both treatment and comparison observations, as an indication of how much overlap there was in the instruction between the two groups (see Table 3.12).

Table 3.11

Total Number of Observations by Teacher

Variable	Vocabulary observation completed	Observation: No vocabulary being taught	Observations unsuccessful (teacher out of room)
Treatment teachers			
Teacher 1	8	2	1
Teacher 2	5	2	1
Teacher 3	4	3	0
Teacher 4	6	2	3
Teacher 5	6	0	1
Teacher 6	6	0	1
Total	35	9	7
Comparison teachers			
Teacher 7	4	1	0
Teacher 8	6	4	0
Teacher 9	3	4	0
Teacher 10	2	6	0
Teacher 11	4	2	1
Total	19	17	1
Overall total	54	26	8

Table 3.12

Number of Intervention Components Recorded During Observations

Variable	Explicit introduction of vocabulary	Student written description of words	Word association	Word analysis	Student nonlinguistic representation	Peer-mediated activity	Graphic organizer	Review
Treatment group								
Teacher 1	6	3	1	1	2	4	0	4
Teacher 2	8	1	4	3	0	4	1	2
Teacher 3	4	4	3	2	3	11	5	1
Teacher 4	4	3	0	1	1	4	2	1
Teacher 5	2	2	2	2	2	8	7	0
Teacher 6	4	1	3	1	2	8	4	1
Total	28	14	13	10	10	39	19	9
Control group								
Teacher 7	4	1	4	2	1	2	1	0
Teacher 8	9	0	2	0	0	1	0	3
Teacher 9	2	0	0	0	0	1	0	2
Teacher 10	0	0	0	0	0	5	1	0
Teacher 11	5	0	2	1	0	1	1	1
Total	20	1	8	3	1	10	3	6

Teacher Logs

Teachers were asked to complete a weekly log of vocabulary instruction delivered in the classroom. Different forms of the log were provided for the treatment and comparison groups (see Appendix G). The treatment log focused on the specific intervention procedures. The treatment teachers noted if the schedule went as outlined or if there were interruptions. It was common for the graphic organizer completion, scheduled for two days, to take only one day, especially as the students became more proficient at working with it and with each other.

The comparison logs were a place for the comparison teachers to document what they did during their vocabulary instruction (see Appendix G). It asked for the date and the procedures followed during the vocabulary lesson. There was a section where the teachers reported the materials they may have used and instructional practices they may have done during the vocabulary lesson. There was also a column where the teacher reported the amount of time spent on vocabulary instruction for each day.

Notebooks

There were two books that were used in the intervention: the basic composition notebook and the Vocabulary Book. Data collection was completed on both of these books to measure fidelity of implementation.

Composition notebook. The composition notebook contained two tasks that were completed for each selection. The first task was that of the students writing their own descriptions of the vocabulary words after instruction by the teacher. The second task, on Day 2, was to draw a nonlinguistic representation of each word. For fidelity of

implementation, the number of times these tasks were completed in the notebooks by students in each treatment classroom was tallied and reported as a percentage.

Vocabulary book. In the vocabulary book, the first section for each selection was a word analysis template which the students completed as a whole class under the direction of the teacher. The remainder of the pages for each selection was the graphic organizers, which were completed with a partner (Appendix B and C). Within the graphic organizer, the tasks to be completed were writing a description, a nonlinguistic representation, an example, and a nonexample of the word. At the bottom of the graphic organizer was a section where the students did their own analysis of the vocabulary word, which was patterned after the one they completed as a whole class. The number of graphic organizers that had any writing in them was tallied, as well as a tally for each of the sections of the graphic organizer that were completed. These were computed as percentages of completion.

<center>**Measures**</center>

When researching vocabulary acquisition, the vocabulary subgroup of the National Reading Panel identified 37 studies in which the type of vocabulary assessment could be determined. Of these, 31 used experimenter-generated assessments, five used a combination of standardized and experimenter-generated assessments, and only one study used solely a standardized test (NRP, 2000). In this study the measures were multiple choice questions. Multiple choice questions are used in many standardized testing situations. These types of test items are quicker to administer, remove teacher bias in test

scores, and give a basic idea of a student's knowledge. Multiple choice questions was the format used in this core reading program. Two assessments were used in this study: the assessment for the weekly selections, and the mastery test. Both of these assessments used multiple choice questions that were taken directly from the assessment handbook of the core reading program (see Appendix F). The task of the students was to read a sentence in which the vocabulary word was used and then mark an answer choice that had the same meaning as the vocabulary word in the sentence.

Mastery Test

The purpose of the mastery test was to determine if the intervention contributed to the retention of the vocabulary words taught during the study. It was hypothesized that the number of interactions and the deeper learning of the words would result in long-term acquisition rather than surface level knowledge that was not internalized. The mastery test had 30 questions. The amount of 30 questions for the overall test was determined by considering the time necessary to administer the test while still sampling a sufficient number of the "tested vocabulary" words. It was estimated that a 30-question test would take between 20-30 minutes for students to complete. This would mean the test would not be too burdensome for a teacher to administer, and would not take up too much literacy instructional time.

The mastery test for this study was created by the investigator using randomized selection of 30 words from 15 passages in the core reading program. The questions were obtained from a possible bank of 100 multiple choice vocabulary questions from the basal quizzes at the end of each of the 15 selections planned to be used in the study. Each

question was assigned a number between one and 100, and then as a number was

randomly displayed, that question was added to the mastery test. The random selection of

words resulted in some selections not having any words on the mastery test, while other

selections had several words that were included. The 30 questions represented a sample

of 30% of the introduced vocabulary. Table 3.13 shows the words that were tested from

each selection.

After the mastery pretest had been administered, it was discovered that with the

random generation of numbers, two numbers had been generated twice, which resulted in

the duplication of two test questions. As a result, the total number of questions on the

mastery test was 28 rather than the original 30 questions.

The mastery pretest was administered at the beginning of the study the week of

Table 3.13

Words Used on the Mastery Test from Each Selection

Selection 1	Selection 2	Selection 3	Selection 4	Selection 5	Selection 6	Selection 7
no words tested	daintily	lair shellfish kelp	unique outfield	no words tested	algae concealed hammocks sternly	no words tested
Selection 8	**Selection 9**	**Selection 10**	**Selection 11**	**Selection 12**	**Selection 13**	**Selection 14**
astonished procession distribution behavior sacred recommend	no words tested	somber steed glimmer	no words tested	no words tested	erected occasion proportion workshop	appreciate released
Selection 15						
landscape miniature reassembled						

September 13 to provide a baseline of vocabulary knowledge of the words from the core

reading program. Treatment and control classroom teachers administered the mastery test

posttest by December 17 at the conclusion of the study to evaluate overall growth and

retention of the tested vocabulary words from the core reading program.

Weekly Selection Quizzes

The purpose of the weekly quizzes was to measure acquisition of vocabulary

words taught weekly using the instruction from the intervention. The weekly quizzes

were taken directly from the core reading program assessment materials provided by the

publishing company (see Appendix F). The core reading program did not direct teachers

to give a pretest quiz before the weekly cycle, but for the study, all teachers gave the quiz

as a pretest at the first of the weekly cycle and as a posttest at the end of the week or

instructional cycle. The number of words on each selection quiz varied from five to seven

words (see Table 3.14). The quizzes took approximately five minutes for students to

complete.

Although teachers had access to these quizzes in their district materials, the

Table 3.14

Selections and Vocabulary Words Completed for Weekly Quiz Data

Selection 3	Selection 4	Selection 5	Selection 6	Selection 7	Selection 8	Selection 9	Selection 10	Selection 11
lair	confidence	barren	driftwood	Union	astonished	bandana	somber	project
ravine	windup	deafening	algae	Confederacy	gratitude	hogan	fate	fabulous
gnawed	fastball	prying	concealed	quarrel	procession	mesas	steed	browsing
sinew	mocking	lurched	tweezers	stallion	distribution	Navajo	fearless	inspecting
shellfish	unique	previous	hammocks	canteens	behavior	jostled	magnified	applauds
kelp	weakness	surveying	sternly	glory	sacred	turquoise	glimmer	
headland	outfield		lamented	rebellion	recommend	bracelet	lingers	

investigator provided copies of the quizzes for each teacher so there would be no confusion or reluctance regarding administering the quiz two times for each instructional cycle. These quizzes were delivered weekly to each teacher in the study, and were collected at the end of the week or instructional cycle by the investigator. Only those tests from the English learners involved in the study were scored and recorded.

At the end of the study, there was the possibility of a total of 13 selections completed from which to gather quiz data. Some teachers completed all 13, the average being completed from all teachers was 10.8 (see Table 3.15). Weekly quiz data collection was stopped after selection nine because the completion of the remainder of the selections was sporadic.

Statistical Analysis

Analysis of data collected from 73 fifth-grade English learners on two measures: (a) overall gain on a mastery test administered at the beginning of the study in September and the end of the study in December; (b) gain on weekly quizzes as measured by a quiz given before the weekly reading selection and a quiz given at the end of the weekly instruction that investigated the short-term effect of the intervention on vocabulary acquisition from the core reading program.

Table 3.15

Average Number of Selections Completed by Group

Total	Average whole group	Average treatment	Average comparison
13	10.8	12	9.4

Descriptive statistics were computed to evaluate distributions of the study variables using SPSS Version 21. Multiple linear regression models were completed using Mplus Version 5 (Muthén & Muthén, 2007). As pretests and posttests (Level 1) were nested within students (Level 2), and students nested within teachers' instructional groups (Level 3), analysis included a cluster variable to account for teacher grouping. Estimates of effect size were calculated using the method described by Cohen (2008).

Summary

The purpose of this study was to investigate the effect of using the described instructional intervention for teaching vocabulary from a core reading program to fifth-grade English learners. The study implemented a treatment and comparison group, and incorporated pretests and posttests. Teachers in both study groups used vocabulary words from a district-adopted core reading program. Teachers in the treatment group used an intervention focused on the delivery of vocabulary instruction.

The intervention developed by the investigator supported the techniques and premises present in the district-adopted core reading program. The resource section of the basal discussed the essential components necessary for English learners to be successful in this reading program. It discussed the following concepts that are integrated in this 5-day intervention:

- using nonlinguistic representations, such as pictures or drawing
- making connections with students' prior knowledge and background
- using graphic organizers and templates to facilitate language production

- providing opportunities for word analysis to determine meanings of words, incorporating affixes and roots as part of the vocabulary instruction

- using a vocabulary notebook

- facilitating interaction between students with differing levels of language proficiency

- performing weekly reviews and assessments.

The intervention used these components exclusively in the realm of vocabulary instruction, whereas the reading program used these at different times throughout the entire language arts block time.

Two types of data were collected. Scores from an overall mastery test administered at the beginning and end of the study and scores from weekly vocabulary quizzes given before and after each selection cycle were included in the analysis. Data was also collected on factors that may have influenced the results of the investigation. A linear regression model was used to analyze the results. The analyses done in this study were to determine if the intervention, when applied with some measure of fidelity, helped students learn the core reading program vocabulary words.

CHAPTER 4

REPORT OF THE FINDINGS

The purpose of this study was to explore the effect of a vocabulary instructional intervention on vocabulary acquisition. This study employed a quasi-experimental design involving 73 fifth-grade English learners who were situated in 11 classrooms. The classrooms were randomly assigned to an intervention treatment group ($n = 6$) or a comparison group ($n = 5$). The question that this research sought to answer was: Is there a difference in vocabulary acquisition between English learners in a treatment group incorporating purposeful and strategic communicative instructional techniques with explicit teacher explanations of new vocabulary terms and communicative tasks as recommended in the research into vocabulary instruction from a core reading program and those in a standard vocabulary -instruction comparison group? Communicative student tasks of the treatment included student-generated descriptions of new vocabulary terms, nonlinguistic representations, word associations, teacher-directed word analysis and graphic organizers. The peer-mediated activities were accomplished by two methods, the joint completion of the graphic organizer and the review games. The graphic organizer was the basis for the peer-mediated structure and required a description, a nonlinguistic representation of the word, an example, nonexample, and word analysis. This study used a pretest-posttest design with the vocabulary mastery pretest at the beginning of the study in September and a mastery posttest at the end of the study in December. This study also measured weekly vocabulary development through weekly vocabulary assessments used in the core reading program.

Descriptive Statistics Results for Measures

Descriptive statistics including distributions, correlations, measures of central tendency, and dispersion were calculated for vocabulary mastery measures and weekly quizzes.

Overall Vocabulary Growth

The mastery test was used to measure overall vocabulary acquisition of words from the core reading program. It was administered at the beginning of the study in September and again at the conclusion of the study in December. The mastery test consisted of 28 multiple choice questions drawn from the vocabulary assessments in the core reading program. The questions were randomly selected from the first 15 reading selections of the core reading program. The response consisted of students choosing from four options that correctly identified the meaning of the vocabulary word underlined in the sentence (see Appendix F).

Assumptions of Normality

Examination of the score distributions revealed that scores were approximately normally distributed on the mastery pretest and posttest. Tests of normality showed that the prescores and postscores did not differ significantly from 0, indicating a normal distribution (see Table 4.1). Scores ranged from 3 to 19 at pretest and ranged from 6 to 26 at posttest. Examination of outliers for the pretest showed two students in the comparison group scored two standard deviations above the mean, with scores of 18 and19, and one

Table 4.1

Test of Normality for Mastery Test

Test	Skewness	*SE*	Kurtosis	*SE*
Pretest	.157	.281	.369	.555
Posttest	-.184	.281	-.116	.555

student in the treatment group scored two standard deviations below the mean with a score of three. For the posttest, one student scored two standard deviations above the mean with a score of 26. Although the student scored two standard deviations above the mean, a histogram showed that this score was not an extensively atypical outlier as there were 10 scores that were just one to four points below the score of 26 (see Figure 4.1). All of these students' scores were from the treatment group. Two scores were two standard deviations below the mean with a score of 6.

Correlations

A correlation analysis measures the linear relationship between two variables. If there is a relationship, as one variable increases or decreases the second variable increases or decreases by a consistent and predictable amount. Correlations were analyzed on the mastery test between pretest (time 1) and posttest (time 2) to determine the relationship between time 1 and time 2 for the mastery test. A scatterplot showed that there was a positive linear relationship between the pretest scores and the posttest scores, albeit not a strong one (Figure 4.2). Table 4.2 displays the results of the analysis that revealed a significant relationship between time 1 and time 2, $r = +.385$, $n = 73$, $p < .01$, two-tailed. Calculating r^2 showed that only 12% of the variability of the posttest scores could be explained by the pretest scores.
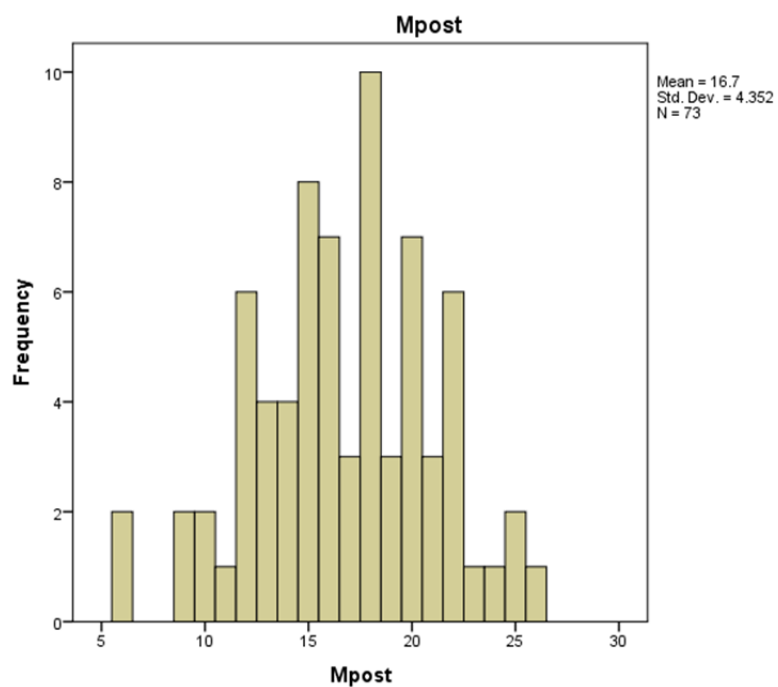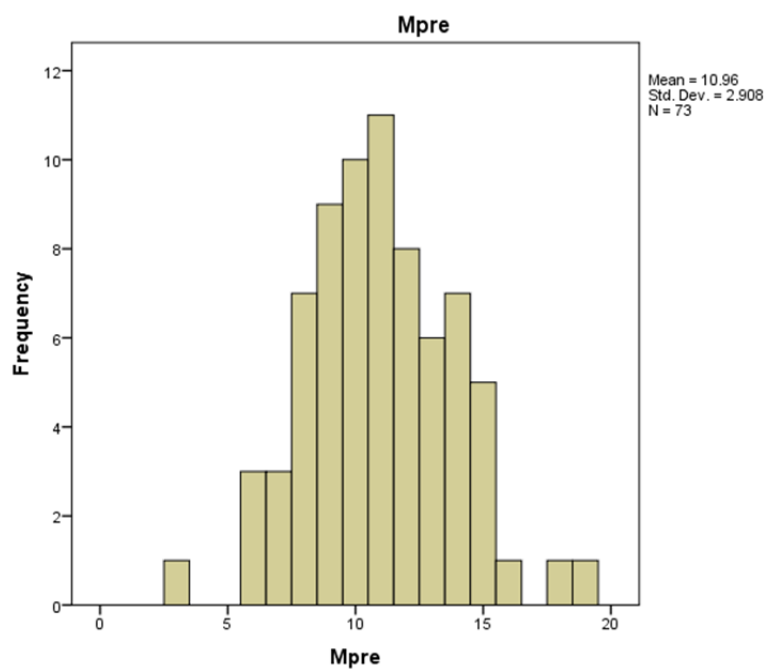
Figure 4.1. Histograms of mastery test scores.
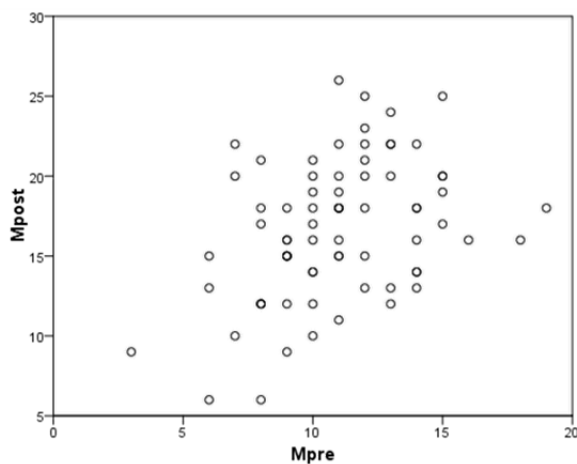
Figure 4.2. Scatterplot of mastery test scores.

Table 4.2

Correlations of Mastery Tests

Time	2
1	.385

Descriptive Statistics

On the mastery test, there was a possible range of scores from 0 to 28. The means were calculated for the pretest ($M = 10.96$, $SD = 2.91$) and the posttest ($M = 16.70$, $SD = 4.35$). Average gain between the pretest and the posttest was 5.68 points (Table 4.3).

Descriptive Statistics by Group

There was not a significant difference between the means of the treatment ($M = 10.77$. $SD = 2.56$) and comparison group ($M = 11.31$, $SD = 3.47$) on the mastery pretest. The comparison group scored higher than the treatment group on the pretest with a difference of .54 points.

Table 4.3

Descriptive Statistics for Mastery Test

Variable	N	Mean	*SE*	Median	*SD*	Variance	Minimum	Maximum
Pretest	73	10.96	.34	11	2.91	8.46	3	19
Posttest	73	16.70	.51	17	4.35	18.94	6	26
Gain		5.68	.49	6	4.15		-2	15

On the mastery posttest the treatment group ($M = 18.28$, $SD = 4.02$) scored higher than the comparison group ($M = 13.85$, $SD = 3.414$). This is a difference of 4.43 points between the means. Students in the treatment group showed higher average scores on the overall mastery gain ($M = 7.43$, $SD = 3.62$) than the comparison group ($M = 2.54$, $SD = 3.09$). The difference between the two means was 4.89 points. An independent t test showed the difference between the two groups at posttest was significant, $t(71) = 5.813$, $p < .001$. Tables 4.4 and 4.5 display descriptive statistics for the mastery test by group. Table 4.6 shows descriptive statistics for treatment and comparison group by time.

Linear Regression

Linear regression was conducted using MPlus Version 5 (Muthén & Muthén, 2007) to examine the potential differences in vocabulary acquisition by group assignment for the overall mastery test. Analysis included a cluster variable to account for teacher grouping. The linear model for the mastery test regressed student posttest scores on pretest scores by group assignment. A chi-square test of model fit for the baseline model was significant, $\chi^2(2, N = 73) = 40.643$, $p < 0.001$, indicating the model was appropriate to significantly predict differences between groups. The model indicated that the group

Table 4.4

Descriptive Statistics for Mastery Pretest by Group

Variable	*n*	Mean	*SE*	*SD*	Median	Minimum	Maximum
Pretest	73	10.96	.340	2.908	11	3	19
Treatment	47	10.77	.374	2.564	11	3	15
Comparison	26	11.31	.681	3.473	10.5	6	19

Table 4.5

Descriptive Statistics for Mastery Posttest by Group

Variable	*n*	Mean	*SE*	*SD*	Median	Minimum	Maximum
Posttest	73	16.70	.509	4.352	17	6	26
Treatment	47	18.28	.586	4.020	18	9	26
Comparison	26	13.85	.670	3.414	14	6	19

Table 4.6

Descriptive Statistics for Mastery Test by Time

Variable	Treatment		Comparison	
	Mastery pretest	Mastery posttest	Mastery pretest	Mastery posttest
n	47	47	26	26
Time	1	2	1	2
Mean	10.77	18.28	11.31	13.85
SE	.37	.59	.68	.67
SD	2.56	4.02	3.47	3.41
Range—Min	3	9	6	6
Range—Max	15	26	19	19
Mean gain score		7.43		2.54

assignment variable was significant, $t(71) = 9.406$, $p < 0.001$. The 95% confidence interval was between 0.385 and 0.675, with a coefficient of 0.530. This analysis revealed a significant difference in growth of vocabulary skills from pretest to posttest between treatment and comparison groups ($p = .001$). Students in the treatment group showed greater progress than student in the comparison group. When interpreting effect size for r^2 (or the percentage of variance explained), 0.01 is considered a small effect, 0.09 is a medium effect, and 0.25 is a large effect size (Cohen, 2008; Gravetter & Wallnau, 2008). In this study, group assignment accounted for 36% of the variance in comparing treatment group to comparison group. These results lend support to the influence of the purposeful and strategic components of the treatment used in this study to help fifth-grade English learners acquire vocabulary knowledge.

Weekly Vocabulary Growth

The weekly quizzes were administered at the beginning and end of each weekly selection cycle. The purpose of the weekly quizzes was to determine if the intervention helped students acquire vocabulary from the core reading program during the weekly vocabulary instruction. Each selection from the core reading program had a weekly vocabulary quiz, with the number of words tested ranging from five to seven. The possible ranges of correct answers were 0 to 5, 6, or 7, depending on the number of vocabulary words tested for that week. The quizzes were multiple choice questions in which the students chose the correct meaning from four options for a word underlined in a sentence.

Assumptions of Normality

Analysis of weekly vocabulary growth focused on weekly gain scores for each of the nine selections taught in all treatment and comparison classes. Gain scores were determined by calculating the average difference in words correct between each weekly pretest and posttest quiz. Gain scores were analyzed for normality (see Figure 4.3). Results of the analysis showed that the gain scores were normally distributed, with scores not differing significantly from zero (see Table 4.7). One student's average growth score was more than two standard deviations above the mean with 4 points growth on the weekly quiz. No scores fell outside of two standard deviations below the mean (see Figure 4.3).
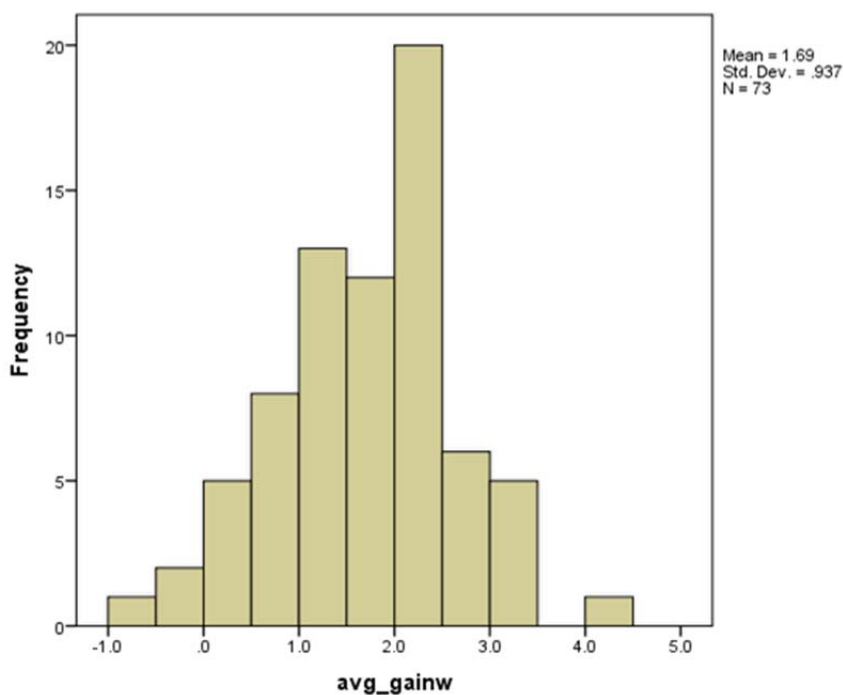
Figure 4.3. Histogram weekly quiz gain scores.

Table 4.7

Test for Normality for Weekly Quiz Gains

Variable	*n*	Mean	*SD*	Skewness	*SE*	Kurtosis	*SE*
Quiz average gain	73	1.69	.937	-.182	.281	-.116	.555

Correlations

Correlation analyses were conducted on the gain scores for the weekly quizzes to determine the relationship between the gains across time. Using the Bonferroni approach to control for Type 1 error across the nine correlations, a *p* value of less than .006 was required for significance. The results of the correlation analyses presented in Table 4.8 show that only one of the correlations was statistically significant, selection one with selection two. In general, these results indicate the relative independence of each of the weekly vocabulary quizzes, which is to be expected as each of the quizzes focused on an independent set of vocabulary terms related to the core reading selection.

Descriptive Statistics

Measures of central tendency were computed on gain scores for each of the nine selections. The mean gain score on the weekly quiz was 1.69, *SD* = .94 (see Table 4.9). The gain scores ranged from -.80 to 4.00.

Descriptive Statistics by Group

The average gain score for the treatment group (*M* = 1.98, *SD* = .88) was higher than the average gain score for the comparison group (*M* = 1.15, *SD* = .80; Table 4.10). The mean difference between the two groups was .83 favoring students in the treatment

Table 4.8

Correlations of Gain Scores by Selection

Selection	2	3	4	5	6	7	8	9
1	.37*	.32	-.08	.10	.20	.13	.22	.10
2		.18	-.03	.16	-.11	-.13	.15	-.021
3			-.11	.08	.05	.25	.14	.25
4				-.10	.23	.01	-.04	-.02
5					-.02	.06	.15	-.01
6						-.04	.21	.23
7							.26	.13
8								.10

*$p < .006$

Table 4.9

Descriptive Statistics for Gain on Weekly Quizzes

Time	Mean	*SE*	*SD*	Variance	Minimum	Maximum
1	1.58	.31	.97	.943	-.03	2.83
2	1.15	.23	.64	.409	.33	2.00
3	.36	.27	.84	.706	-.93	1.75
4	2.16	.51	1.71	.2.91	-.75	4.29
5	1.70	.30	.89	.787	.43	3.00
6	1.46	.45	1.28	1.630	-.50	3.57
7	2.15	.53	1.50	2.240	-.40	3.50
8	2.44	.55	1.75	3.060	.60	6.00
9	.95	.23	.68	.459	-.58	1.76
Mean gain score	1.69	.11	.94	.877	-.80	4.00

group. An independent *t*-test showed that the difference between the two groups was significant, $t(71) = 4.03$, $p < .001$. Tables 4.11 and 4.12 show the weekly quiz descriptive statistics by group. Table 4.13 displays the weekly quizzes by time.

Table 4.10

Descriptive Statistics for Weekly Pretest Quizzes by Group

Variable	n	Mean	*SE*	*SD*	Median	Minimum	Maximum
Pretest	73	2.77	.08	.656	2.80	1.43	4.43
Treatment	47	2.84	.10	.694	2.89	1.43	4.43
Comparison	26	2.64	.11	.571	2.67	1.67	3.78

Table 4.11

Descriptive Statistics for Weekly Posttest Quizzes by Group

Variable	n	Mean	*SE*	*SD*	Median	Minimum	Maximum
Posttest	73	4.45	.12	1.0	4.60	2.00	6.11
Treatment	47	4.82	.13	.87	4.89	2.00	6.11
Comparison	26	3.79	.18	.94	4.00	2.00	5.44

Table 4.12

Descriptive Statistics for Mean Gain Score by Group

Variable	n	Mean	*SE*	*SD*	Median	Minimum	Maximum
Gain scores	73	1.69	.11	.94	1.76	-.80	4.00
Treatment	47	1.98	.13	.88	1.12	-.80	4.00
Comparison	26	1.15	.13	.80	2.00	-.20	2.50

Linear Regression

Linear regression was conducted using MPlus Version 5 to examine the potential differences in vocabulary acquisition by group assignment for the weekly quizzes. Analysis included a cluster variable to account for teacher grouping. The linear model for the weekly quiz gains regressed student average weekly posttest scores on average

Table 4.13

Descriptive Statistics for Mean Gain Score by Time and Group

| | Treatment | | Comparison | |
| | Weekly quiz pretest | Weekly quiz posttest | Weekly quiz pretest | Weekly quiz posttest |
Variable				
n	47	47	26	26
Time	1	2	1	2
Mean	2.84	4.82	2.64	3.79
SE	.10	.13	.11	.18
SD	.69	.87	.57	.94
Range—Min	1.43	2	1.67	2
Range—Max	4.43	6.11	3.78	5.44
Mean gain score		1.98		1.15

weekly pretest scores by group assignment. A chi-square test of model fit was significant, $\chi^2(2, N = 73) = 181.10, p < 0.001$, indicating that the linear regression model was a good fit for this analysis, and significantly predicted the differences between groups. The model indicated that group assignment variable was significant, $t(71) = 4.030, p < 0.001$. The 95% confidence interval was 0.156 to 0.710, with a coefficient of 0.433. This analysis revealed a significant difference in growth of vocabulary acquisition from weekly quiz pretest to posttest between the treatment and comparison group ($p < .001$). Students in the treatment group showed greater growth than students in the comparison group. Effect size estimates for weekly mean gains were medium (Cohen, 2008; Gravetteer & Wallnau, 2008), with group assignment accounting for 15% of the variance in comparing the treatment group to the comparison group. These results substantiated the influence of the treatment instruction to promote student vocabulary acquisition.

Analysis of Fidelity of Implementation

Three areas of fidelity of implementation were inspected for this study. Fidelity of implementation in part focused on instruction by the treatment teachers as measured by the amount of completion of two notebooks by the English learners in each classroom. The second area of focus for fidelity was the number of instruction components as measured by teacher logs and an observation checklist during researcher observations of the treatment and comparison teachers.

Notebooks

Marzano and Pickering (2005) advocated the use of notebooks during vocabulary instruction. There were two notebooks used by treatment students in this study which were called a composition notebook and a vocabulary notebook.

Composition notebook. The composition notebook was used by students for two purposes: (a) to write their own descriptions of the vocabulary words introduced the first day of the weekly cycle; and (b) to draw their own nonlinguistic representations on the second day of the weekly cycle. On Day 1 students wrote their own descriptions of the new vocabulary words in the composition notebook after the teacher had presented the vocabulary words with explicit explanations and nonlinguistic representations. On Day 2, students created their own nonlinguistic representations in their composition notebooks after there had been word associations made with the new words and teachers had led the students through an exercise in analyzing the words for affixes. These Day 1 and Day 2 activities gave students multiple exposures to the words before drawing their own

nonlinguistic representations at the end of Day 2 vocabulary instruction.

The percentage of completion was calculated by examining the number of descriptions and the number of nonlinguistic representations for each student for the nine selections used in the analysis (selections three through eleven). For the nine selections analyzed (referred to as selections one through nine for analysis purposes) all had seven words with the exception of selection three, which had six words, and selection nine, which had five words. This gave a total of 60 possible descriptions and 60 possible nonlinguistic representations for the composition notebooks.

The total percentage of descriptions (D) and nonlinguistic representations (R) completed was calculated for each student as well as the average and the percent completed for each selection by teacher (Table 4.14 and Table 4.15). From each of these calculations for the selection an overall percentage by teacher was computed. The number of descriptions and nonlinguistic representations that were completed were not tallied for correctness, only completion.

Inspecting individual student composition notebooks from each classroom gave detailed information about the fidelity of implementation. At first glance one could have determined that students were fairly consistent in completing descriptions and

Table 4.14

Completion of Composition Notebook by Treatment Teacher

Variable	Teacher 1 (%)	Teacher 2 (%)	Teacher 3 (%)	Teacher 4 (%)	Teacher 5 (%)	Teacher 6 (%)
Notebook total	75	32	79	50	97	69
Descriptions	78	57	91	94	98	67
Nonlinguistic representations	71	7	67	5	95	71

Table 4.15

Number of Descriptions and Nonlinguistic Representations in the Composition Notebook by Student

Selection	1		2		3		4		5		6		7		8		9		Total	
Words per selection	7		7		6		7		7		7		7		7		5		60	
Teacher/student	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D%	R%
Teacher 1																				
T1S1	7	0	7	0	0	6	7	7	7	7	7	7	7	7	7	7	5	5	90	77
T1S2	7	0	7	0	6	6	7	7	7	7	7	7	7	7	7	6	5	5	88	75
T1S3	6	0	7	0	6	6	7	7	7	7	7	7	7	7	7	7	5	5	98	77
T1S4	7	0	7	0	0	6	7	7	7	6	7	6	7	7	7	7	5	5	78	75
T1S5	0	0	7	0	0	6	7	7	6	6	0	0	6	6	7	7	0	4	55	60
T1S6	7	0	7	0	0	6	7	7	7	7	7	7	7	7	7	7	5	5	90	77
T1S7	0	0	7	0	0	6	7	0	3	6	0	0	0	7	2	7	0	0	32	43
T1S8	7	0	7	0	0	5	7	5	0	0	7	7	0	7	7	7	5	2	67	55
T1S9	6	0	7	0	0	6	7	7	7	7	6	6	7	7	7	7	5	5	88	77
T1S10	7	0	7	0	0	6	7	7	7	7	7	5	7	7	7	7	5	5	88	75
T1S11	7	0	7	0	0	6	2	7	6	7	7	7	2	7	6	7	5	5	70	73
T1S12	5	0	7	0	0	6	7	7	6	7	7	7	7	7	7	7	5	5	85	77
T1S13	7	0	7	0	0	6	7	7	6	7	7	7	7	7	7	7	5	5	88	77
T1 averages	5.6	0	7	0	.92	5.9	6.6	6.3	5.8	6.3	5.8	5.6	5.5	6.9	6.5	6.9	4.2	4.3	78	71
T1 percentages	80	0	100	0	15	99	95	90	84	90	84	80	78	99	93	99	60	62		
Teacher 2																				
T2S1	3	0	6	0	1	1	0	0	0	0	7	0	0	0	7	5	5	3	48	15
T2S2	3	0	7	4	0	0	0	0	0	0	7	0	7	0	7	0	5	0	60	7
T2S3	3	0	7	0	2	2	0	0	7	0	0	0	4	0	7	1	5	0	58	5
T2S4	4	0	6	0	3	0	0	0	0	0	7	0	7	0	5	0	5	0	62	0
T2 averages	3.3	0	6.5	1	1.5	0.75	0	0	1.75	0	5.3	0	4.5	0	6.5	1.5	5	0.8	57	7
T2 percentages	46	0	93	14	25	13	0	0	25	0	75	0	64	0	93	21	100	15		

(*table continues*)

Selection	1		2		3		4		5		6		7		8		9		Total	
Words per selection	7		7		6		7		7		7		7		7		5		60	
Teacher/student	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D%	R%
Teacher 3																				
T3S1	7	7	7	1	6	6	7	7	7	7	7	7	7	4	7	0	5	5	100	73
T3S2	7	7	5	7	0	6	0	7	7	7	7	7	7	0	7	0	5	5	75	77
T3S3	7	7	7	0	6	6	7	7	0	0	5	7	5	0	0	0	4	0	72	45
T3S4	6	2	7	0	6	6	7	7	6	3	7	2	7	0	7	7	5	5	92	53
T3S5	4	3	7	0	5	6	7	7	7	7	7	7	6	0	7	7	5	5	92	70
T3S6	7	7	7	0	6	6	0	7	7	0	7	6	7	0	7	7	0	0	80	57
T3S7	7	7	7	0	6	6	7	7	7	7	7	7	7	7	7	7	5	4	98	85
T3S8	7	5	7	0	6	6	7	7	7	7	7	7	7	0	7	0	5	0	100	53
T3S9	7	7	7	0	6	6	7	7	7	7	7	7	7	7	7	7	5	5	100	88
T3S10	7	7	7	0	6	6	7	7	7	0	7	7	7	7	7	0	5	5	100	65
T3 Averages	6.6	5.9	6.8	0.8	5.3	6	5.6	7	6.2	4.5	6.6	6.4	6.7	2.5	6.3	3.5	4.4	3.4		
T3 Percentages	94	84	97	11	88	100	80	100	89	64	94	91	96	36	90	50	88	68	91	67
Teacher 4																				
T4S1	7	1	7	0	6	0	7	0	7	0	7	0	7	0	7	0	5	0	100	2
T4S2	7	0	7	0	6	0	7	1	7	0	7	0	7	7	7	0	5	0	100	13
T4S3	7	0	7	0	6	0	7	0	7	0	7	0	7	0	7	0	5	0	100	0
T4S4	7	0	0	0	6	0	6	0	2	0	0	0	0	0	0	0	0	0	57	0
T4S5	7	0	7	0	6	0	7	0	7	0	7	0	7	0	7	0	5	0	100	0
T4S6	7	0	7	0	6	0	7	0	7	1	6	0	7	7	7	1	5	1	98	17
T4S7	7	0	7	0	6	0	7	0	7	0	7	0	7	1	7	0	5	0	100	2
T4 Averages	7	0.1	6	0	6	0	6.9	0.1	6.3	0.1	6.7	0	6	2.1	7	0.1	4.3	0.1		
T4 Percentages	100	2	86	0	100	0	98	2	90	2	96	0	86	31	100	2	71	2	94	5
Teacher 5																				
T5S1	7	7	7	7	6	6	7	7	7	7	7	7	7	7	6	7	4	5	97	100
T5S2	7	7	7	5	6	6	7	6	7	3	7	7	6	6	7	7	5	5	98	87
T5S3	7	7	7	7	6	6	7	7	7	7	7	7	7	6	7	7	5	5	100	98

(*table continues*)

Selection	1		2		3		4		5		6		7		8		9		Total	
Words per selection	7		7		6		7		7		7		7		7		5		60	
Teacher/student	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D	R	D%	R%
T5 Averages	7	7	7	6.3	6	6	7	6.7	7	5.7	7	7	6.7	6.3	6.7	7	4.7	5		
T5 Percentages	100	100	100	90	100	100	100	95	100	81	100	100	95	90	95	100	93	100	98	95
Teacher 6																				
T6S1	4	5	7	7	5	6	6	6	7	5	5	4	6	6	7	5	5	5	87	82
T6S2	4	7	0	0	6	5	6	7	5	7	6	6	7	7	7	7	4	4	75	83
T6S3	7	7	4	7	1	6	0	7	0	7	7	7	7	7	7	7	5	5	63	100
T6S4	7	6	7	7	6	5	7	5	7	7	7	7	7	6	7	4	5	3	100	83
T6S5	7	0	0	0	3	1	1	0	6	1	7	0	0	0	7	0	3	0	57	3
T6S6	0	7	0	7	1	6	0	5	0	7	0	6	0	7	0	7	0	0	2	87
T6S7	1	5	6	4	5	2	7	6	7	6	7	2	6	5	7	2	5	5	85	62
T6 Averages	4.3	5.3	3.4	4.6	3.9	4.4	3.9	5.1	4.6	5.7	5.6	4.6	4.7	5.4	6	4.6	3.9	3.1		
T6 Percentages	61	76	49	65	64	74	55	73	65	82	80	65	67	78	86	65	77	63	67	71

nonlinguistic representations for each selection. On closer inspection, it became obvious

there was a wide disparity between classroom rates of completion for the six treatment

teachers. Some of these disparities were due to teacher implementation factors.

- Students in the class of Teacher 1 had no nonlinguistic representations for

  selections one and two. For selection three students had nonlinguistic

  representations but no descriptions. The teacher was confused at the beginning

  of the study with exactly what should be happening in the composition

  notebook. Once she received clarification the students in her class consistently

  completed both the descriptions and the nonlinguistic representations.

- The composition notebooks from the class of Teacher 2 had low percentages

  in the descriptions and the nonlinguistic representations. It appeared that she

  omitted the directions to the students to complete the nonlinguistic

  representations in selections one, four, five, six, and seven as none of the

  students had any components at all. Students did complete the descriptions

  more consistently than the nonlinguistic representations. Selection four was

  apparently completely omitted as there were neither descriptions nor

  representations for any student.

- Teacher 4's students consistently left out the nonlinguistic representations. For

  these nine selections it appeared the students were not directed to create their

  own nonlinguistic representations per the Day 2 treatment daily schedule. The

  small number of nonlinguistic representations recorded appeared to be done

  randomly as one or two students chose to create a nonlinguistic representation

for one or two of the vocabulary words. However, students in this teacher's

class were consistent writing the descriptions, showing that the teacher gave

them direction to complete the descriptions.

- Teacher 5 did not submit a composition notebook for one of her four students.

  For the student notebooks she did submit, she had the highest rate of

  completion for descriptions and nonlinguistic representations.

- Teacher 6 did not submit notebooks for two of her nine students. The

  completion percentages from her class showed she was the only teacher who

  had more nonlinguistic representations than descriptions. The percentages of

  student completions for descriptions and nonlinguistic representations in her

  class were fairly consistent.

Summary of composition notebook fidelity. It was possible to arrive at a

percentage of completion when counting the *selections* in each notebook that had at least

one component completed. When investigating the exact number of descriptions and

nonlinguistic representations completed by each student a clearer picture emerged about

the fidelity to the treatment notebooks in each classroom. It was interesting with this

detailed evaluation to find that some teachers completely omitted descriptions or

nonlinguistic representations. There were a variety of reasons for these omissions

including confusion about the treatment, teacher absences, or a total disregard to fidelity

of the treatment for that week. However, there were several instances in which teachers

provided the opportunity for students to work in the composition notebook but students

completed only a portion of the word descriptions or the nonlinguistic representations for

a selection. It was difficult to determine why that happened in each instance; it might have been a reflection of student work completion efforts or ability, or lack of time. Lack of monitoring may have contributed to the incomplete descriptions and nonlinguistic representations. If teachers were not helping students pace their work they may have run out of time to finish.

In all classes but one students had a higher percentage of descriptions completed than nonlinguistic representations. This may attest to the benefits of explicit instruction for the *teacher*, giving a guide to follow for the lesson which culminated on Day 1 with students writing their own descriptions. Another contributing factor may have been the nature of the Day 2 schedule. Day 2 had three separate components to be completed; the first two, the teacher-directed word analysis and the word associations, were completed as whole class. These two previous activities gave students multiple opportunities to interact with the words which facilitated the creation of their own nonlinguistic representations. However, teachers may have spent too long on the first two components or the components themselves may have required more time than teachers had allowed for completion. At times, teacher self-pacing may have contributed to these lower percentages.

Students who had no descriptions or nonlinguistic representations completed for a particular selection may have been absent on the day that particular task was completed. At times, students had the words written under their nonlinguistic representations with no description completed. Sometimes students completed all descriptions or all nonlinguistic representations but one. It was assumed that they may have run out of time to complete

all of them. In spite of these instances, four of the six teachers had consistent percentages of student completion of the components of the vocabulary notebooks in their classes.

Vocabulary notebook. The vocabulary notebook was used by the treatment group on days two, three, and four of the treatment schedule. There were two separate tasks in the vocabulary notebook, the teacher-directed word analysis and the graphic organizers for each of the vocabulary words.

Teacher-directed word analysis. The vocabulary notebook contained one template for each of the nine passage selections for word analysis. The word analysis template was used by teachers for whole-class instruction and was completed on Day 2 (see Appendix B). On this template vocabulary words were analyzed for affixes and a base word. Students completed the template in the notebook as it was directed by the teacher during whole class instruction.

The word analysis template completion percentage was calculated by determining the number of students in each class and multiplying by the nine selections used for the research analysis. This resulted in a possible total of templates that could have been completed (9 passage templates x *n* of students, 9 x *n*). The number of templates that were completed for each selection was totaled and then divided by the total number possible to arrive at a percentage of the word analysis templates completed. The completion rates for the teacher-directed word analysis had percentages ranging from 76-97% (see Table 4.16).

Graphic organizer. A graphic organizer was to be completed for each vocabulary word from the nine passages. There were five sections on the graphic organizer: a

Table 4.16

Completion of Vocabulary Notebook

Variable	Teacher 1 (%)	Teacher 2 (%)	Teacher 3 (%)	Teacher 4 (%)	Teacher 5 (%)	Teacher 6 (%)
Vocabulary notebook total	71	62	72	71	80	70
Teacher word analysis	76	97	89	92	81	86
Graphic organizer						
Description	76	62	88	80	99	80
Nonlinguistic representation	73	60	87	80	93	79
Example	73	60	81	79	98	73
Nonexample	72	60	75	78	94	69
Student word analysis	56	31	9	14	17	33

description of the word, a nonlinguistic representation, an example, a nonexample, and a word analysis section for each individual vocabulary word (see Appendix B).

As per the communicative approach, communicative interaction encourages cooperative relationships among students. To facilitate partner work during the treatment each vocabulary notebook had enough graphic organizers for half of the total vocabulary words from each selection. Students were required to work together to complete the entire number of graphic organizers for each vocabulary word from a selection. For instance, selection one had seven vocabulary words. Each vocabulary notebook contained only four graphic organizers for selection one. Partner one (the reporter) told partner two (the recorder) what to write on the graphic organizer in partner two's vocabulary notebook for the first vocabulary word. The partners then rotated roles, and partner two told partner one what to write on the graphic organizer in his/her vocabulary notebook for the second vocabulary word. As this rotation continued, the result was that partner two had four graphic organizers completed in his/her individual vocabulary notebook, and

partner one had three completed in his/her vocabulary notebook. Thus all seven words for selection one had completed graphic organizers, but the completions were split between the two partner vocabulary notebooks.

Seven of the nine analyzed selections had seven vocabulary words. The third selection had six vocabulary words and the ninth selection had five vocabulary words. This resulted in either three or four graphic organizers completed in each student's vocabulary notebook for the selections that had seven vocabulary words as explained above. For the third selection each student had three graphic organizers completed for the six vocabulary words. For selection five each student had either two or three graphic organizers completed. As this study did not monitor student pairs, it was impossible to know if a student was the partner who completed the graphic organizer for four of the seven words or the partner who completed three graphic organizers for that particular selection. Thus, an average of 3.5 was used to compute the total number possible for the selections with seven words. The selection with six words would have had equal graphic organizers completed between the partners, three each. For the selection with five vocabulary words, half of the students had three completed and the other half had two completed, so an average of 2.5 was used to compute the total number possible for that selection. For this reason, the total possible number of graphic organizers that could have been completed per student was 30: 3.5 x 7 = 24.5 for the selections with seven words; 3 for the selection with six words; and 2.5 for the selection with five words (3.5 x 7 + 3 +2.5 = 30). The number of students who completed notebooks in each class was multiplied by 30 (30 x n) to get the total possible graphic organizer sections that should

have been completed for that class. The number of sections completed by each student was divided by the total possible to find an average completion rate; totals ranged from 62- 80% completion (see Table 4.16).

Completion of individual sections of the graphic organizer was analyzed for each selection. The number of completed sections in each graphic organizer was counted and this number was used to determine an overall percentage of completion for each section. Thus there was a percentage for descriptions, for nonlinguistic representations, for examples, for nonexamples, and for student word analysis (Table 4.16).

The first section of the graphic organizer was the descriptions section. In the section for descriptions one partner told the other partner how to describe the term and that partner wrote it in his/her vocabulary notebook in the appropriate section. Analysis of the descriptions revealed the lowest percentage of completion was in the class of Teacher 2 with 62%. The highest percentage of all teachers was Teacher 5 with descriptions 99% of the time. The range for the other four teachers was from 76-88%.

The nonlinguistic representations in section two were created by one partner telling the other partner what to draw in that section of the graphic organizer (Prabhu, 1987). The class of Teacher 2 had the lowest percentage of the nonlinguistic representations in the graphic organizer completed by the students with 60%. The remaining classes' completion percentages ranged from 73-93%.

For the third and fourth components on the graphic organizer students worked as partners to explain or draw a representation of an example of the vocabulary word and a nonexample of the vocabulary word. The example completion rates ranged from 60-98%,

and nonexamples completion ranged from 60-94%.

The last section on the graphic organizer, student word analysis, was low for almost every class. Students were to complete this portion of the graphic organizer together as partners by analyzing the parts of the word, exactly as they had with the teacher on the template completed the previous day which was included in the vocabulary notebook on the previous page to the first graphic organizer. The student word analysis involved partners explaining if there were affixes and what the base word was. The highest percentage completed was from the class of Teacher 1 with 56% completed. The remainder of the classes ranged from 9-33% completion.

Summary of vocabulary notebook fidelity. It was interesting to note that the teacher-directed word analysis was done fairly consistently. The teacher with the highest percentage of completion of this whole-class template had some of the lowest scores on the student-generated graphic organizers. This may indicate that she was stronger in teacher-directed instruction and was uncomfortable with students working in partners on their own. She may not have given students time to complete the graphic organizers, or she did not monitor them as they were working to ensure they were completing the tasks. She also had low scores on the composition notebook completion. She was a teacher whose principal required her to participate in the study, so she may not have been committed to the treatment instruction.

It appeared that with most of the graphic organizer sections, with the exception of the student word analysis, the percentages for each teacher were consistent. The consistency of the scores may have indicated that teachers allowed students to work

regularly with the graphic organizer over the course of the study.

Conclusions about implementation based on notebook analysis. Overall, the majority of the treatment teachers implemented the notebooks for the treatment with a reasonable level of fidelity giving students the opportunity to complete the tasks in the composition notebook and the vocabulary notebook. It is important to note that the students had a fairly high percentage of completion of the components in both of the notebooks, which reflected on the teacher averages to measure fidelity. There appeared to be enough fidelity to the treatment to have an impact on the vocabulary acquisition and thus the test scores of the treatment students. Although there were some low percentages in certain components of the two notebooks, on average every teacher did the overall notebook portion of the treatment more than half of the time, and the majority of treatment teachers had students work in the composition notebook and together in the vocabulary notebooks approximately 75% or more of the time. This opportunity for students to work with peers to complete the graphic organizers for each selection contributed to successful vocabulary acquisition for these English learners.

Teacher Logs

Teachers in the treatment and comparison groups were asked to complete weekly logs detailing their instruction for each instructional cycle. Treatment teacher logs were used for information on the schedule for the cycle, noting any interruptions or important notes about the instruction. The comparison teacher logs were used to describe the vocabulary instruction during each instructional cycle (Appendix G). This provided insight into classroom instruction that may not have been observed by the researcher.

Treatment logs. The treatment logs recorded how the treatment went for the week. Teachers noted if the treatment went for five days or for four days. There was a place to record interruptions for each day of the cycle and the amount of time lost.

Teacher 1 completed a log for eight of the nine selections. Teachers two and three returned no logs. Teachers four, five, and six completed a log for each week.

Teacher 1 turned in a log for every weekly cycle but one, and on one of her first logs she indicated that she might have misunderstood the treatment components and schedule. This was confirmed through observation and the notebook data mentioned above. Time notes on her logs indicated that she averaged approximately 20 minutes a day for the treatment. Some days were reported as 30 minutes, some as 15, but her notes showed that on average the treatment took 20 minutes as expected so as not to become burdensome or overwhelm the reading instructional time. It was on the logs that she noted that she had grade level meetings once a week on Day 3 of the instructional cycle. This necessitated her combining Day 3 and four on Day 4. It was anticipated that on short weeks Day 3 and four would be combined so this was included on the treatment log where a teacher could mark that the treatment went for four days rather than the five days on the schedule. Her notes on the logs indicated that she covered almost all the components every week.

Teacher 4 turned in logs for every story. She reported on two logs that she shortened the time in the vocabulary notebook because of time constraints. The remainder of the logs reported that instruction went as planned for the entire week. However, researcher observations showed that this was not the case, as there were several

times there were interruptions in the schedule when observations were attempted. The composition notebooks also showed this was not the case. Students had no nonlinguistic representations on several of the selections, although there were some for the selections that were not part of the nine selections that were analyzed.

Teacher 5 returned all logs with some details in addition to the required elements. She reported what had happened each week. At times she was reflective on some of her logs and used them as a way to communicate with the researcher; she questioned why a certain student had performed poorly on the weekly posttest quiz because she thought he had completed the process well throughout the week and she wrote questions for the researcher. She reported the days when the treatment was not completed. She had two days of substitutes, and she noted days that were missed because of school-wide testing, the music specialist, science specialist, and library time. She also noted times she completed more than one day at a time by combining the components.

Teacher 6 completed logs for every selection. She noted that her vocabulary instruction went for 20 minutes. There were three times she combined days because of time constraints.

Comparison logs. The comparison logs also had a smaller rate of submission to the researcher. Teacher 7 returned five logs, two of which were for the same selection. Teacher 8 submitted one log and indicated that instruction was the same for every week. Teachers 9 and 10 returned no logs at all. Teacher 11 returned no logs but did supply a sample of graphic organizers she used for vocabulary instruction which she indicated was used for each vocabulary lesson.

Teacher 7 had recorded what she did during her vocabulary instruction and noted the amount of time she spent on each lesson on four of her logs. One week she mentioned "picture and definition." It was not clear whether this was the teacher or the student using pictures and definitions. She spent 30 minutes on this. On the same log she indicated students worked on "picture squares" on which they drew a picture and used the vocabulary word in sentences for 40 minutes. On a second log she recorded "picture cards/crosswords, PowerPoint, quiz" which took two hours to complete. She submitted two logs for selection three; one noted that she used the lesson cards from the core reading program and completed a Frayer model for one vocabulary word, *barren,* and mentioned "acting out, activating background knowledge." It was unclear if the acting out and activating background knowledge was related to the word *barren.* She did not note the time she spent this day. For this same selection she noted that she introduced vocabulary and posted pictures; the assumption is that the pictures posted were from the core reading program. This instruction lasted one hour. The next log that was submitted was one month later and she recorded that she did basal instruction for an hour.

Teacher 8 submitted one log that was to cover each week as she indicated that each week was the same. She reported that her vocabulary instruction followed the same routine for each day of the week: Day 1—introduce words on board, in basal, echo read words and definitions (15 minutes); Day 2—review words on the board, include definitions and sentences, in the core reading program read the words on the context page together (20 minutes); Day 3—read words and definitions together from the board, partners develop a sentence with the assigned words (20 minutes). It was unclear what

was meant by "assigned" words; Day 4—go over words on the board again, rapidly; play "I say, you say" game with the words and definitions. This game was observed and consisted of the teacher erasing the word and definition from the board and then saying the word; the first student who said the definition received a piece of candy.

Teacher 11 submitted a copy of two different graphic organizers she used for vocabulary instruction. One contained a section where the word was written, and lines to record the part of speech of the word and synonyms and antonyms for the word. The researcher observed students gluing this graphic organizer into their notebooks. The second graphic organizer had a circular section in the middle of the square, similar to a Frayer model graphic organizer. The four corners had a place for synonyms, antonyms, definitions and a sentence. The teacher indicated these graphic organizers were used each week.

Conclusion from teacher logs. The treatment teachers who completed logs were more consistent in returning the logs than the comparison teachers who submitted logs. It appeared from the treatment logs that the treatment instruction went as planned for most of the teachers most of the time. Two of the comparison teachers noted that their weekly instruction followed the same routine. Observations showed that this was true for Teacher 8; however, for teacher eleven who reported using the graphic organizers weekly, the use of the graphic organizer was only observed one time.

Observations

Observations using the observation checklist (see Appendix H) were performed regularly by the researcher throughout the study by the researcher in the treatment and

comparison classrooms.

Observations of treatment group instruction. There were a total of 23 items on the observation checklist for the treatment teachers. Instruction for days one and two had six items for each day focusing on explicit instruction and multiple opportunities to use and discuss the new vocabulary words. Days three and four each had the same three items related to the graphic organizer, as it was planned that completion of all of the graphic organizers for each selection would take two days. Day 5 had five items based on review. Day 1 and 5 included administering the pretest and posttest as part of the checklist.

To measure fidelity of treatment group instruction, percentages were calculated for implementation of the daily schedule based on the observations. Each component of the daily schedule that was observed was marked for that day, then a total percentage was calculated for each teacher. Observations were not completed every day of the week because of teacher schedules, and sometimes teachers combined components of the daily schedule because of missing a previous day. For example, during one observation Teacher 4 did the word analysis on Day 2, but then the class had to leave for something scheduled outside of the classroom and did not do the nonlinguistic representations on that day. Although she may have combined that task with tasks on another day, this instruction was not observed and thus not scored. Teacher 6 had students work on the graphic organizers for Day 4, and then having extra time moved into the Day 5 review activity. For observation data, the teacher was only given credit for Day 4 in the final analysis of fidelity to the schedule. These examples illustrate times teachers did not comply with the daily schedule as was noted on Table 3.10, yet tried to stay true to the

components of the treatment. However, calculating an overall percentage of the

components on the observation checklist by day gave a general idea of the adherence to

the components of the daily schedule (see Table 4.17).

Observation notes showed that the treatment teachers had an average of 71% of

items completed on the correct day of the daily schedule as calculated from the total

percentages.

Observations of comparison group instruction. Comparison teachers were

observed with an observation checklist using many of the same components as the

treatment teachers. Comparison teachers were given credit in the coding for any strategy

they used that was similar to the treatment group instruction. However, there were several

components comparison teachers could not be held accountable for: (a) Use of the

Table 4.17

Total Percentages by Daily Schedule for Treatment Teachers

Observations	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Teacher 6
Day 1	3/6 5/6 4/6 1/6	5/6 5/6 4/6	5/6	6/6 6/6	5/6	4/6 5/6
Day 2	3/6 1/6	5/6	5/6 0/6	3/6		5/6
Day 3				3/3	3/3	3/3
Day 4			3/3	3/3	3/3	3/3
Day 5	5/5 4/5	5/5		4/5	2/5 1/5 1/5	4/5
Total	26/46	24/29	13/21	25/29	15/27	24/29
%	57	83	62	86	56	83

researcher-provided descriptions for the words, as they did not have access to these descriptions. (b) Use of the nonlinguistic representations provided by the researcher. The comparison teachers did not have access to these particular nonlinguistic representations, but if they used the picture cards from the core reading program they were marked as using nonlinguistic representations. (c) Completion of the teacher-directed word analysis template. Comparison teachers did not have access to this template, but if they did any kind of word analysis that was coded on the observation sheet. (d) The two specific review games. (e) The templates for the games. Comparison teachers were not provided the specific review games used in the treatment, but when they played any kind of review games that was indicated on the observation form. For instance, on Day 2 the items *word analysis template used by teacher* and *word analysis template used by student* were dropped from the six possible items from the treatment observation checklist leaving four possible items for the comparison group: (a) word associations posed by the teacher; (b) associations made by the students; (c) word analysis performed; and (d) student nonlinguistic representations created (see Table 4.18). Thus the comparison observation checklist had 17 components.

Observation of comparison teachers focused on potential use of treatment instructional components and on overall vocabulary instruction. Approximately 27% of the possible components of the treatment instruction were observed in the comparison classrooms. Table 4.18 shows a comparison of the treatment and comparison group instructional items observed and noted on the observation checklists.

Using the treatment provided many opportunities for teachers to use methods that

Table 4.18

Components of Treatment Observed by Group

	Treatment						Comparison				
Overall components observed	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11
Explicit explanations	3	3	2	3	1	2	X	3	1	X	1
Teacher nonlinguistic representations	3	5	2	2	1	2	3	5	1	X	2
Student descriptions	3	1	3	3	1	1	X	X	X	X	X
Word associations	1	4	4	1	2	3	3	2	X	X	2
Word analysis	1	4	3	3	1	2	2	X	X	X	X
Student nonlinguistic representations	2	1	3	X	1	2	X	X	X	X	X
Students working in partners	3	3	5	3	5	4	3	1	1	5	X
Graphic organizers used	1	2	4	3	5	3	X	X	X	1	1
Review game played	4	1	1	1	X	1	X	3	1	X	X
Totals	21	24	27	19	17	20	11	14	4	6	6

have been discussed in the literature and recommended from research to be effective

teaching strategies. The general components of effective vocabulary instructional

strategies incorporated in the treatment intervention were observed to be used by the

treatment teachers (Table 4.18). Some of these effective instructional strategies were also

used by the comparison teachers, but at a much lower rate. These components may not

have been appropriately emphasized in the core reading program or teachers may have

misunderstood or disregarded instructional recommendations. For example, all teachers

except teacher eleven were observed having students work in partners; this was strongly

emphasized in this district and teachers were measured on their use of partner interaction

during district appraisals. However, there was a difference between the treatment and

comparison groups in the way the partner interaction was used. The treatment teachers

used the partner work during a task to complete the graphic organizer, while the

comparison teachers typically had students turn to a partner and share a response. This created a difference between the treatment and comparison groups in the complexity of partner work in which the partners were engaged. The partner work with the treatment group was scheduled to last approximately 20 minutes three days of the week. The partner work in the comparison group consisted of responses to a partner that would take approximately one minute, and were used intermittently throughout a lesson.

Interactions can occur between teachers and students as well as between students in partners or groups. The communicative approach stresses the importance of interactions that are authentic and provide opportunities to use the language to communicate in social contexts. As shown in the research, in typical classrooms teachers do the majority of the talking (Arreaga-Mayer & Perdomo-Rivera, 1996; Kirylo & Millet, 2000; Lopez-Reyna, 1996; Padrón, 1994; Ramirez, 1992). At times teachers need to provide explanations and direction, but there should be more interaction than just teacher talk. Interactions examined in this study were identified as teacher providing explicit explanations of the vocabulary terms and students interacting with each other in partner or group communicative tasks. In this study the teachers in the treatment groups used more communicatively interactive activities than teachers in the comparison group as measured by the observation checklist. Using the information of the observed components of the treatment (see Table 4.18) the average number of teacher and student interactions noted in observations over the time of the study are shown in Table 4.19.

Conclusions about implementation based on observations. Observations revealed that on the whole the treatment teachers were true to the fidelity of the treatment

Table 4.19

Number of Observed Teacher and Student Interactions over the Time of the Study

Group	Teacher explicit explanations	Average	Teacher/student interactions	Average	Student/student interactions	Average
Treatment	26	4.33	29	4.83	23	3.83
Comparison	16	3.20	9	1.80	10	2.00

with each teacher showing more than half of the time they were on the correct daily

schedule. Adherence to the daily schedule seemed to be more of a challenge to them than

incorporating the components of the treatment. It was important that they were able to

implement the components even if they were off on the daily schedule. However, without

a daily schedule of components it would be difficult for teachers to track completion of

the components for themselves. Instruction for days missed would probably not have

been completed on another day without the regular daily requirements and routines in

place. It was worthy of note how often teachers' reading instructional time was

interrupted or changed, usually by situations over which they had no control.

Summary

The purpose of this study was to investigate the impact of a vocabulary treatment

intervention which included the use of purposeful and strategic instructional techniques

situated in aspects of the communicative approach to language learning to teach

vocabulary to English learners. The study employed a pretest/posttest design with 73

fifth-grade English learners. Acquisition of vocabulary was measured with a mastery test

and weekly quizzes of vocabulary words used in the core reading program.

Correlation analysis for the mastery test indicated there was a significant linear relationship between the mastery pretest and the posttest. Correlation analysis for the weekly quizzes showed there was little correlation between gain scores for most selections. Descriptive statistics showed there was no difference between groups for the mastery pretest. Linear regression analyses of the mastery posttests and weekly quiz gain scores showed that there were significant differences between the groups with students in the treatment group showing greater gains on vocabulary word acquisition than students in the comparison group.

Fidelity of implementation was measured from two vocabulary notebooks completed by students related to the treatment instruction, teacher logs, and classroom observations of treatment and comparison groups. Vocabulary notebooks showed the number of treatment components that were completed by the students. Teacher logs gave added insight into the vocabulary instruction in both groups. The observations showed a considerable difference of implementation of a number of purposeful and strategic vocabulary instructional communicative techniques between the two groups.

The fidelity of implementation information substantiates the conclusion found through statistical analyses of a significant difference on gain scores between the treatment and comparison teachers on the mastery test and the weekly quizzes. The use of purposeful and strategic instructional techniques appeared to have had a significant positive effect on vocabulary acquisition for fifth-grade English learners.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS, AND

RECOMMENDATIONS

Vocabulary instruction has long been a topic of discussion, but its importance and mode of implementation has been debated and varied throughout the years (Blachowicz et al., 2006; Graves & Watts-Taffe, 2002; Ryder & Graves, 1994). Some theories have posited that wide reading is the best way to acquire vocabulary (Krashen, 1985; Nagy & Herman, 1985), while other theories promote the idea that direct instruction of vocabulary is more fitting (Anthony, 2008; Coady,1997; Graves, 2006; Jenkins et al., 1984; Marzano, 2004; Marzano & Pickering, 2005; NRP, 2000; Proctor et al., 2005). Regardless of the theory, the reality of everyday vocabulary instruction is that often this instruction takes a backseat in classroom lessons (Beck et al., 2004; Becker, 1977). When vocabulary is addressed in a classroom, many times instruction is relegated to the task of looking up definitions in a dictionary or glossary, which is likely to be ineffective for English learners (Archer & Hughes, 2011; Beck et al., 2002; Echevarria et al., 2008; Irvin, 1990; Laufer, 2001; Marzano & Pickering, 2005; Stahl & Fairbanks, 1986). Few studies have been conducted on the impact of explicit vocabulary instruction on vocabulary acquisition, especially in the realm of English language learners (August & Shanahan, 2006).

The major goal of this study was to explore the effectiveness of using purposeful and strategic communicative techniques as recommended in the research situated in aspects of the communicative approach to language learning to teach vocabulary to

English learners. Specifically, this study examined communicative techniques with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students to aid acquisition of vocabulary from core reading programs. This study addressed the following two questions.

1. Is there a difference in *overall* vocabulary acquisition between English learners in a treatment group incorporating purposeful and strategic communicative techniques with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students with vocabulary instruction from a core reading program and those in a standard-instruction comparison group? It was expected the treatment would result in a significant increase on overall vocabulary acquisition for fifth-grade English learners as shown on a mastery vocabulary test.

2. Is there a difference in *short-term (weekly)* vocabulary acquisition between English learners in a treatment group incorporating purposeful and strategic communicative techniques with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students with vocabulary instruction from a core reading program and those in a standard-instruction comparison group? It was expected the treatment would result in a significant increase on short-term (weekly) vocabulary acquisition for fifth-grade English learners as shown by gain scores from weekly quizzes.

Participants were 73 fifth-grade English learners nested in classrooms of 11 teachers who were randomly assigned to the instructional treatment group or to the comparison group for standard vocabulary instruction. Both the treatment and

comparison groups were taught vocabulary words from the district-adopted core reading program. The treatment group implemented an intervention specifically designed to teach vocabulary using methods with the potential to increase vocabulary acquisition of English learners.

Evaluations of these two questions was conducted through a mastery test administered at the beginning and end of 14 weeks of data collection and through quizzes given at the beginning and end of each weekly instructional cycle. Vocabulary test items were taken directly from the assessment portion of the core reading program. Statistical analyses were conducted to evaluate the results of this study. Additional data from observations, teacher logs, and student work was collected on the fidelity of the implementation of the treatment and the type of vocabulary instructional strategies used by the comparison group teachers.

Overall Vocabulary Acquisition

The first question of this study was: Is there a difference in *overall* vocabulary acquisition between English learners in a treatment group incorporating purposeful and strategic communicative techniques with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students with vocabulary instruction from a core reading program and those in a standard-instruction comparison group? It was expected the treatment would result in a significant increase on overall vocabulary acquisition for fifth-grade English learners as shown on a mastery vocabulary test. The null hypothesis for this question was: There is no statistically significant

difference in scores on a mastery vocabulary test between English learners in a treatment

group using purposeful and strategic instructional techniques recommended by the

research and applied through the communicative and those in a standard-instruction

comparison group.

A vocabulary mastery test was administered at the beginning and end of the study.

Analysis of the mastery pretest showed there was no significant difference between the

groups at the beginning of the study ($t = .760$, $df = 71$, $p = .450$). Although this was a

quasi-experimental study with students nested in classrooms, the random assignment of

teachers in treatment and comparison groups resulted in comparable groups in regard to

vocabulary for this study. A linear regression model with a cluster analysis to account for

teacher effects was used to analyze results of the mastery test. Chi-square statistics were

significant, indicating the model was a good fit χ^2 $(2, N = 73) = 40.643$, $p < 0.001$.

Results showed the group assignment variable was significant, $t (71) = 9.406$, $p < 0.001$.

Group assignment accounted for 36% of the variance in growth ($r^2 = .36$). Thus the null

hypothesis for overall vocabulary acquisition as shown by the mastery vocabulary test

was rejected.

The results of the linear regression confirmed the initial expectations of the study.

There was a difference between the overall vocabulary acquisition for English learners on

a mastery test for the treatment and comparison groups. Students in the instructional

treatment group ($M = 18.28$, $SD = 4.02$) demonstrated increased growth over students in

the comparison group ($M = 13.85$, $SD = 3.41$). This study revealed that a vocabulary

instructional treatment that included these communicative instructional techniques and

activities produced higher vocabulary gains than for students receiving standard vocabulary instruction from the core reading program.

Short-Term Vocabulary Acquisition

The second question of this study was: Is there a difference in *short-term (weekly)* vocabulary acquisition between English learners in a treatment group incorporating purposeful and strategic communicative techniques with explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students with vocabulary instruction from a core reading program and those in a standard-instruction comparison group? It was expected the treatment would result in a significant increase on short-term (weekly) vocabulary acquisition for fifth-grade English learners as shown by gain scores from weekly quizzes. The null hypothesis was: There is no statistically significant difference in gain scores on weekly vocabulary quizzes between English learners in a treatment group using purposeful and strategic instructional techniques recommended by the research and applied through the communicative approach and those in a standard-instruction comparison group.

Vocabulary quizzes were administered at the beginning and end of each week of the study. A linear regression with a cluster analysis to account for teacher effects was calculated to examine the differences in vocabulary acquisition by group assignment for the weekly quizzes. A chi-square test of model fit was significant, χ^2 (2, $N = 73$) = 181.10, $p < 0.001$, which indicated that the linear regression model was a good fit for this analysis and significantly predicted the differences between groups. The model showed

the group assignment variable was significant, t (71) = 4.030, p < 0.001. Group

assignment accounted for 15% of the variance in growth (r^2 = .15). The analysis revealed

a significant difference in growth of vocabulary acquisition from weekly pretest to

posttest between the treatment and comparison group. Thus the null hypothesis for the

short term vocabulary acquisition as shown by the weekly gain score was rejected.

The results of the linear regression confirmed the initial expectations of the study.

English learners being taught vocabulary with this treatment showed higher gain scores

on weekly quizzes than English learners receiving standard instruction. This study

revealed that a vocabulary instructional treatment that included these communicative

instructional techniques and activities produced higher short-term vocabulary gains than

for students receiving standard vocabulary instruction from the core reading program.

Description of Treatment Group Instruction

The initial study expectation was that there would be a difference between the

treatment group and the comparison group when the weekly instructional cycle of the

treatment was used for vocabulary instruction. Statistical analyses showed that this was

indeed the case. English learners being taught vocabulary with this treatment showed

increased acquisition on overall and short-term vocabulary measures than English

learners receiving standard instruction.

There were several instructional components used for the treatment that have been

recommended in the research as effective instructional techniques. These components

were applied to vocabulary instruction for English learners and helped the study meet the

initial expectations. During the weekly cycle purposeful and strategic techniques were implemented within the treatment group which were used in conjunction with the communicative approach to language instruction. The weekly instructional cycle included explicit teacher explanations to introduce new vocabulary and communicative tasks completed by fifth-grade students. Research has shown the benefits of students involved in collaborative and structured activities (Alvermann, 2000; Ballman et al., 2001; Cambourne, 2002; Kim, 2008; Larsen-Freeman, 2007; Laufer, 2001).

The first 2 days of the weekly instructional cycle consisted of explicit teacher explanation of new vocabulary terms. teacher-directed word analysis and word associations, as well as work in a composition notebook which included student descriptions and nonlinguistic representations of the words. Day 3 and 4 involved students working as partners to complete the peer-mediated communicative activity of the graphic organizer found in the vocabulary notebook. Review games were played on Day 5.

Explicit Explanations

Explicit explanations were a component of the treatment and were used to provide initial descriptions of the words. Dictionary definitions can be difficult for English learners to understand without clear explanations (Albus et al., 2005; Beck et al., 2002; Diamond & Gutlohn, 2006; Garcia, 1991). During the treatment instruction, teachers provided student-friendly definitions of the words rather than providing a definition directly from a dictionary or glossary. Teachers provided explicit explanations with nonlinguistic representations as they described the words and students practiced the

descriptions under the direction of the teacher when they wrote their own descriptions of the words in the composition notebook. These explicit teacher explanations created a basic foundation of understanding the words in contrast to standard instructional practices. The core reading program used in the classrooms did not recommend explicit explanations of the words for vocabulary instruction.

The nonlinguistic representations were important to the explicit explanations of the vocabulary words. Many researchers suggest using nonlinguistic representations in vocabulary lessons (Barcroft, 2004; Hernandez, 2003; Garcia & Beltran, 2003; Green, 2005; Marzano & Pickering, 2005; Pérez, 1981). Research substantiated these suggestions, showing student success when nonlinguistic representations were used in instruction (Kamil et al., 2008; Tonzar et al., 2009). Providing images or pictures related to the new vocabulary helped treatment English learners have a better understanding for some of the less common vocabulary terms, such as *lurched, prying,* and *sinew*. The use of nonlinguistic representations helped English learners understand a term when the word was abstract and it was difficult to use a basic picture to illustrate the meaning. For instance, the words *sacred, confidence,* and *glory* needed images that would represent a meaning or connotation of the word as these terms were too abstract for an actual picture. These nonlinguistic representations helped English learners connect the terms to something they were familiar with, whether from their native culture or new experiences. The core reading program included nonlinguistic representations for the vocabulary words, but they were on small cards and were an optional supplemental part of the program. The nonlinguistic representations for the treatment group were projected on the

board and were an integral part of the first day of instruction. It is powerful for English learners when teachers use visuals rather than solely oral explanations (Lesaux & Geva, 2006; Marzano & Pickering, 2005). The second day of the treatment schedule gave students additional opportunities to interact with the words; even with these additional exposures, often the nonlinguistic representations students created in the composition notebooks were the same or very similar to the nonlinguistic representations that had been used during the explanations of the words on Day 1. This indicates the importance of the teacher-provided descriptions and nonlinguistic representations to support the students as they began to acquire the specific vocabulary words. This modification of vocabulary instruction with core reading programs was simple, but effective for English learners.

For this study, explicit explanations were noted through researcher observations and teacher logs, which showed that there was consistency in applying explicit explanations by the treatment teachers. Teachers gave thorough descriptions of the words rather than merely introducing the words or using dictionary or glossary meanings and they used nonlinguistic representations. The fact that the treatment teachers were making a consistent effort to explicitly teach the vocabulary words may have played a pivotal role in the acquisition of the specific terms from the core reading program, both in short-term learning (as demonstrated by weekly quizzes) and in long-term retention (as demonstrated by the mastery test).

Student Communicative Activities

The treatment included several structured communicative student peer-mediated

activities. There is much research on the benefits of student interaction, and this practice

was observed in almost every classroom regardless of the group assignment. But there

was a difference between the types of interaction in the two groups. Research on partner

interaction stresses that interaction needs to be structured (Delquadri et al., 1986; Dutro

& Moran, 2003; Gersten & Baker, 2000; Fuchs et al., 1997; Klingner & Vaughn, 2000;

Kourea et al., 2007; McMaster et al., 2006; Palinscar & Brown, 1984). The treatment

required a structured partner interaction with the "reporter" and "recorder" roles. Students

had explicit directions about what each partner should be doing during the graphic

organizer work. Structured partner interaction related to vocabulary was not observed in

any of the comparison classrooms. The majority of the interactions in the comparison

classrooms occurred when students were asked to respond to a partner about a particular

question from the teacher. This stems from the "think pair share" strategy, the effect of

which should not be diminished, but is only one example of possible partner strategies

and should not be the sole means of partner interaction in a classroom.

Added to the importance of structured peer interactions is the role of activities for

which students are required to collaborate. Providing a task for students to accomplish

together ensures longer continued oral interaction between partners, which contributes to

language development (August & Shanahan, 2006; Ballman et al., 2001; Duke &

Pearson, 2002; Echevarria et al., 2008; Green, 2005; Hernandez, 2003; Reutzel & Cooter,

2005). The communicative activity in the present study was the completion of the graphic

organizer. Students had an assignment to complete a graphic organizer for each word

from the selection that could not be completed independently. This assignment created

the situation in which students had to discuss the words, which contributed to vocabulary development, content knowledge, and required negotiation of meaning. There were no tasks like this in any of the comparison group classrooms. The fact that students rotated roles throughout this activity took away the opportunity for one student to dominate the conversation or the oral interactions as can happen when students have different levels of language ability. Students learning a new language may hesitate to talk for fear of making mistakes or being ridiculed (Krashen, 1985). The requirement that both partners speak increased oral interaction. These roles, combined with the tasks of the graphic organizer, led to deeper conservations and engagement with the vocabulary words, which in turn influenced vocabulary acquisition for English learners.

Word Analysis

The use of morphology for vocabulary acquisition has been discussed often in the literature as being an effective way for English learners to understand new vocabulary (Cooper et al., 2006; Echevarria et al., 2008; Keiffer & Lesaux, 2007, 2010; Marzano, 2004; McKutchen et al., 2009; Nunes & Bryant, 2006; Region IV ESC, 2003; Rekrut, 1996). There were two components of word analysis built in to the treatment schedule, a teacher-directed word analysis and a student word analysis which was completed during the work on the graphic organizer.

Teacher-directed word analysis. One component of the treatment group weekly cycle was a teacher-directed word analysis task using a word analysis template located in the vocabulary notebook to identify affixes on a chart separated by columns labeled "prefix, base word, suffix." If the word had an affix students wrote the affix and the base

word in the appropriate columns. If the word did not have an affix, the word was written in the "base word" column and an "X" was written in the prefix and suffix columns. Treatment teachers consistently had students complete this chart. However, when examining completion of the student work on this template it was discovered that there were often mistakes in correct identification of affixes. For example, for the vocabulary word *sacred*, students in one class identified the base word and suffix as *sacr-ed* rather than marking it as a word without an affix. The teacher had over-generalized the concept of the letters *–ed* as a suffix when in fact it was just part of the word. The same was done with the word *stallion,* which was analyzed as *stall-ion.* The letters *–ion* are not used as a suffix in this word.

These errors were unexpected as this was a teacher-directed activity in which the teacher provided instruction and modeling for each word during whole group completion of the template. Although the treatment teachers were consistent in completing this activity, errors of this type could cause confusion for English learners and nullify the positive effect of morphology instruction.

Student word analysis. The student word analysis was completed as part of the graphic organizer. Although the graphic organizer was designed to be a partner activity, the word analysis section on the graphic organizer had low completion rates. There were a few reasons the student word analysis may not have been completed: (a) it was skipped because it was the last section of the graphic organizer and students had run out of time to complete it; (b) it was a small section at the bottom of the graphic organizer so was easy to disregard; (c) there was a lack of monitoring completion of the entire graphic organizer

by the teacher; (d) less than half of the words actually had affixes; this may have led to students feeling the exercise was not engaging because so much time was spent copying the word and having no affixes to work with. Whatever the reason, it had a very low completion rate with students in only one teacher's class completing it more than half of the time.

There may have been language transfer issues that influenced the completion of the student word analysis section. The patterns of affixes in a student's native language may not directly translate or connect to the English pattern of affixes. The majority of students in the study had Spanish as a native language, and in the Spanish language affixes are used differently in some instances. An example for comparative adjectives would be the translation of the English word *prettier.* In Spanish students would say *más bonita,* rather than using suffixes to express the adjective, which directly translated into English would be "more pretty." Verb suffixes are different; for the verb "run" the Spanish word is *correr;* for "I am running" the translations is "estoy corriendo." For the word "walk" the Spanish word is *caminar*; the intransitive form of the verb "walking" in English translates to *caminando* in Spanish. Both must have an auxiliary verb, and in Spanish it is used only in the progressive form, i.e. *estoy/estaba/estaré caminando.*

Several languages have different ways of conjugating verbs which do not correspond to the suffixes used in English conjugations. If there was not explicit explanation about the use of affixes in the English language, this activity may have been difficult for students to understand and complete.

Regardless of the difficulties with completion of the student word analysis

section, effective use of morphology has been shown to contribute to vocabulary acquisition for English learners. Had teachers checked the accuracy of the word morphology and monitored student word analysis completion results may have been more noticeable.

Word Association

Word associations were completed during a teacher-led group discussion to help English learners make connections between new terms and their background experiences. After the teacher demonstrated creating a word association, the students discussed their own associations with a partner. For instance, for the word *sternly*, one teacher asked the students if they had ever seen him speak "sternly" to the class. This led to a discussion of times the teacher had been stern. Then students discussed with a partner a time when someone in their life had spoken sternly, or when they had spoken sternly to a sibling or a pet. It is important to note the focus of word association was finding ways for English learners to connect the new word to something that was familiar to them (Beck et al., 2002).

Research has shown that there is a relationship between background knowledge and academic achievement; when students do not have the particular background for a specific concept or term it is requisite that the teacher builds a background with the English learners (Anthony, 2008; Bromley, 2002; Echevarria et al., 2008; Kirylo & Millet, 2000). Marzano (2004) emphasized the importance of building background; making associations and personal connections with the words is one way to build background. Making personal connections with their native culture is a powerful way for

English learners to build background. Through observations and treatment logs, it was found that under the guidance of the treatment, word associations were developed approximately twice as often by the treatment teachers than the comparison teachers. Helping students make connections between the words and their own lives and backgrounds may have provided a crucial element for acquiring vocabulary terms.

Graphic Organizer

Days three and four of the treatment schedule were dedicated to the peer-mediated completion of the graphic organizer. Graphic organizers are a visual way to represent concepts or terms and have been found to be effective and concrete ways for students and particularly English learners to learn new information (Echevarria et al., 2008; Frayer et al., 1969; Johnson et al., 1982; Kirylo & Millet, 2000; Laturnau, 2003; Margosein et al., 1982). There were several strategies students employed while completing the graphic organizer in the present study, all of which were done with a partner. These included writing a description of the word, creating a nonlinguistic representation, and identifying examples and nonexamples of each vocabulary word.

The use of examples and nonexamples has been found to be effective in studies on reading comprehension (Baumann et al., 2003b; Beck & McKeown, 1991; Graves, 2006; Marzano et al., 2001; Marzano & Pickering, 2005). Although not many studies have investigated the use of nonexamples in vocabulary instruction, several researchers have suggested or observed their use when teaching new words (e.g., Beck et al., 2002; Donnelly & Roe, 2010; Graves, 2006; Sobolak, 2011). Teachers in the comparison group were observed using antonyms in vocabulary instruction, but there is a difference

between an antonym and a nonexample. Nonexamples require students to categorize the word to find something that is not associated with the word. For instance, for the term *sinew*, it would be difficult to find an antonym. But a nonexample could be derived from other body parts that would not be considered *sinew*, such as muscle or bone. During classroom observations teachers four and five instructed students to give a nonexample that was related to the basic context of the vocabulary term. For example, for the word *bracelet*, Teacher 5 explained that a nonexample could be *necklace*, staying within the context of jewelry. It was interesting to note that the two teachers who were observed giving explanations on how to create the nonexamples and to keep them within the same context as the vocabulary word had the highest rates of completion of this section in the vocabulary notebook. All things considered, the average percentage of completion for the nonexamples section was 75%. The fact that the partners came up with a nonexample fairly regularly may have contributed to the word knowledge that was sustained across the time of the study. Although some comparison teachers used graphic organizers with various tasks for students to complete, there was nothing in their instruction that matched the peer mediation or communicative structure involved in the study.

Review Games

Day 5 consisted of one of two games ($100,000 Pyramid and Jeopardy) used to review the vocabulary for the week. The games were designed to provide repetition and review that is essential for English learners (Echevarria et al., 2008; Garcia & Beltran, 2003; Maranzo, 2004; Marzano et al., 2001; Swain, 2005). Students had the task of describing a word to a partner based on the nonlinguistic representation of the word in the

Pyramid PowerPoint game. As noted previously, nonlinguistic representations used in this game may have been an important aid to students as they did not have to rely solely on spoken language to understand a vocabulary term (Marzano & Pickering, 2005). The Jeopardy game required teams to read the description of the word and decide the correct word. Students relied on their previous work for these games (the descriptions and nonlinguistic representations they had written in their notebooks and completed during partner work). Another important aspect of the review games was partner interaction. Students had the task of determining the word based on the definition with a partner or team, which required oral interaction. In addition, it is important to note that games with partners provide a non-threatening environment for English learners to play and succeed without being put on the spot by having to answer a question independently in front of the class. Students like to be competitive, but the games need to be structured for English learners to have success and not be embarrassed or worried that they will make a mistake in front of their peers. The affective filter (Krashen, 1985), or level of comfort, needs to be strongly considered when structuring games for English learners.

Summary

Overall, the majority of the treatment teachers implemented the components of the treatment with a reasonable level of fidelity. It appeared teachers gave students the opportunity to complete the tasks in the two notebooks as it was found the students had a fairly high percentage of completion of the components in both of the notebooks which reflected on the teacher averages to measure fidelity. In most of the sections, with the exception of the student word analysis, the percentages for each teacher were consistent.

The consistency of the scores indicated that teachers allowed students to work regularly with the graphic organizer over the course of the study.

There appeared to be enough fidelity to the treatment to have an impact on the test scores of the treatment students. Every treatment teacher did the notebook portion of the treatment more than half of the time, and the majority had students work together in the notebooks approximately 75% of the time.

A variety of purposeful and strategic communicative techniques were used in the treatment. These techniques incorporated into the communicative approach may have contributed to the significant effect of the treatment on vocabulary acquisition for English learners. The opportunity for students to receive explicit explanations of the vocabulary words, work with peers to complete the graphic organizers for each selection, employ word analysis and word associations, complete a graphic organizer for each vocabulary word, and participate in review games provided multiple exposures to the words and opportunities for oral interaction that may lead to successful vocabulary acquisition for English learners. This is significant and indicates the possibility that the methods used in the treatment instruction had a large impact on English learners learning specific vocabulary words.

Description of Comparison Group Instruction

Each of the comparison teachers had a variety of activities that were observed by the investigator. These will be examined by individual teacher to provide description of instruction occurring in the comparison groups.

Teacher 7 used nonlinguistic representations from the core reading program to teach vocabulary during one observation. She held up the pictures and had students repeat the word. For the word *mesa* she used the core reading nonlinguistic representation that was actually a butte. She had students show with their hands what the top of the mesa would look like. She asked "How would you describe a mesa to someone? Partner two explain to partner one." She read the core reading program definition she had placed on the back of the pictures. She had the definitions written on the board with blanks. Students copied the definitions and were directed to put the correct words in the blanks and then check with a partner for feedback. She connected the new vocabulary words to Utah history the students had learned in fourth grade.

Another day she had students complete the vocabulary worksheet from the core reading program. On the first section of the worksheet the students wrote the vocabulary word on a blank in front of the meaning. For the second section, students filled in blanks in sentences with the missing vocabulary word. She then showed an internet video from the core reading program called "Grammar Jammer." This particular video discussed four kinds of sentences. Then there was discussion in preparation for reading the selection. One topic was the word *advantage*, which was not a tested vocabulary word. She discussed what the word *advantage* might mean, but never gave them a direct explanation. Students then read the story.

An observation was conducted in which the lesson was on affixes using Latin and Greek roots. Students worked in groups to create words with the roots and affixes.

This teacher had a lesson in which she focused on word associations for the

vocabulary words. She asked questions such as, "What does *pre* mean? (for the word *previous*). Tell your partner what the *previous* episode of Sponge Bob was." "How do you feel when you hear something really loud?" She related that to what they do when they hear the fire alarm, and had kids plug their ears. She continued, "Show me peaceful. Show me very loud." For the word *peaceful* examples were a bird singing, a friend talking. For *loud* examples were screeching brakes, a roaring crowd. This discussion was to help explain the word *deafening.* She had written the word *barren* on the board with a picture from the core reading program. She had students orally respond to "I thought the desert would be barren, but instead _____. Tell a partner." Then students shared out what they had said. She proceeded with a second sentence for *barren.* "The warehouse is now barren, although it once contained _____." It became clear to the teacher that students did not know what a warehouse was, so she clarified, and then asked "What's something in this room that could be stored in a warehouse?" Students then completed a graphic organizer with sections for the word's part of speech, for a root word and affix, for a definition with a picture, example and nonexample. She gave some oral prompts to scaffold student completion of the graphic organizer: "How can I describe this word? It's kind of like…. It looks like…. It smells like…. It's where you go to…. It's when….You use it when…."

Teacher 8 indicated that her vocabulary lessons were the same for each week. At the beginning of the selection cycle she explained the Amazing Words. Other observations of this same process showed that she did explain some of the tested vocabulary words, sometimes in addition to the Amazing Words. This day she then

provided an explicit explanation for one of the tested vocabulary words. She followed a procedure she called "My turn, your turn," in which she would say the word and/or the definition and the students would repeat what she said, then they would all say it together. Sometimes she would have students write the words in a sentence so she could assess if they understood the words. This teacher used many personal stories to explain the words. She used a personal story about *surveying* from the top of the mountain. The core reading program shows a surveying machine for the nonlinguistic representation while the definition in the worksheets was "to look at something." This teacher used physical movements to explain *prying* and *staggering* from the selection. She then reviewed the "Question of the Week" from the core reading program which introduced the theme of the selection. She then had students read the one-page passage that contained all the tested vocabulary words. She would call on individual students to explain the meaning of the word, and have them tell a partner the word. This teacher used all the worksheets from the selections in what she called "story packets."

Observation of four review lessons showed that she had the pictures from the core reading program posted on the board with the sentences from the quiz written underneath. She had students chorally read the words and sentences, calling it "My turn, your turn." Then they read the word together. She did not correct when students read the word wrong in the sentences, such as *leaning* for *learning*, *defending* for *deafening*. The class then played a review game. Students left their hands on their desks, and the teacher would say either the word or the definition which were still written on the board. If the students knew the word or definition they would raise their hands and the first one who raised

their hand would get a candy if they could say either the definition or the word.

Teacher 9 was observed during a review of vocabulary words. She had a PowerPoint on which she had written the quiz questions. Students read the questions and then held up an individual white board on which they had written their answer choice, A, B, C, or D. The teacher would cue them when to show their answers.

For another vocabulary lesson the teacher showed a PowerPoint that had the vocabulary word, a nonlinguistic representation from the core reading program, and a description of the word. After she had shown students the PowerPoint she read the story to them.

On another day the teacher reviewed for the weekly quiz. She reviewed the definitions she had posted on the board. She then held up a card with the word and the partners would tell the definition to each other. The students were then divided into teams and lined up in the middle of the room. She held up a card with the word on it for the first person in each line to identify. The first person in the line who knows the answer ran to her and told her the definition.

Teacher 10 was observed in one vocabulary lesson using a combination of the tested and oral vocabulary words from the core reading program to write a story. A student would supply a sentence, and he would write that sentence on the board. Then all students would copy the sentence.

Another day vocabulary instruction involved previewing the selection. He reviewed the genre of the selection and the vocabulary words. He had students complete a graphic organizer that had a section for the word, the definition and a picture. For this

graphic organizer he used vocabulary words from the students' math book. He then gave the students what he called the "spelling packet," a group of worksheets stapled together that included grammar, spelling, and vocabulary practice.

During three observations the students were reading the story in partners. They would then respond in their notebooks to questions from the board about the selection. The teacher directed them in analyzing the questions asked in the books. The teacher posed a question, then had students read in the text to find the answer. He would direct students to talk with their table about the answers they found and write the answer in their notebooks. Students would discuss the answers, then one student would be called on to report the answer. At the end of this part of the lesson he directed students to work on their spelling packets, which included worksheets on sequence, vocabulary, grammar, and irregular plurals. Students worked independently on these packets.

Teacher 11 was observed in one lesson giving explanations of the words after the students had completed the pretest. When she began her vocabulary instruction portion of the cycle, she went back through the pretest and began explaining the meaning of the words. While she was going over these, a student found one of the vocabulary words in the text of the selection, so she stopped the explanations and the activity switched mid-stream to having the students find the vocabulary words in the text. She incorporated a nonlinguistic representation of the tested words by having the students look at the pictures in the student book that were on a preliminary page before the actual selection. There were usually pictures for three of the vocabulary words from each selection at the beginning of the unit in the student text. One student pointed out that the picture that was

shown for a *mesa* was in actuality a butte. So the teacher drew a picture of a mesa on a

chart using a document camera. She then wrote the definition under the picture: *A flat-*

topped land formation and gave the part of speech as a noun. She proceeded to write

about other landforms: *plateau; higher flat land*. She then drew a picture of a mountain

peak for the word *peak*, and described it as *uplift*. Students then wrote their own

sentences with the vocabulary words. Some students were asked to read their sentences

aloud to the class, after which they were directed to read their sentences to their table

group. The students then completed a graphic organizer by cutting the squares apart that

required a picture, the part of speech of the word, a synonym, and an antonym. They then

glued the parts of the graphic organizer into a notebook.

During another observation for teacher eleven, the students were reading the

selection. The teacher shared personal stories related to the selection. Students choral

read a paragraph after which students discussed and made predictions for the next

paragraph. The teacher made a connection between some of the information from the

selection and the assembly the students had seen the previous day. Although this lesson

was done during her scheduled vocabulary time none of this instruction related to

vocabulary.

Vocabulary instruction was observed on another day. Students copied the

vocabulary word meanings which the teacher had written on the board. They chorally

read the words together. The teacher asked the question "What qualities would a rider

look for in a steed? Tell a partner." When the students struggled to tell a partner, she gave

the description of *a horse, especially used in war*. This was the definition she had written

on the board. The core reading program definition was different, *a high-spirited horse.* She had the core reading program picture posted on the wall, and directed students to write a sentence using the word *steed.* Students read their sentences one at a time to the class. She then moved to the next vocabulary word, *somber.* She directed students to show their partner what *somber* would look like. She posed the questions: "How would you stand?" One student demonstrated that. "How would you move?" Another student demonstrated. "How could you help someone who was feeling somber? What would you say? What would you do?" Discussion ensued to end the lesson.

Another 30-minute vocabulary lesson consisted of showing nonlinguistic representations from the core reading program on a PowerPoint. The teacher explained the idea that all snowflakes are *unique,* and showed pictures of snowflakes. The rest of the reading time was spent in reading journals.

Differences Between Treatment and Comparison Group Instruction

Through observations the researcher documented instructional strategies in the comparison classrooms that were unlike strategies used in the intervention. The basic routine of instruction by some of the comparison group teachers, as outlined in the core reading program and noted by researcher observations, consisted of: teacher reading the words to the students, giving a definition supplied from the core reading program, and having students choral read the words or the definition. The practice of choral reading the words would be basically for pronunciation, which is important, but lends no support for the meaning of the word. English learners cannot internalize the meaning of a word when

the only instruction and oral practice is chorally reading the definition or saying the word together. There needs to be effective input from the teacher concerning the word, as well as opportunities for English learners to produce language about and with the word (Beck et al., 2002; VanPatten, 2003).

There appeared to be a lack of consistent use of explicit explanations of vocabulary in the comparison classrooms. One teacher had students discuss with a partner to determine the meaning of the word with no previous input or explanation from the teacher. When introducing the vocabulary words, another teacher wrote the definitions on the board, but had blanks for missing words that students had to fill in and then check with a partner, which required students to deduce the meaning of the words rather than have them explicitly explained. The core reading program teacher's manual recommended using explicit instruction during comprehension lessons but not during vocabulary instruction, creating a lack of explicit explanation specifically for learning new vocabulary words.

Four of the five comparison teachers had students use or write the vocabulary words in a sentence as part of vocabulary instruction. When an assignment requires students to use vocabulary words in a sentence, English learners need time to gain knowledge of the word beyond the generalization level (Beck et al., 1987; Cronbach, 1942; Dale, 1965) and time to process the meaning of the words before attempting to use them appropriately in sentences. If not, the sentences may be superficial and will not indicate comprehension of the term. An example would be for the vocabulary word *lair* a student could write something like "I like lairs" and complete the expectation of the

assignment. One teacher had each student read aloud the sentence he/she had written. This kind of activity tends to lead to disengagement of the other students who are expected to be listening. There is no interaction, and only one student at a time is allowed to participate in the activity.

Three of the five comparison teachers were observed using the worksheet pages provided in the core reading program as part of their vocabulary instruction. Treatment teachers may have used the worksheet pages, but they were not used during observations of the treatment instruction. In two comparison classes the teachers used worksheet packets for the weekly instructional cycle, which included vocabulary worksheets. These packets were assigned each week. In one comparison class, the packet often took more than a week to complete, which caused this teacher difficulty in staying on the core reading program schedule. The packets included worksheets on comprehension strategies, grammar lessons, and spelling, which the teacher called "spelling packets." The use of worksheets as the main source of instruction does not provide English learners with effective instruction. The number and variety of pages in the packet contributed to instruction consisting mainly of explanations of the *directions* on the worksheets. This limited opportunities for English learners to be actively involved in the learning (Hofmeister & Lubke, 2011), lacked guided practice on concepts (Archer & Hughes, 2011; Pearson & Dole, 1987), and provided very limited engagement in the learning process (Hofmeister & Lubke, 2011). English learners need scaffolding and support during the learning process to be successful and able to have some measure of meaningful achievement (Echevarria et al., 2008). Worksheets alone provide no

opportunities to build background knowledge, no comprehensible input, and no opportunities for meaningful communication.

Although the core reading program included instructional methods that were used by the comparison teachers during vocabulary instruction, those methods may not have addressed the specific needs of English learners (Echevarria et al., 2008, VanPatten, 2000). It is important that teachers be knowledgeable about techniques that are advantageous for English learners and be purposeful and strategic in their use in order to supplement instruction in a core reading program as necessary. Using a treatment such as the one designed for this study assisted teachers in providing vocabulary instruction that was purposeful, strategic, and beneficial for English learners, affording many opportunities for communicative interactions and allowing English learners to participate fully and access classroom instruction.

Similarities Between Treatment and Control Group Instruction

During researcher observations of classroom instruction and analysis of teacher logs, it was noted that some of the comparison group teachers used, to varying degrees, components included in the treatment. These included strategies such as graphic organizers, nonlinguistic representations, notebooks, and review activities.

Graphic Organizers

Some strategies used by three comparison teachers that were similar to strategies in the treatment intervention included the use of graphic organizers. A graphic organizer used by one comparison teacher had a section for students to draw a picture of the

vocabulary word, a section in which the students determined the part of speech of the word (noun, verb, or adjective), and a section for identification of synonyms and antonyms. Another teacher used a graphic organizer which had a place for synonyms and antonyms, as well as a definition and a sentence using the word. One teacher used a graphic organizer on which the students would draw a picture of the word and use it in a sentence. One graphic organizer was used to work with vocabulary from the math book. The graphic organizers were used inconsistently. All of these teachers were observed using a graphic organizer only once. When asked about the use of graphic organizers, one teacher responded that sometimes the graphic organizers were used for every word, and sometimes just for a term she felt would be difficult for the students. Another teacher indicated that she used one of two graphic organizers consistently each week. During researcher observations, it was noted students completed the graphic organizers independently, in contrast to the treatment group students working in pairs and completing the graphic organizer task together.

Nonlinguistic Representations

The treatment group instruction used images projected onto a screen for the non-linguistic representations. Projection of words and representative images was also observed in one comparison classroom in which the teacher created a PowerPoint for each selection. The core reading program included pictures for the vocabulary words. Three of the five comparison teachers consistently used the core reading program vocabulary picture cards (approximately 5" x 7" in size). They posted the vocabulary picture cards on the wall and referred to them during instruction. Some teachers in the

treatment group posted the nonlinguistic representations they had been provided for this study. Posting visual representations of vocabulary words is a good support for English learners. However, the goal of using the nonlinguistic representations in the treatment was to provide comprehensible input during explicit explanation of the words. Conversely, when the nonlinguistic representations were posted for the comparison groups, it was generally used only as a reference for students rather than to introduce and explain the meaning of the vocabulary words. Some of the graphic organizers used by the comparison teachers required a nonlinguistic representation. Students in the treatment group created their own nonlinguistic representations consistently during two activities during the weekly cycle, which created a deeper interaction with the meaning of the word providing more support rather than simply having a picture posted on the wall.

Notebooks

Marzano and Pickering (2005) encouraged the use of notebooks during vocabulary instruction. Two comparison teachers were observed using notebooks. One teacher had students glue their graphic organizers into a notebook. Another had students use notebooks during reading instruction to record answers to the questions at the end of the selection, although the notebook was not specific to vocabulary instruction. There did not appear to be any interaction or practice with the vocabulary terms in these notebooks. The notebooks in the treatment group were used four of the days of the treatment instruction. The activities completed in the notebooks the first two days were a source of support for the activities that followed the remainder of the instructional cycle. Descriptions of the words, student-generated nonlinguistic representations, and teacher-

directed word analysis from days one and two provided a scaffold and a reference for students when they completed the graphic organizer in the vocabulary notebook on days three and four.

Review Activities

Review games were an integral part of Day 5 of the treatment instruction. Some comparison teachers provided different types of review prior to administration of the weekly post quiz. Teacher seven used a PowerPoint she created for practice quizzes with the vocabulary words. Two comparison teachers presented a formal review of the vocabulary words using methods that helped ensure success on the quizzes without promoting depth of knowledge about the words. Teacher eight consistently posted the pictures and the definitions on the board when the students took the weekly post quiz. Teacher nine projected the exact questions with multiple choice responses from the quiz on the screen, had students write the letter of the correct answer on a white board, and then show her the answer they had chosen just prior to giving the quiz.

Two comparison teachers used review games for part of their instruction. However, they were not the kind of game that promotes success for English learners (Echevarria et al., 2008; Marzano and Pickering, 2005; VanPatten, 2000). Teacher nine played a game in which the class was divided into two teams and lined up in the middle of the classroom. The teacher held up a card with the word, and the first student in line who knew the correct definition ran up to the teacher and told the definition. This game provided no processing time for English learners, and only two students at a time were involved in the game, leaving many students unengaged in the review for the majority of

the time. Teacher eight played a review game each week prior to the end-of-week quiz.

She posted a picture and wrote the definition of each word on the board. She then erased

the definition of the word, and the first student to raise a hand and give the definition was

given a piece of candy. This type of review highly favored native English speakers

because it provided no time for processing or mental translating for English learners to be

successful. The game required no retention of words taught throughout the week.

Students only needed to read the definition within seconds of the definition being erased.

Review games that depend on quick individual responses are very difficult for English

learners who need time to process information (VanPatten, 2000). It is interesting to note

that even when comparison teachers took measures to ensure success on the quizzes,

there was still a significant difference on the quiz results between the treatment and

comparison groups in the linear regression analysis.

Summary

Teachers in the treatment group and the comparison group used some similar

instructional methods. Despite the similarities, there was a marked difference in the

assessment results between groups. Vocabulary instruction in the comparison group

offered fewer instructional methods recommended in the research specifically designed to

benefit vocabulary acquisition for English learners, and those they did use were

implemented inconsistently. For example, instruction of the vocabulary terms included

limited explanations from the teachers, exercises in reading the words in context, or cloze

exercises to determine the meaning of the words. Teachers may have been following the

core reading program suggestions on how to introduce the vocabulary, which included

the suggestions listed above and observed in some comparison classes. The core reading program used strategies recommended in the research but it was not specific to teaching vocabulary. Two comparison teachers used personal experiences to build background for the selection, but they were their own experiences, not those of the students. Graphic organizers were used sporadically. Nonlinguistic representations were displayed but were seldom used by students. If a notebook was used, it was either not connected to vocabulary or had no specific purpose. Review activities were used inconsistently, favored native English speakers, and did not require a deep knowledge of the words.

The instructional methods used in the treatment were from those recommended in the research and were used purposely and strategically, directed toward the communicative needs of English learners. Explicit teacher explanations were used to introduce and explain the meaning the vocabulary words, which is essential for English learners. Graphic organizers were used consistently, required peer mediation, and served as a communicative task to be accomplished that provided multiple opportunities to practice the vocabulary words and to interact with a partner, both which contributed to vocabulary acquisition for English learners. Notebooks served several purposes: they were used during guided and independent practice, provided for accomplishment of the peer-mediated task, and served as a resource throughout the week. Review games were competitive but required peer interaction and used the descriptions and nonlinguistic representations that were completed on Day 1 and 2. These tasks were done consistently each week, providing for structure, repetition and multiple exposures that supported English learners' needs. This study showed that consistent, purposeful, and strategic

implementation of key techniques and communicative activities that focused on language learning and communication contributed to vocabulary growth for English learners.

Effects of the Treatment

There were several positive outcomes from the treatment used in this study. One was that treatment teachers more closely followed an instructional schedule and routine for vocabulary. Although the core reading program had daily and weekly schedules outlined, the schedules were different each day and week. This may add variety to instructional techniques, but teachers and students may perform better with set routines. This is attested to by the fact that treatment teachers stayed on the schedule of the weekly core reading program and completed more selections than comparison teachers. Treatment teachers averaged 12 selections completed, and comparison teachers averaged nine completed selections. Even though treatment teachers were spending time on vocabulary every day, they still completed more selections. This is a factor when considering the district expectation of fidelity of implementation to the core reading program. By completion of more of the selections, students would be exposed to more vocabulary, more comprehension lessons, and more reading practice with the selections.

Another important factor to consider with implementation of the treatment was the amount of exposure students had with the vocabulary words. Research has shown that multiple exposures over time are necessary for students to acquire vocabulary (Beck et al., 2002; Cummins, 2003; Nation, 1994). Coyne and colleagues (2007) found that increasing encounters with target vocabulary in varied and meaningful contexts resulted

in higher scores on vocabulary measures than instruction in which students were given only the meaning of the words as they heard a story read to them. In the present study, this idea was transferred to English learners as they were introduced to and practiced the vocabulary words in multiple activities as per principles of the communicative approach to language learning. These activities were planned to be conducted daily with the treatment instruction, resulting in numerous interactions with the vocabulary words. This additional practice resulted in more interaction between the teacher and students and between student to student in partners or groups.

Because the strategies used in the treatment were based on recommendations from the research on effective vocabulary instruction, treatment teachers were consistent in using effective techniques for vocabulary instruction. Teachers did not have to make decisions on which strategies to implement for the instruction. Instruction was clearly outlined and the strategies used were those identified as effective to teach vocabulary.

Instructional techniques recommended by research were used in the treatment classrooms purposefully and strategically to teach vocabulary to English learners. Core reading programs may suggest activities or lessons that have been shown to be effective for instruction, but they do not necessarily focus on vocabulary instruction. For example, in one fifth-grade selection from the core reading program used in the study (Afflerbach, et al., 2011), there were 4 days of the weekly cycle that indicated instruction on vocabulary. The first day the students were to create a chart assessing their word knowledge for each vocabulary word. They created a chart that had the headings: *Know, Have Seen*, and *Don't Know*. Students then rated their knowledge of each vocabulary

word and wrote a sentence for the words they checked that they knew. This may be a good way for students to be accountable for their learning, but it does not provide explanation of the meanings of the words. The next vocabulary activity occurred on Day 2. Teachers were directed to use the explicit instruction model to teach a strategy for identifying unfamiliar words using context clues (in the margin was the direction *Teach unfamiliar words*). Teachers modeled the strategy (the margin said *Model the strategy*) by applying a "think aloud" of reading sentences and using context clues to determine the meaning of the word *hydrogen.* The guided practice step (the margin said *Guide practice*) identified by the core reading program was to write the following sentences on the board: *The gas engine was mounted on an open coach. If it rained, the riders and passengers got a drenching.* The teacher is instructed to have students use context clues to determine the meaning of the word *drenching.* If the students needed help, the teacher were directed to point out that they could use the clue word *rain.* For additional support teachers could use the picture vocabulary cards. For the independent practice (labeled *On their own* in the margin) students read a passage in their student book and wrote down the context clues from the passage. In the vocabulary instruction for this day teachers used the research recommended practice of explicit instruction to teach how to use context clues, but the meanings of the words were not explicitly explained. On Day 4, there was another vocabulary lesson in which teachers were instructed to use the explicit instruction model to review the use of context clues. For the first step of explicit instruction (labeled in the margin as *Teach unfamiliar words*), the teacher was directed to write the following sentence on the board: *The* Hindenburg *cruised low over the icebergs of the Atlantic.*

Students were then directed to look for clues in the text to figure out the meaning of the word *cruised*, write what they think the word meant, and then check that with a dictionary. For the guided practice (labeled as *Guide practice* in the margin) students used sticky notes to mark unfamiliar words in the text and then used context clues to determine the meaning of the each word. For the independent practice (labeled *On their own* in the margin) students told the definitions they identified using context clues and then read aloud the dictionary definition of each word. Again, teachers were using explicit instruction to teach using context clues, but the vocabulary words for the reading selection were still not explicitly taught. On Day 5 context clues were reviewed again using the same framework of explicit instruction. For the independent practice students worked with partners to write context sentences using the vocabulary words. Students switched their sentences and identified the context clues that helped them identify the meaning of the word. The vocabulary instruction for this cycle were lessons on the use of context clues, not the vocabulary per se.

In this study, all of the strategies implemented from recommendations in the research focused explicitly on the targeted vocabulary words of the reading selection. Teachers used effective methods from the research purposely and strategically for the goal of vocabulary acquisition. The instruction was consistent and targeted towards recommendations that would be effective for English learners.

One unexpected finding from the study was the impact that teacher lack of knowledge may have on English learners. Research shows that careful and purposeful use of morphology can support vocabulary learning for English learners, but that assumes

knowledge of morphology by the teachers. During analysis of workbook completion for the teacher-directed word analysis template there were several instances in which students had misidentified affixes. The student's task was to write the word analysis as the class did this activity together. This speaks blatantly to the difficulties for English learners to acquire language during content class instruction if teachers are careless or not proficient in the conventions and form of the English language. Teachers need to be aware that they are not only content teachers, but they are English teachers as well in all of their communication with students. All of the teachers in this study either had an ESL endorsement or were in the process of acquiring one. A requirement of the endorsement is a class in which the focus is on phonology and syntax and how those areas may influence classroom instruction and language acquisition. It would be assumed that teachers, as college graduates, would have a basic knowledge of English grammar and conventions. That may not be the case, as indicated in this study. Institutions of higher education may need to address grammar and language use in the endorsement program to help ensure teachers are adequately prepared to teach language forms, and thus the English language, proficiently.

<div align="center">**Limitations**</div>

There were limitations of this study in the areas of instruction, materials, fidelity, measures, scheduling and data collection, and sample size.

Instruction

Teachers in the district where this study took place were under pressure to raise

scores and classroom performance as several of their schools were ranked at the bottom of the state for achievement. It was difficult for some teachers to incorporate this new method of vocabulary instruction in addition to other curricular challenges. Some principals insisted teachers participate, creating some resistance from at least one teacher in complying with the components of the intervention. Attending an additional training for the study above the district training prior to school starting was a challenge for them, attested by the fact few attended.

Comparison teachers were asked to complete logs to indicate the vocabulary instruction they were providing in their classrooms. However, only two teachers submitted logs that explained their instruction. One teacher reported that he had lost his logs, so more were provided, but he still did not submit any to the investigator. Although observations were conducted to identify instructional techniques implemented in the comparison classrooms, the logs could have added additional insight into the instruction taking place in the classrooms in which no logs were returned, providing a more complete picture of vocabulary instruction in the comparison classrooms.

Materials

The core reading program was newly adopted in this district, creating additional pressure to learn the basics of the new program while teachers implemented this intervention with new materials. Not all core reading program materials were available to the teachers or to the investigator at the beginning of the school year. This contributed to the study beginning later than planned with fewer weeks of implementation.

Both the standard instruction and the treatment instruction included nonlinguistic

representations in their materials. The treatment instruction had the representations displayed on a screen using an LCD projector. The core reading program contained picture cards for each word. Sometimes English learners' background knowledge or their interpretations of the nonlinguistic representations caused confusion or were incorrect for the context of the selection. For example, the treatment group picture for the word *barren* was a sandy landscape with only a dead tree. The landscape and the tree were both barren. One student could not connect that to the explanation of barren, which was "nothing there," because there was a tree in the picture. The core reading program picture for *barren* was of rocky terrain with a small plant growing among the rocks and a field with grass in the background with the meaning "not able to produce much." The word *barren* in the selection was used to describe a plain where railroad workers were laying track. A plain could be, but usually is not described as rocky land. However, the meaning "not able to produce much" is a broad term that needs to be connected to a visual image of a landform in the selection, which would require extensive explanation of what it means to not be able to produce much, and how that relates to the plain on which the railroad workers were laboring. For the word *Union,* the treatment group nonlinguistic representation was a picture of Union soldiers connecting to the context of the core reading program selection about the Civil War. The core reading program nonlinguistic representation was a photo of a group of parachuters holding hands, indicating that the people were showing their union. This image may have been confusing for English learners because it did not relate to the context or the time frame of the Civil War. In the selection the word *Union* was used in the text as "Union army" and "Union bugler." The

explanation of the word from the core reading program would require an extra step to connect the word to the context of the selection. For some abstract terms, such as "glory," an extra step to explain the term and then how it connects to the context is necessary, but nonlinguistic representations should be as close to the context of the selection as possible to help English learners understand how the image is related.

A limitation to the study was that the descriptions and nonlinguistic representations were not monitored nor analyzed for accuracy. It would be expected that classroom teachers would monitor student work, but there is no way to determine if this occurred consistently throughout the entire study. There may have been times when the students wrote descriptions or nonlinguistic representations that were incorrect. General observation of student work during notebook completion analysis showed the majority of the completions by the students were correct. Although errors appeared to be few, those noticed indicated that after Day 1 of instruction some students were still confused about the meaning of the word. There appeared to be fewer errors in the nonlinguistic representations on Day 2. If indeed students were not monitored for accuracy, adding this expectation into the study may have increased the positive effects of the treatment.

Teaching vocabulary to English learners is only a first step in language acquisition. Students need to know the vocabulary to be successful in academic settings. However, part of communication is using the vocabulary at the sentence level. Students need to know vocabulary to be able to communicate in sentences, but this study did not measure the complexity of the discourse between the partners. If this kind of information was included in the study, it may have shown that incorporating sentence level

expectations in the extended conversations may have positively affected language acquisition. It is assumed that students spoke to each other in sentences during the conversations they held while doing the graphic organizer, but it was beyond the scope of this study to analyze the discourse of the partners or the complexity of their interactions.

Fidelity

Although treatment group teachers tried to follow the instructional cycles of the treatment with the core reading program selections, the components of this study were not always implemented with fidelity due to human error and situations beyond the teachers' control. Occasionally, teachers forgot to administer the selection quiz pretest and did not adhere to the daily or long-term teaching schedule. As the study progressed, it was determined that some teachers were getting behind on the schedule of reading selections. Thus, the teachers who were behind were instructed by the investigator to omit instruction for selection 12 as words from this passage were not included on the mastery test due to random selection of words. At times observed instruction crossed over different days of the schedule, making it difficult to correctly code instruction during observations. Treatment teachers were occasionally observed combining components from different days because of time constraints.

Some situations that impeded the schedule were beyond the teachers' control. At times the days of the week did not always match the schedule of the days for the treatment. If there was a shortened week with 4 days, the review of vocabulary words (Day 5) may have been completed the following Monday, or days three and four may have been combined. Interruptions (fire drills, specialists in the classrooms, school-wide

testing) of the daily schedule also affected the weekly instructional cycle which resulted in teachers occasionally taking longer than five days to complete the instructional cycle for a single selection. These interruptions hampered the weekly progress of the treatment and led to fewer selections included in data collection than originally planned. The original number of 15 core reading program selections and weekly quiz data points was compressed to nine. On the whole, teachers attempted to follow the fidelity of the treatment, but the fluid nature of classrooms and schools created circumstances that at times caused difficulty with implementation.

The fact that the researcher was the only individual conducting the observations was a limitation. The researcher had had extensive experience in observing classrooms for general instruction as well as sheltered instruction across two districts and had been involved in district appraisals, amounting to well over 100 observations. However, it does create an issue with no inter-rater reliability in this study. If there had been additional observers, the number of observations would have increased and there would have been more detailed information on the instruction, especially in the comparison classes.

Measures

One limitation was the fact that the measure for the mastery test was constructed by the investigator. Although the questions for the mastery test and the weekly quizzes were drawn directly from the core reading program, there was not established validity or reliability of the mastery test or weekly quizzes. However, the fact that the mastery test and quiz questions were taken directly from the core reading program increases the authenticity and ease of replicability of this study.

The fact that the teachers had access to the testing materials in the core reading program could have led to preteaching of the vocabulary words prior to the weekly assessments. If that were the case, pretest scores would have been higher than noted in the data, and there would not have been a difference between the pretest and posttest quizzes. There was a difference between the means of the two assessments, with a pretest mean of 2.77 ($SD = .656$) and a posttest mean of 4.45 ($SD = 1.0$). This would likely not be the result if teachers in the study had pretaught the vocabulary.

The delay in beginning the data collection caused a limitation on the mastery pretest. One word, *daintily*, was taught in selection two during the third week of the study but the mastery pretest was not administered until the fourth week. There was a test item for the word *daintily* on the mastery test. However, all teachers in both groups had taught selection two, so all students had been exposed to the word. An analysis of the percentage of students who had the correct answer on the pretest item for that word showed that 44% of the comparison group had it correct, and 48% of the treatment group had it correct, indicating that there was not a large difference between the groups on that particular test item on the mastery pretest.

Scheduling and Data Collection

The work of setting up the study to be ready at the beginning of the school year happened over the district's summer break. This caused some issues with communication and getting teachers ready to begin the study when school started. Many teachers did not check email during the summer, resulting in one school being dropped from the study because of lack of response. This decreased the power of the study as fewer students were

involved.

The fact that the study ended in mid-December contributed to some students missing the posttest. This specific population from the district was known to leave school during the month of December to travel to Mexico for the holidays. It was hoped that the number of students in this study whom that may have applied to would have been quite low. As it turned out, there were eight students who missed the posttest.

Sample Size

Participants in this study were limited to 73 students and 11 teachers. A larger sample would increase the power of the analyses. Because of other curricular initiatives in the participating district, perceived lack of time, and difficulties in communication, not all schools initially targeted for potential inclusion participated in the study, resulting in a smaller sample size than originally anticipated. The loss of the comparison class in the school in which the teachers wanted to teach as a team led to a decrease in the number of students. The majority of English learners nested in the classrooms for this study had intermediate language proficiency levels. A larger sample might increase the likelihood of having a wider range of language proficiencies included in the study.

Implications for Practice

Most educators would agree that teaching vocabulary is important, but common practices often do not provide more than a superficial level of instruction on word knowledge (Beck et al., 2002; Becker, 1977). In core reading programs lessons, vocabulary words are typically introduced on the first day of an instructional cycle and

referred to sporadically throughout the remainder of the reading unit (Becker, 1977). This study revealed several methods that could be used to approach core reading program vocabulary instruction without taking a large amount of additional instructional time or materials. The Common Core Standards require extensive use of academic vocabulary (NGA Center & CCSSO, 2010). It behooves elementary teachers to have an intensive focus on vocabulary as part of their instruction, especially to promote vocabulary acquisition for English learners. Recommendations based on this study are presented below.

1. *Incorporate vocabulary instruction for 20-30 minutes every day*. English learners need frequent exposure to unfamiliar vocabulary words to incorporate words into their lexicon (Jenkins et al., 1984). Vocabulary instruction should offer multiple opportunities to practice the vocabulary words from the core reading program selections. Vocabulary instruction for English learners will oftentimes require instructional techniques and time beyond that presented in core reading programs teacher's editions, and must involve more than completing a vocabulary worksheet for English learners to acquire meanings of the words. A specific focus on vocabulary for part of reading instruction each day will result in increased word knowledge for English learners.

2. *Use explicit explanations during vocabulary instruction.* Explicit explanations will contribute to vocabulary acquisition for English learners. English learners should not be expected to learn vocabulary by using only context clues or solely glossary definitions. Instruction should begin with explicitly teaching the word with student-friendly explanations and nonlinguistic representations (Marzano & Pickering, 2005) to increase

comprehensible input for English learners as English learners need the support of clear, explicit teacher explanation of word meanings and visuals for complete understanding of vocabulary words. Nonlinguistic representations can be used during initial explanation and continued throughout vocabulary instruction, such as during review activities or peer-mediated assignments. There are many resources available for teachers to find effective visuals to use during vocabulary instruction such as clip art, Google images, and pictures from calendars, among others. Teachers can create a thematic portfolio of pictures or collect images relative to each reading selection and connected to students' cultures to organize visuals and nonlinguistic representations for use during vocabulary instruction. Teachers can also provide opportunities for practice of the word meanings in which English learners may write their own word descriptions and create their own nonlinguistic representations. It is also important to monitor the work to ensure students are applying the word meanings as they are used in the context of the core reading program selection.

3. *Incorporate communicative student tasks to aid acquisition, exposure, and use of vocabulary terms*. The communicative approach focuses on meaningful interaction and negotiation of meaning to help students acquire language in authentic situations, discussions, and activities. The inclusion of peer-mediated activities during vocabulary instruction throughout the instructional cycle supports the goals of a communicative task. The term "peer-mediated" implies more than a superficial exchange of thoughts; it indicates a level of work and involvement that requires interaction between partners to complete an assignment or activity. Vocabulary instruction should present English

learners with structured opportunities to talk about vocabulary words with a partner, delineating roles that will promote in-depth discussion of the vocabulary terms. Instruction should incorporate a variety of activities as described in the communicative approach to provide many peer-mediated opportunities for English learners which necessitate deep conversation and oral discourse while partners work out the solution or answers for a specific task.

In this study the graphic organizer was the basis of one of the communicative tasks reinforcing peer-mediated activities. Components of a graphic organizer should integrate activities that are effective for English learners, such as writing word descriptions and creating nonlinguistic representations. Citing examples and nonexamples within the context of the reading selection as part of the graphic organizer helped English learners establish a deeper and clearer understanding of each word. Graphic organizers can contribute to the goal of a communicative task when it is used with effective and structured peer-mediation.

Further Research

This study provides various avenues for further research in relation to core reading program vocabulary instruction with English learners. Components of the treatment could be investigated individually. The purposeful and strategic instructional techniques used during the communicative activities could be separated and researched individually to study if one strategy over another would provide the most vocabulary acquisition growth for English learners using a core reading program. It may be that the

overarching idea of partner interaction and the communicative approach was the key to the success of this treatment instruction, or perhaps it was the fact students were working together on a task as they interacted with the vocabulary terms. The combination of the two may have provided the power of the treatment. Research into separation of these various elements during core reading program vocabulary instruction could add some insight into vocabulary instruction for English learners.

A future study could investigate the effects of the treatment based on English language proficiency to determine if the treatment provided different amounts of growth for students with differing language proficiency levels. This treatment was effective for English learners at an intermediate proficiency level as was demonstrated in this study. It may have strong effects for English learners who are at beginning or advanced stages of language proficiency.

Expanding the current study to a larger population would be helpful to generalize and confirm results about vocabulary instruction with core reading programs for English learners. Using this treatment in other subject areas or grade levels could add important information to the base of vocabulary instruction research for English learners.

A study that analyzes the types of tested words found in a core reading program and uses the communicative teaching approach of various activities centered on a particular part of the target language could add important information in the study of what is effective for English learners. For instance, the tested words could be divided into categories for instruction, such as nouns, verbs, and adjectives. If the words were categorized into parts of speech and implemented in a communicative approach it may

enhance the language acquisition of English learners.

Given the fact that vocabulary is an important part of language acquisition leads to the question of which words from a reading selection should be taught to facilitate language growth of English learners. Is it more beneficial to concentrate on words considered tier two words (Beck et al., 2002), or should the vocabulary lessons identify words important to the overall comprehension of the selection? This would be an area for additional research which could impact the way core reading programs identify words to be taught that would be of most benefit to English learners.

Vocabulary knowledge plays an important role in student success in today's educational environment. Research that focuses on successful vocabulary instruction for English learners is sorely lacking (August & Shanahan, 2006). The National Literacy Panel (August & Shanahan, 2006) located studies demonstrating the importance of vocabulary for English learners in a variety of domains, such as the significance of vocabulary knowledge to comprehension, the effect of first language vocabulary on second language vocabulary acquisition, and the implications of oral language proficiency on vocabulary knowledge. However, there is very little research that focuses specifically on methods to teach English learners vocabulary in relation to core reading programs.

Conclusion

Vocabulary instruction for English learners is an area of research that can no longer be ignored. The majority of schools in the United States use core reading

programs for their reading instruction (DeWitz et al., 2009), but the persistent academic

gap between English learners and native English speakers indicates that the vocabulary

instruction in the core reading programs is not meeting the needs of English learners.

Although core reading programs have recommendations for vocabulary instruction, the

reality is that a very small percentage of time is dedicated solely to vocabulary

acquisition (Blachowicz et al., 2006; Flynt & Brozo, 2008; McGill-Franzen et al., 2006).

The amount of time spent specifically on vocabulary instruction in this study supplied

opportunities to interact with and practice the words to ensure the words were learned by

the English learner students (Barcroft, 2004; Blachowicz et al., 2006; Beck et al., 2002;

Becker, 1977; Crawford, 2003; Echevarria et al., 2008; Gersten, 1996). The study

incorporated vocabulary instruction for 20-30 minutes every day of the instructional

cycle, which allowed time for English learners to interact with the words and yet did not

take away from the remainder of the core reading curriculum teachers were responsible to

teach. This amount of daily exposure may have been critical to the successful vocabulary

acquisition for English learners. This research indicated that a daily focus on instruction,

even for a relatively brief of time, influenced English learners' vocabulary growth.

Teachers need additional resources that are proven to be effective in helping

English learners gain vocabulary knowledge. This study confirmed the effectiveness of

several strategies recommended in the research for successful vocabulary acquisition for

English learners. Analyzing the effect of the different techniques used in the treatment for

vocabulary acquisition was not the purpose of this study. This study sought to determine

if using techniques recommended in the research purposely and strategically would be of

benefit for English learners to acquire vocabulary while being taught with core reading programs. The purpose of this study was to take a holistic look at the combined strategies recommended from the research, and use them through the medium of a communicative language teaching approach.

What benefit is it for students to have learned these additional words that appear to be acquired through the implementation of recommended strategies applied in this treatment? As mentioned in the review of the literature, the small number of words that can be taught individually make that method appear to be a daunting task. However, if we look at each individual selection, the students in the treatment were able to be successful during that specific lesson. The mastery test measured knowledge of 28 words. At the beginning of the study, the students already knew an average of 11 words found on the pretest ($M = 10.77$, $SD = 2.564$). By the end of the study students in the treatment group knew an average of 18 words ($M = 18.28$, $SD = 4.02$), an average growth of seven words. If we look at the same measures for the comparison group, the students knew an average of 11 words ($M = 11.31$, $SD = 3.473$), and at the end of the study they knew on average 14 words ($M = 13.85$, $SD = 3.414$). This is an average growth of three words. If a test was administered that measured knowledge of all of the words found in the selections in this study the numbers may be larger than anticipated. The treatment students gained on average more than double the number of words than the comparison group. Although the numbers of seven words and three words are small, the impact of more than doubling words learned by using methods recommended in the research through a communicative learning approach is notable. As stated by Ballman and colleagues (2001),

> Vocabulary learning is important for two reasons. The most obvious is that an increasing knowledge of words in a language is the immediate measure of knowledge of the entire language. A second and not so readily noticeable value of vocabulary learning is rooted in the relationship between familiarity and ease in communicating. (Ballman et al., 2001, pp. 64-65)

There is discussion in the literature concerning teaching basic vocabulary that crosses over different content areas (Coxhead, 2000; Marzano & Pickering, 2005) in comparison to focusing on teaching specific words within a selection or content area (Graves, 2006). The assertion made from this study is that students need to know the words specific to the content area to be successful in understanding difficult content. If a treatment similar to the one used in this study was used to teach vocabulary from a content text (i.e., a science or history text) English learners may have the opportunity to be successful in the acquisition of the specific vocabulary necessary to understand and be successful in the particular content material for a chapter or a unit. Competence in one section builds the foundation for and leads to success in subsequent material.

Evidence from this study points to the importance of techniques used for teaching vocabulary. It can no longer be the "mention and assign" concept. Vocabulary instruction must be rigorous and in-depth. English learners cannot comprehend text that contains words that are not part of their lexicon. Incorporating word descriptions and nonlinguistic representations into communicative vocabulary instruction is beneficial for English learners. Use of word descriptions presented explicitly by teachers and those that students created themselves and with partners increased likelihood that the word would become part of their lexicon. Partner work and independent use of nonlinguistic representations during communicative instruction as used in this study helped English learners internalize

the meanings of the words (Echevarria et al., 2008; Marzano & Pickering, 2005). This study helped substantiate the importance of instruction recommended in the research and specific to vocabulary instruction in core reading programs.

The purpose of vocabulary instruction should be for communication in authentic situations (Andrews, 2006). Delivering instruction through the basic model of the communicative approach is one way this can be accomplished. The fact that English learners in this study were required to interact and work together to complete graphic organizers provided additional vocabulary exposure to aid acquisition of the new vocabulary words (Ballman et al., 2001; Echevarria et al., 2008; Garcia & Beltran, 2003; Gersten et al., 2007; Hernandez, 2003; Larsen-Freeman, 2007; VanPatten, 2003; Vygotsky, 1978). This study provided multiple opportunities for students to communicate, and that communication was centered on vocabulary terms. This was a powerful way to blend peer interaction with specific vocabulary words from the core reading program. Teachers need to consider peer interaction as more than a "think pair share" moment and incorporate structures and tasks that require authentic use of extended conversation. Communication is enhanced when students work together to accomplish a specific task. Providing communicative endeavors in the classroom facilitates meaningful levels of conversation. Focusing that communication on vocabulary words from core reading programs contributes to multifaceted discussion about the vocabulary that needs to be learned, leading to successful vocabulary acquisition for English learners. As English learners acquire more vocabulary, their linguistic and communicative capabilities increase. The goal of the communicative approach of language teaching is to develop

learners into competent English speakers who can navigate the complexity of communication that goes beyond basic word knowledge and is infused into all facets of their lives, leading to success and fulfillment in all their endeavors.

When teachers, and core reading programs, for that matter, use instruction that ignores needs of English learners there is a great disservice done to students. The number of English learners, especially those of Hispanic descent, are growing each year with an increase of 3% over the past decade (Remeseira, 2013). Teachers and publishers alike need to be sensitive to the English learners that cross the doorways of our educational institutions. Ignoring their needs creates problems that are often manifest negatively in society. English learners have the right to receive instruction that meets their needs and is beneficial to their academic success. Using methods that are proven in the research to be effective instructional tools is one way to be sensitive to their learning styles and specific needs, and using the communicative approach acknowledges their culture and strengths while giving them authentic opportunities to learn the language. Lacking instructional techniques that honor them as individual students is the deficit model of thinking and is detrimental to everyone. Teaching vocabulary in ways that is most beneficial for English learners is one small step toward their overall language acquisition.

This study demonstrated an effective process in which teachers engaged English learners in active and meaningful learning of new vocabulary. Vocabulary knowledge is crucial to academic success. Educators can no longer ignore the importance of vocabulary instruction for English learners—the stakes are too high.

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APPENDICES

Appendix A

Description of Language Proficiency Levels

UALPA Explanations for Proficiency Levels

(Adapted from WIDA Consortium, 2007)

At the given level of English language proficiency, English language learners will process, understand, produce or use:

5- Fluent
o specialized or technical language of the content areas
o a variety of sentence lengths of varying linguistic complexity in extended oral or written discourse, including stories, essays or reports
o oral or written language approaching comparability to that of English proficient peers when presented with grade level material

4- Advanced
o specific and some technical language of the content areas
o a variety of sentence lengths of varying linguistic complexity in oral discourse or multiple, related sentences or paragraphs
o oral or written language with minimal phonological, syntactic or semantic errors that do not impede the overall meaning of the communication when presented with oral or written connected discourse with sensory, graphic or interactive support

3- Intermediate
o general and some specific language of the content areas
o expanded sentences in oral interaction or written paragraphs
o oral or written language with phonological, syntactic or semantic errors that may impede the communication, but retain much of its meaning, when presented with oral or written, narrative or expository descriptions with sensory, graphic or interactive support

2- Emergent
o general language related to the content areas
o phrases or short sentences
o oral or written language with phonological, syntactic, or semantic errors that often impede the meaning of the communication when presented with one- to multiple-step commands, directions, questions, or a series of statements with sensory, graphic or interactive support

1- Pre-Emergent
o pictorial or graphic representation of the language of the content areas
o words, phrases or chunks of language when presented with one-step commands, directions, WH-, choice or yes/no questions, or statements with sensory, graphic or interactive support
o oral language with phonological, syntactic, or semantic errors that often impede meaning when presented with basic oral commands, direct questions, or simple statements with sensory, graphic or interactive support

Appendix B

Material for Treatment Group

Weekly Schedule for Vocabulary Intervention

Materials: Core reading program which contained the reading passages; Mastery tests; Weekly quizzes; Composition notebook; Vocabulary Book, which contained all of the graphic organizers used as a class and as partners; flash drive, which contained the PowerPoint game templates, the pictures/nonlinguistic representations for the vocabulary words, and a basic description of the word for the teachers to use as needed

Day 1:
The weekly quiz of vocabulary words from the core reading program story is administered by teacher.
Teacher provides an explicit description, explanation, or example of each word with a non-linguistic representation.
Students restate the description in their own words. They write their restatement in the composition notebook.

Day 2:
Word association activity: Relating the word to a word or phrase the students are already familiar with. For example, if one of the new words in a given list was *virtuoso*, the association would be created by asking the question, "Which word goes with piano? (*virtuoso*). Explain why." Students should also be given the opportunity to associate the word with things known to them from their own cultures and backgrounds.
Students create a picture, symbol, or graphic to illustrate the vocabulary word.

Day 3 and 4:
Peer-mediated task-based activities are used. These are activities that provide time for students to interact and discuss the words with each other. Students complete a vocabulary graphic organizer for each vocabulary word, working in partners. One partner is the reporter, the other is the recorder. These roles alternate between the partners.

Day 5:
Review games are played, which include two PowerPoint template games: Jeopardy and $100,000 Pyramid. Weekly quiz is administered.

Note:
For weeks that only have 4 days, there will only be one day of task-based activities.

*Schedule that was provided to the intervention teachers

Graphic Organizer for Use with Vocabulary Task-based Activity.

Word:			
description		picture	
example		nonexample	
word	*prefix*	*base word*	*Suffix*

Word Analysis Template

word	prefix	base word	suffix

Definitions Provided to Treatment Teachers for Their Use

The Red Kayak

grumbled: said in an unhappy way
compressions: push down on someone's chest to help their heart beat
insistently: kept doing it; didn't stop
minute: 60 seconds of time
normally: done the way you always do it
neutral: when an engine is running but not moving
intentionally: meant to do it

Thunder Rose

constructed: built; made
pitch: black as tar, like the road; very dark; the black material on a road
devastation: damage; destruction; things ruined or destroyed
daintily: very carefully and prettily
lullaby: a song to put a baby to sleep
thieving: stealing; taking things that don't belong to you
veins: the tubes that carry the blood in your body

Island of the Blue Dolphins

lair: a place where an animal may live
ravine: a small canyon; a place in the land where there are steep sides and a narrow
bottom
shellfish: fish with shells or hard coverings
gnawed: chewed
headland: a high place
kelp: a plant that grows in the ocean
sinew: something in your body that is like a little rope that holds your bones to your
muscles

Satchel Paige

confidence: you know you can do it
windup: the moves someone does just before throwing a ball
fastball: a ball thrown fast and straight
outfield: in the game of baseball, the part of the field that is past the bases
mocking: making fun of someone
weakness: something that is difficult for you; something you don't do well
unique: different than anything else

Ten Mile Day

surveying: measuring the land
barren: empty; nothing there, bare
previous: before
prying: moving something that is very tight and hard to move; moving a difficult thing with a special tool
lurched: jerked; moved roughly, not smoothly
deafening: very loud

At the Beach

driftwood: a piece of wood that is floating on the water
hammocks: pieces of material to lie on that are tied between 2 trees
tweezers: small tool with two sides that pinch together to hold something small
algae: a plant that grows in the water that doesn't have leaves or roots
sea urchins: a small animal that lives in the ocean that has a shell covered with poky spines
concealed: hidden
sternly: in a strict way
lamented: felt bad about

Hold the Flag High

canteen: something to carry water in
glory: when you are praised or honored for doing something important
stallion: horse
Confederacy: a group of states that wanted to be apart from the United States
quarrel: a disagreement; argument; a fight using just words
rebellion: a fight against something
Union: all the United States together; or the states that wanted the country to stay together

The Ch'i-lin Purse

gratitude: thankfulness
behavior: how you act
sacred: very important to someone; special
benefactor: someone who helps someone else
procession: where a lot of people walk together
distribution: pass something out to everyone; give something to everyone
recommend: tell you that it's a good thing to do

A Summer's Trade

hogan: a round house made of dried mud that Native Americans live in
bandana: a small scarf worn on the head or neck
mesas: flat mountains
Navajo: a Native American tribe
jostled: pushed; bumped
turquoise: a blue rock used to make jewelry
bracelet: something worn around the wrist

The Midnight Ride of Paul Revere

fearless: not afraid
glimmer: little light
somber: serious
fate: what's going to happen
lingers: stays for a little while
magnified: made to look bigger
steed: horse

The Fabulous Perpetual Motion Machine

applauds: claps
project: something you are working on or making
fabulous: very good
browsing: looking around at things
inspecting: looking at something very carefully

Leonardo's Horse

architect: someone who designs buildings
depressed: sad
philosopher: someone who thinks about things
fashioned: made in a special way
midst: in the middle of doing something
bronze: a metal
cannon: a large gun that is on a cart that shoots large balls

The Dinosaurs of Waterhouse Hawkins

mold: a container for making a shape
workshop: a place where you work
proportion: the size of something compared to something else
tidied: cleaned
foundations: bases of a statue
erected: built
occasion: special day or special thing

Mahalia Jackson

choir: a group of people singing
barber: someone who cuts hair
teenager: someone who is between 13-19 years old
religious: having to do with church
slavery: when a person is owned by someone else
appreciate: be thankful for
released: sold to people

Special Effects in Film and Television

prehistoric: long ago
landscape: what the land looks like
background: behind the main things
miniature: small
reassembled: put together again

Sample Pictures on the Flash Drive for Use by Treatment Teachers

<u>At the Beach</u>

driftwood

hammock

tweezers
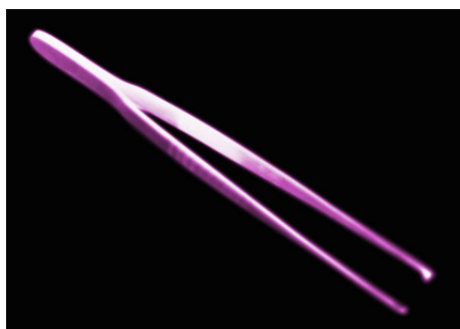
algae

sea urchin

concealed
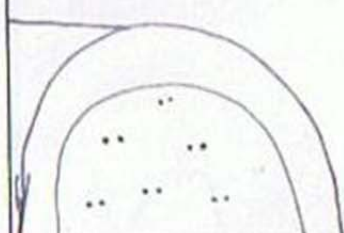
sternly

Appendix C

Samples from Student Notebooks

surving

Barren

Previous

Prying

Surveying: measureing something
Barren: nothing there
previous: back
Prying: using a special tool to move something hard
luched: pulling somebody out of there feet
Deafening: to loud
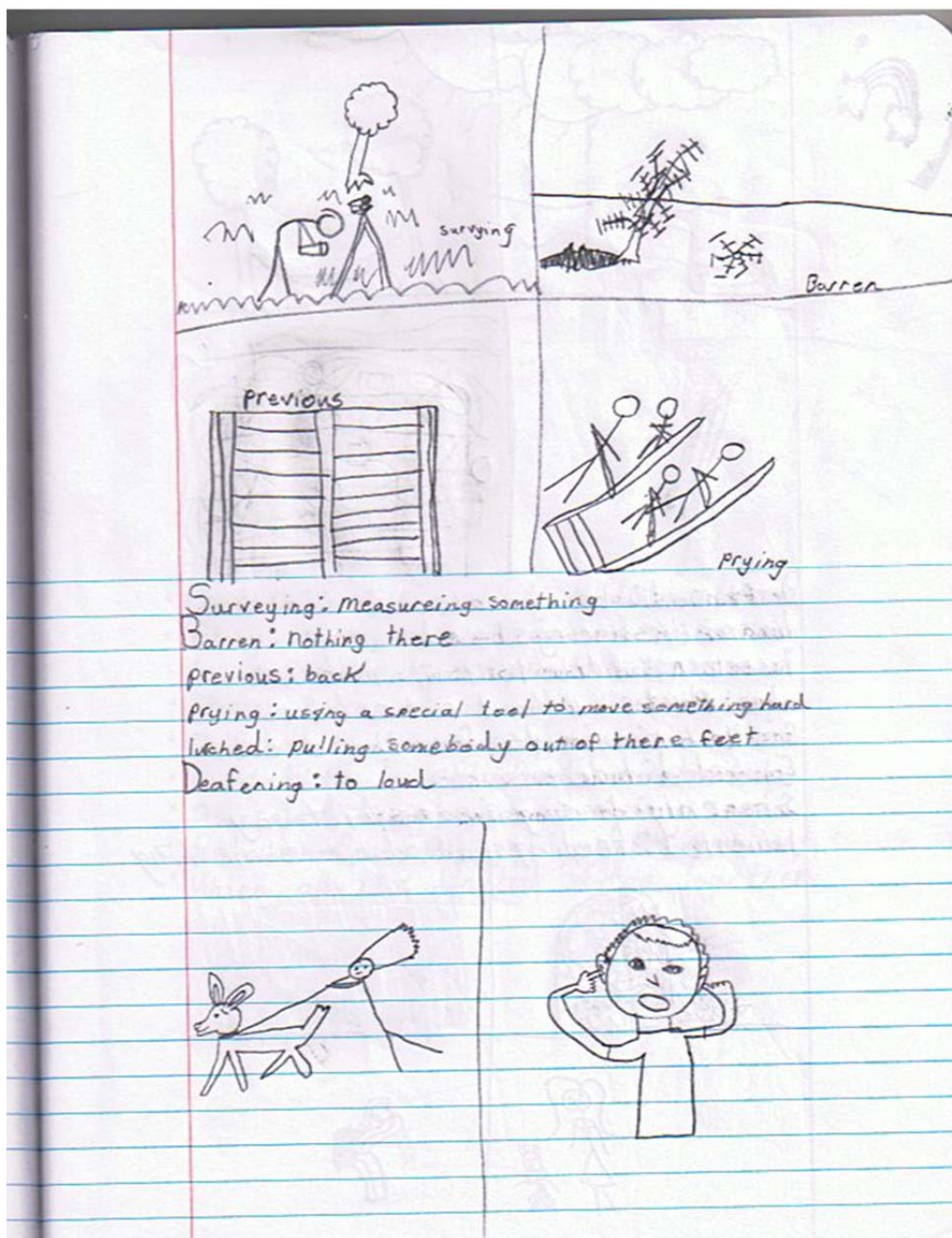
Word: lair

description lair is a hang out for wolves

picture

example The hyinas lair is on the cliff

non-example Clubhouse

word	prefix	base word	Suffix
lair		lair	

Ten Mile Day

Sept 28, 2010

word	prefix	base word	suffix
Surveying		Survey	ing
barren		barren	
Previous		Previous	
Prying		Pry	ing
lached		lach	ed
Deafening		Deafen	ing

Appendix D

PowerPoint Review Games

315

Jeopardy

B	E	A	C	H
$100	$100	$100	$100	$100
$200	$200	$200	$200	$200
$300	$300	$300	$300	$300

Final Jeopardy

$100 Question

A piece of wood that was floating on the water.

$100 Answer

driftwood

$200 Question

Pieces of material to lie on that are tied between 2 trees.

$200 Answer

hammock

$300 Answer

Sea urchins

Appendix E

PowerPoint Presentation for Teacher Training

Vocabulary Intervention Training

Rationale

- ELs struggle with vocabulary
  - Importance of vocabulary
  - Research on vocabulary

- Comprehension
  - Relationship of vocabulary to comprehension

- CRTs
  - Our district is struggling
  - Our state is struggling

Overview of Intervention

- Use their basals
- Explicit instruction of vocabulary
- Descriptions rather than definitions
- Non-linguistic representation
- Word association
- Word analysis
- Task-based activity; working together
- Graphic organizer
- Review game

Day 1

- Administer pretest for weekly tested words
- Explicit explanation of each vocabulary word
  - Kid friendly description
  - Non-linguistic representation
- Students write their own explanation in their notebooks

Day 2

- Word association activity
  - Teacher generated questions to associate vocabulary word with other related words
  - Students associate vocabulary word with words they know
- Word analysis
  - Determine if the word has affixes, use template
- Students write their own non-linguistic representation in their notebooks

Day 3-4

- Students work on graphic organizer in pairs
  - Reporter, recorder
  - Overview of graphic organizer
    - Give a word
    - Teachers in partners work through the graphic organizer

Day 5

- Review activity
  - Pyramid Game: used with small number of words
  - Jeopardy Game: used to review not just that week's words, but others as well
- Assessment
  - Posttest of weekly vocabulary words

Materials

- Pre- and posttests first and last day of intervention, and weekly pre- and posttests provided
- Descriptions and non-linguistic representations provided
- Student notebooks provided
- Graphic organizer provided
- Game template provided
- Word analysis template provided
- Non-linguistics representations provided

Process

- I will train classes
- I will check the pre- and posttests related to the intervention
- Observations by me, 4-5 times during the study time
- Weekly logs: I'll provide them and collect them

Data collection

- Everything will be coded to ensure anonymity
- I will gather the UALPA scores for each student
- I will record the 4th grade CRT scores for each student
- I will ask for a copy of the weekly vocabulary test scores and also scores from the vocabulary section of unit tests given by the teacher from the basal tests
- I will gather DIBELS results from September and January

Appendix F

Measures

Student Name_____ **Date**_____

Teacher Name_____

Island of the Blue Dolphins

Pretest/Posttest

Directions
Find the word or words with the same meaning as the underlined word. Choose the correct answer.

1. The tourists went to the <u>headland</u>.
A land on top of a cliff
B land surrounded by wild grasses
C land that sticks out into the sea
D land covered with rocks

2. We saw many <u>shellfish</u> during our visit.
A sea creatures
B beach pebbles
C water birds
D river stones

3. The hiker found a <u>lair</u>.
A decayed tusk
B forgotten trail
C ground nest
D animal's den

4. The dog <u>gnawed</u> the stick.
A fetched
B chewed
C ignored
D dodged

5. The water was full of <u>kelp</u>.
A sea plants
B flowing lava
C small reptiles
D bright coral

6. Her moccasins were made with real <u>sinew</u>.
A antlers
B cord connecting muscle and bone
C minerals
D thread made from sheepskin

7. A creek flowed through the <u>ravine</u>.
A distant mountains
B dark cave
C dense forest
D deep valley

Name _____   Date_____

Teacher _____

Research Mastery Test

Directions: Find the word or words with the same meaning as the underlined word. Choose the correct answer.

1. The water was full of <u>kelp</u>.
A sea plants
B flowing lava
C small reptiles
D bright coral

2. The hiker found a <u>lair</u>.
A decayed tusk
B forgotten trail
C ground nest
D animal's den

3. We saw a <u>glimmer</u> in the distance.
A dim light
B flowing creek
C foggy valley
D frightening sight

4. **I <u>recommend</u> the pie.**
A appreciate
B heartily suggest
C deserve
D graciously offer

5. He <u>reassembled</u> his model after it fell on the floor.
A threw away
B made whole again
C repacked carefully
D cleaned hurriedly

6. The <u>landscape</u> was covered with wildflowers.
A mountain range
B dense thicket
C view of scenery on land
D end of a peninsula

7. Her <u>behavior</u> is odd.
A nickname
B way of acting
C pronunciation
D way of dressing

8. This place is <u>sacred</u>.
A holy
B impressive
C damaged
D worthless

9. It was an <u>occasion</u> that everyone enjoyed.
A familiar occurrence
B skilled performance
C planned meeting
D special event

10. **We saw many <u>shellfish</u> during our visit.**
A sea creatures
B beach pebbles
C water birds
D river stones

11. **She skipped <u>daintily</u> across the yard.**
A hurriedly
B gracefully
C promptly
D constantly

12. He was <u>astonished</u>.
A surprised
B worried
C satisfied
D dismissed

13. **Kay enjoys playing in the <u>outfield</u>.**
A part of a baseball field closest to first base
B the mound that the pitcher stands on
C part of a baseball field farthest from the batter
D shelter containing the players' bench

14. The <u>steed</u> walked across the field.
A high-spirited horse
B riderless horse
C unsaddled horse
D bad-tempered horse

15. **Her handwriting is <u>unique</u>.**
A dainty
B special
C sloppy
D acceptable

16. The students looked at <u>algae</u> under the microscope.
A simple plants
B crystals
C fossil fragments
D chemicals

17. He got a new <u>hammock.</u>
A small hammer
B hanging bed
C storage pouch
D cloth shelter

18. The memorial was <u>erected</u> last year.
A built
B expanded
C designed
D presented

19. His surroundings were <u>somber</u>.
A unfamiliar
B gloomy
C uncomfortable
D decaying

20. She entered the <u>workshop</u>.
A room where items are sold
B room where workers plan meetings
C room where items are made
D room where workers are trained

21. I <u>recommend</u> the pie.
A appreciate
B heartily suggest
C deserve
D graciously offer

22. Police <u>released</u> a picture of the man they were looking for.
A displayed
B threw out
C approved
D made public

23. The memorial was <u>erected</u> last year.
A built
B expanded
C designed
D presented

24. We saw a <u>miniature</u> pony.
A sturdy
B saddled
C sleek
D small

25. She talked to the dog <u>sternly.</u>
A uneasily
B harshly
C frantically
D adoringly

26. We watched the <u>procession</u>.
A people playing a game
B audience cheering
C group moving together
D workers planting crops

27. The work I did was in <u>proportion</u> to the pay I received.
A correct installation among parts
B realistic exhibition of color
C correct relation between items
D realistic demonstration of movement

28. He doesn't <u>appreciate</u> expensive clothes.
A purchase
B desire
C value
D mend

29. The <u>distribution</u> of clothing was done quickly.
A display
B tearing up
C inspection
D giving out

30. The gifts for her were <u>concealed.</u>
A hidden
B expensive
C astonishing
D purchased

(Note: the two duplicate questions are highlighted)

Appendix G

Logs for Treatment and Control Teachers

Vocabulary Information for Treatment Group

Intervention Information Log

Week/Date_____

Place a check by the statement that indicates how the intervention went this week.

_____ Intervention went on schedule; 5 days

_____ Intervention went for 4 days

          _____ school holiday

          _____ other interruption (please describe below)

          _____

_____ Intervention went for 5 days, but times were interrupted.

          _____ Day 1 interrupted. Time lost: _____

          _____ Day 2 interrupted. Time lost: _____

          _____ Day 3 interrupted. Time lost: _____

          _____ Day 4 interrupted. Time lost: _____

          _____ Day 5 interrupted. Time lost: _____

Control Vocabulary Lesson Information Log

Date	Vocabulary Lesson: Story, procedures, etc.	Materials, Activities, etc.	Time spent

Notes:

Appendix H

Observation Sheet

Treatment Observations

Teacher _____

Day 1 Date: _____ Time spent: _____
a. Pretest administered   1a _____
b. Explicit explanations of words by teacher   1b _____
      1. My definitions used   1b1 _____
c. Non-linguistic representations by teacher   1c _____
      1. My pictures used   1c1 _____
d. Student descriptions in their own words in their notebooks   1d _____

Day 2 Date: _____ Time spent: _____
a. Word association questions posed for each word   2a _____
b. Student associations developed   2b _____
c. Word analysis performed   2c _____
      1. My template used by teacher   2c1 _____
      2. My template used by students   2c2 _____
d. Student non-linguistic representations in their notebooks   2d _____

Day 3: Date: _____ Time spent: _____
a. Students working in partners   3a _____
b. Students rotating roles   3b _____
c. Graphic organizer completed for each word   3c _____

Day 4: Date: _____ Time spent: _____
a. Students working in partners   4a _____
b. Students rotating roles   4b _____
c. Graphic organizer completed for each word   4c _____

Day 5: Date: _____ Time spent: _____
a. Review game played   5a _____
      1. Correct game played   5a1 _____
      2. My template used   5a2 _____
b. Students in partners or teams   5b _____
c. Post-test given   5c _____

X = present
0 = not present

Observations for Comparison Teachers

Teacher _____

Day 1 Date: _____ Time spent: _____
a. Pretest administered   1a _____
b. Explicit explanations of words by teacher   1b _____
c. Non-linguistic representations by teacher   1c _____
d. Student descriptions in their own words in their notebooks   1d _____

Day 2 Date: _____ Time spent: _____
a. Word association questions posed for each word   2a _____
b. Student associations developed   2b _____
c. Word analysis performed   2c _____
d. Student non-linguistic representations in their notebooks   2d _____

Day 3: Date: _____ Time spent: _____
a. Students working in partners   3a _____
b. Students rotating roles   3b _____
c. Graphic organizer completed for each word   3c _____

Day 4: Date: _____ Time spent: _____
a. Students working in partners   4a _____
b. Students rotating roles   4b _____
c. Graphic organizer completed for each word   4c _____

Day 5: Date: _____ Time spent: _____
a. Review game played   5a _____
b. Students in partners or teams   5b _____
c. Post-test given   5c _____

X = present
0 = not present

CURRICULUM VITAE

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Education

2013	**Doctorate in Education (PhD),** Utah State University, Logan, UT Emphasis: Curriculum and Instruction Dissertation: An Exploratory Study of Purposeful and Strategic Communicative Techniques to Teach Vocabulary from Core Reading Programs to English Learners Chair: Dr. Cindy Jones
May 2005	**Masters in Second Language Teaching,** Utah State University, Logan, UT Project: Success in the Second Language Classroom Chair: Dr. Tricia Gallagher-Geurtsen
May 1981	**Bachelor of Arts in Elementary Education,** Utah State University, Logan, UT Cum Laude

Endorsements

2007	**Reading Endorsement,** Utah State University, Logan, UT
1999	**ESL Endorsement,** Weber State University, Ogden, UT

Certifications/Licenses

1981-Present	Utah State Licensed Educator
2011-Present	WIDA Trainer
2011-Present	National Trainer for NEA English Language Learners Culture, Equity & Language Training
2009-Present	Trainer of Trainers Certification for UALPA
2005-2006	Accelerated Learning Cycle Instructional Model
2004	Certified SIOP (Sheltered Instruction Observation Protocol) Presenter

Teaching Experience

2011-Present	**Teacher Specialist for Title III and Migrant Programs** **Ogden City School District**
2007-Present	**Instructor for ESL Endorsement: Weber State University/Ogden School District; Granite School District**

	EDUC 4740 Building School Partnerships with ESL/Bilingual Families
	EDUC 5770 Field Experience in ESL/Bilingual Education
	ENGL 4410: Strategies and Methodologies for English Language Learners
	ENGL 4420: Phonology and Syntax
1989-2011	**Teacher in Ogden City School District**
	Ogden, UT
2011	Instructional Coach, Odyssey Elementary
2008-2011	Alternative Language Services (ALS) Coordinator, Odyssey Elementary
	Assignments in addition to regular classroom teacher:
2005-2008	ALL (Newcomer) Teacher
2000-2004, 2006-2007	Summer School/Migrant Teacher
1999-2002	ESL Teacher at Edison Elementary
1984-1989	**Teacher in Carbon County School District**
	Price, Utah
1981-1983	**Teacher in Cache County School District**
	Logan, UT

Administrative/Leadership Experience: Ogden City School District

2012-present	Utah State School Support Team
2011	Instructional Coach, Odyssey Elementary
2010-present	Supervisor of Migrant Summer School Administrative Interns for Ogden City School District
2010-2012	Professional Learning Teams Supervisor for Ogden City School ESL Endorsement Program
2010-present	Ogden District Appraisal Team
2008-2011	Alternative Language Services Coordinator, Odyssey Elementary
Summer 2010	Principal for Ogden School District Summer School Program
2004-2008	Alternative Language Services Coordinator, Lewis Elementary
2001-2004, 2007-2012	Teacher Mentor
Summer 2003	Lead Teacher for Lewis Summer School
1999-2002	Alternative Language Services Coordinator, Edison Elementary

Presentations

November, 2011	Mieure, D. & Jones, Cindy D. (2011, November) Teaching Vocabulary to EL Students Using Peer-Mediated and Task-Based Activities Association of Literacy Educators and Researchers, Richmond, VA
January, 2011	Mieure, D. (2011, January) Teaching Academic Vocabulary to ESL Students Using Peer Mediated and Task Based Activities. Hawaii International Conference on Education, Honolulu, HI
April, 2005	Mieure, D. (2005, April). Literacy in the ESL Classroom. Paper presented at the Languages, Philosophy, and Speech Communications Student Research Colloquium, Utah State University, Logan, UT

Trainings Presented

April 2013	NEA English Language Learners Culture, Equity & Language Training, Maine Education Association; Portland, Maine
February 2013	NEA English Language Learners Culture, Equity & Language Training, California Education Association North; San Jose, CA
2010-Present	Utah Academic Language Proficiency Assessment trainings, Ogden City Schools
2004-Present	SIOP (Sheltered Instruction Observation Protocol) trainings, Odyssey Elementary, Lewis Elementary, James Madison Elementary, Ogden, UT
February, 2010	Using Realia in the Classroom, ESL Conference, Ogden City Schools and Northern Utah Curriculum Consortium
December, 2009	Modeling Instruction in English Language Development, Dee Elementary, Ogden, UT
June, 2009	Motivating the Unmotivated Student, Ogden City Summer Institute
November, 2006	Comprehension Strategies, Ogden City Professional Plus Program, Ogden, UT
March, 2006	AL Cycle, Northern Utah Curriculum Association, Ogden, UT
April, 2005	Literacy Centers in the Classroom, Ogden Foundation Literacy Centers Project, Ogden, UT
August, 2001	ESL in the Classroom, Ogden City Alternative Languages Office, Ogden, UT
March, 2000	Math Strategies, Ogden District Math Inservice, Ogden, UT

Honors and Awards

January, 2010	Research Award from Center for Women and Gender Studies, (Utah State University), $500
November, 2010	Graduate Student Travel Award for Presentation (Utah State University), $300
	Matching Funds from College of Teacher Education and Leadership, (Utah State University), $300
1978	Superior Student Scholarship (4 year scholarship), Utah State University, Logan, UT

Professional Organizations

2004-Present	National Association of Multicultural Education
2009-2010	Ex-Oficio President, Utah State Chapter of National Association of Multicultural Education
2008-2009	President, Utah State Chapter of National Association of Multicultural Education
2007-2008	President-elect, Utah State Chapter of National Association of Multicultural Education
2004-2007	Secretary, Utah State Chapter of National Association of Multicultural Education
1981-Present	Utah Education Association, National Education Association
2002-2004	Representative for Lewis Elementary, Ogden Education

	Association
2000-2002	Representative for Edison Elementary, Ogden Education Association
1989-1990	Representative for Mountain View Elementary, Ogden Education Association
1999-2000	TESOL (Teachers of English to Speakers of Other Languages)

Committees

2003-2008	Lewis Elementary CCLC (21st Century Community Learning Centers) Advisory Board
2005	Ogden District Math Curriculum Block Revision Committee
1999-2002	Ogden District Crisis Intervention Team
1999-2000	Ogden District Alternative Language Services Committee
1999-2000	Ogden District Strategy 7 Committee for Implementation of the District Mission Statement