Coiro, Beverly. Robust Vocabulary Instruction for English Language Learners in Collaboration with the Mainstream Classroom Teacher (2012)

The purpose of this study was to determine if Beck, McKeown, and Kucan's model of direct vocabulary instruction is an effective teaching tool for preteaching science and social studies vocabulary to second grade English language learners in collaboration with the mainstream classroom teacher. The research method was an action research project in second grade ESL pull-out sessions. The qualitative data collected consisted of a personal teacher journal, a student observation journal, and classroom teacher interview and observations. The quantitative data included the findings from the pretest, posttest, and delayed posttest. The main findings were: 1) Beck et al.'s model of robust vocabulary instruction seems to work as a method to preteach the targeted academic vocabulary from science and social studies texts and 2) Collaboration with the classroom teacher allows both the teachers and the students to connect the curriculum of the mainstream classroom and the ESL pull-out session.

PRETEACHING SCIENCE AND SOCIAL STUDIES VOCABULARY USING THE RICH AND INTENSIVE METHOD OF VOCABULARY INSTRUCTION

by

Beverly Coiro

A Capstone submitted in partial fulfillment of the requirements
for the degree of Master of Arts in English as a Second Language

Hamline University

St. Paul, Minnesota

July, 2012

Committee:

Ann Mabbott, Primary Advisor
Bonnie Swierzbin, Committee Chair
Valerie Shaw, Peer Reader

ACKNOWLEDGEMENTS

I am very grateful to Ann Mabbott, my primary advisor, and Bonnie Swierzbin, committee chair, for their guidance, insights, time, patience, and encouragement. To my peer reader, Valerie Shaw, thanks for your sharp eye and your sharp wit. You kept me laughing and grounded throughout the process. A loving thank-you to my husband John for all the things you did so I could have the time to work on my capstone. Finally, to my English language learners, I hope you never lose your delight in everything that is new.

TABLE OF CONTENTS

Chapter One: Introduction…….1

Vocabulary Learning and English Language Learners...……....1

Demographics…….....2

Vocabulary Acquisition……..……4

Robust Vocabulary…….6

ESL Pull-Out Program.……..7

Purpose of the Research…….9

Background of the Researcher…….....10

Guiding Questions…….....13

Chapter Overviews...……13

Chapter Two: Literature Review…… 15

Vocabulary Development……..15

Collaborative Teaching…….…….24

Professional Learning Community……...29

Gap in the Research……..30

Chapter Summary…….32

Chapter Three: Methodology……...34

Overview……..34

Research Design……...35

Participants……...37

Research Site……....39

Procedure for Instruction……..40

Curriculum……..……..42

Cycles……..…..47

Assessment……..…..48

Verification of Data……..50

Ethics……50

Chapter Summary…….51

Chapter Four: Results……...52

Pretesting…….....52

Posttesting……...……..53

Delayed Posttesting……..…....53

Cycle One: Scientific Investigations.……..….….....54

Cycle Two: Simple Machines.…...…….....60

Cycle Three: Landforms…….…….…….……...…...…..64

Collaboration..…….…...….…..69

Chapter Five: Conclusion……..…….…75

Major Findings…….....75

Implications…….....77

Limitations……....79

Further Research…….……..80

Personal Growth…….…...…...81

Appendices…….…...…83

Appendix A: WIDA Performance Definitions.....……..……..……....83

Appendix B: Cycle One Pretest, Posttest, and Delayed Posttest on Scientific

Investigations……...85

Appendix C: Cycle Two Pretest, Posttest, and Delayed Posttest for Simple Machines……...88

Appendix D: Cycle Three Pretest, Posttest, and Delayed Posttest for Landforms……...…….….91

Appendix E: Post Research Interview Questions for Classroom Teacher…….…..94

Appendix F: Consent Letter…….…96

References……...…….…....99

LIST OF TABLES

Table 1 Study Participants……37

Table 2 W-APT/ACCESS Scores for Study Participants…….39

Table 3 Vocabulary Words for Cycle One: Scientific Investigations….……..55

Table 4 Student Performance on Tests for Science Vocabulary over Scientific Investigations……...56

Table 5 Number of Students out of Four Scoring at Percentage Levels for All Tests over Scientific Investigations……...60

Table 6 Vocabulary Words for Cycle Two: Simple Machines….……61

Table 7 Student Performance on Tests for Science Vocabulary over Simple Machines..61

Table 8 Number of Students Out of Four Scoring at Percentage Levels for All Tests over Simple Machines……..64

Table 9 Vocabulary Words for Cycle Three: Landforms…….……65

Table 10 Student Performance on Tests for Social Studies Vocabulary over Landforms……...65

Table 11 Number of Students Out of Four Scoring at Percentage Levels for All Tests over Landforms.……..68

CHAPTER ONE: INTRODUCTION

Almost forty years ago, Wilkins wrote that "without grammar very little can be conveyed, without vocabulary *nothing* can be conveyed" (1972 as cited in Milton, 2009, p.3). This statement succinctly summarizes what all English as a second language (ESL) teachers know: English language learners (ELLs) must acquire a large vocabulary in order to be effective communicators, readers, and writers. This knowledge logically leads the ESL teacher to ponder the question of how English language learners learn vocabulary and which method or methods are best practice for teaching vocabulary to ELLs.

Vocabulary Learning and English Language Learners

This question of vocabulary acquisition is an important one as evidenced by the National Reading Panel's decision to include vocabulary as a subgroup under comprehension in its report on teaching reading to children (National Institute of Child Health and Human Development, 2000). The National Literacy Panel advocates that teachers target vocabulary when working with language-minority children as part of the curriculum for literacy in the classroom (August & Shanahan, 2006).

According to Pressley (2006), it seems likely that most children in early childhood learn vocabulary implicitly through listening and interacting with others in their environment as well as listening to the radio and the television. As children grow older and learn to read, some new vocabulary is implicitly added through reading (Pressley,

2006). However, there are studies which indicate that ELLs are not as likely as native English speakers to increase their vocabulary knowledge implicitly even with extensive reading (Proctor, Carlo, August, & Snow, 2005) and that there is a need for explicit vocabulary instruction so that ELLs can successfully add to their vocabulary knowledge (August, Carlo, Dressler, & Snow, 2005; Francis, Rivera, Lesaux, Kieffer, & Rivera, 2006).

Vocabulary learning is an integral component of language acquisition and vocabulary specialists generally agree that lexical competence is the critical element in communicative competence (Decarrico, 2001). The National Literacy Panel on Language-Minority Children and Youth included vocabulary in their list of individual-level predictors of reading comprehension (August & Shanahan, 2006). Clearly, vocabulary is important in listening and reading comprehension and it may indeed be the most important language piece for English language learners (Gass & Selinker, 2008). Vocabulary knowledge has been shown to have a high correlation with other factors that predict success in school such as reading comprehension and writing (Zwiers, 2008). It should be noted here that learning language structure and function are also critical components of acquiring English, but the focus of this study is vocabulary.

Demographics

These facts about our English language learners showcase the need to address their learning issues. Since 1991 the school population in the United States has grown 12%, but the population of English language learners has grown 105% (Hiebert & Kamil, 2005). There is the expectation that this population will continue to grow as evidenced by the fact that over the past 30 years the population of school-age children who speak a

language other than English has almost tripled from 3.8 million to 10.6 million (U.S. Department of Education, National Center for Education Statistics, NCES 2007). In 2009 the total number of students who spoke a language other than English in the home was 11.2 million (U.S. Department of Education, National Center for Education Statistics, NCES 2011). English Language Learners now make up close to 20% of the public school population in the United States (Meyer, Madden, & McGrath, 2005). The U.S. Census projection is that by 2030, 40% of the school population will be made up of students whose home language is not English (Thomas & Collier, 2002).

Traditionally, immigrants have settled in large numbers in urban areas, but now we are seeing immigrants settle in smaller cities, suburban enclaves, and rural areas throughout the United States, and enrolling in schools that historically have not had to serve students with diverse linguistic needs (Kindler, 2002; Meyer et al., 2005; Zehr, 2008). Meskill, (2005) notes that by the year 2050 the population of English language learners is expected to double resulting in the fact that most teachers will have ELLs in their classroom in the future. The school system of the United States has been neither prepared nor educationally equipped to effectively deal with these learners as evidenced by the fact that the 41 State Educational Agencies that report on English language learners' success in reading comprehension tell us that only 18.7% of the students assessed scored above the state-established norm (Hiebert & Kamil, 2005). What these statistics portend for the future of English language learners is disheartening. In *The Condition of Education* publication for 2004, it was reported that ten per cent of students in the U.S. who spoke English at home failed to graduate high school, but 31% of language-minority students who spoke English as a second language failed to graduate

high school, and 51% of language-minority students who spoke English as a second language *with difficulty* [emphasis added] failed to graduate high school (U.S Department of Education, National Center for Education Statistics, 2004). Language-minority students who do not master academic English reading and writing face a limited future with less opportunity for jobs and earning power (August & Shanahan, 2006). These statistics show that as educators we need more and better information on how to teach this growing population of students.

Vocabulary Acquisition

The National Literacy Panel on Language-Minority Children and Youth advises that typical classroom curriculum alone is not sufficient instruction to promote vocabulary development for English language learners (August & Shanahan, 2006). This lack of vocabulary acquisition due to insufficient instruction is an example of Stanovich's (2008) theory of the "Matthew Effects" in which Stanovich applies the idea of Matthew 25:29—"the rich get richer and the poor get poorer." This means that students who begin school with a greater wealth of vocabulary, in terms of both amount and richness, tend to continue to acquire vocabulary at a faster rate and with greater ease than students who begin school with less vocabulary. English language learners are often in this latter category as they have not been exposed to much English vocabulary prior to beginning school and are often not explicitly taught vocabulary once they begin their formal schooling (Mancilla-Martinez, 2010). The ESL students that fall into this category may become poorer and poorer in vocabulary in relation to their native English-speaking peers (Biemiller, 2001).

Researchers vary in their estimates about the number of words that average native English-speaking school children in the U.S. learn in a year. Biemiller & Slonim (2001) estimate that before grade three the average native English-speaking student learns an average of between 800 and 900 words a year and that increases to 1,000 a year after grade two. By the end of grade two, the average student in the U.S. has acquired 6,000 root word meanings. Of particular concern is their finding that students in the lowest quartile of this population at the end of grade two had vocabularies of only 4,000 root words, the same number for average kindergarteners. According to Biemiller (2001), this gap is not filled in and these children never catch up to their peers and these children in the lowest quartile continue to acquire vocabulary at a lower rate. Adding to this issue is the knowledge that many children who struggle with reading comprehension due to a lack of vocabulary often do not derive enjoyment from reading, and so do not choose to read, decreasing their chances of acquiring new vocabulary through reading (Pressley, 2006; Beck, McKeown & Kucan, 2002). This is a matter of great concern as reading is crucial to understanding the world and our place in it.

Elementary-age English language learners face many challenges in trying to keep pace with their English-only peers in vocabulary acquisition. ELLs are less proficient at figuring out the meaning of unknown words from context as the number of unknown words within the text is likely to be high (Carlo, et al., 2004). Also, as ELLs often do not have a full grasp of English grammar, they are less inclined to be able to use linguistic clues to figure out the meaning of unknown words (Stoller & Grabe, 1995). What is to be done to help these English language learners overcome these challenges in vocabulary acquisition?

Robust Vocabulary

Beck, et al.'s model of vocabulary acquisition (2002) acknowledges the important role that vocabulary plays in reading comprehension and with that in mind created their method of *robust vocabulary instruction* for native English-speaking children lagging behind in vocabulary knowledge. This is a method for teaching vocabulary that utilizes various engaging activities that take students beyond one-dimensional definitions and offers students multiple and varied exposures to vocabulary. In this instructional model, vocabulary has been categorized into three tiers. Tier One is classified as basic high-frequency vocabulary not requiring much instructional attention in order for the student to ascertain meaning. Examples of Tier One words are clock, baby, run, and sun. Tier One words can often be taught through visuals, such as using a picture of a clock or baby, or by acting out actions like walking and running. Tier Two words are those words of high-frequency that can be found across a variety of domains. These words are more complex and nuanced than Tier One words and require more instructional attention and multiple exposures so that students have a strong and clear representation of these words. Beck et al. (2002) promote knowing these Tier Two words as the hallmark of a mature and rich vocabulary. Examples of Tier Two words are analyze, culture, interpret, and tradition. Tier Three words are words that are specific to a domain, considered to be of low frequency, and are best taught within the framework of the content area. Some examples of Tier Three words given by Beck et al. (2002) are antenna, metamorphosed, and entomologist. The authors contend that when these types of words appear in a language arts story it is possible to give a brief explanation of them as students do not need a detailed explanation in order to understand the story. However, if these words

appear in a science text in which the students are learning about insects, the importance of these words in understanding the science text is critical. It would seem then that more focus should then be paid to Tier Three words within a science text than would be paid to Tier Three words when they appear in children's literature.

Though Beck et al. (2002) created an instructional method for the general native English-speaking population in the mainstream classroom, can this approach be used with English language learners to preteach the academic vocabulary needed for communication in and understanding of the content in the mainstream classroom? Moreover, does collaboration between the ESL and the mainstream teacher in choosing the words that are to be pretaught help both teachers to focus on making connections between the ESL and mainstream classroom that benefit the English language learners in their acquisition of academic vocabulary? The idea of collaboration between the traveling ESL teacher and the classroom teacher is a fairly new concept (deJong, 1995), but it is one that merits more study as it holds promise for a more a integrated curriculum that would unite the ESL and classroom teacher and result in shared goals for their ESL students.

ESL Pull-Out Program

One of the most popular models for ESL instruction in the United States is the non-collaborative pull-out program as this is the least costly (Carrasquillo & Rodriguez, 1996). In the 2006-07 school year, 42 states in the United States reported that some districts within the state employed the pull-out program for their Language Instruction Educational Program (LIEP), and this number increased to 46 states for the 2007-2008 school year (Office of English Language Acquisition, Language Enhancement, and

Academic Achievement for Limited English Proficient Students, 2012). This non-collaborative pull-out program is one in which English language learners leave the mainstream classroom to go to the room where the ESL teacher instructs them in English language arts (Hruska, 2000; Office of English Language Acquisition, Language Enhancement, and Academic Achievement for Limited English Proficient Students, 2012). In this program the ESL teachers see students that are often scattered throughout a building or even many buildings resulting in ESL teachers seeing students for only one or two periods a day and for the remainder of the school day the students are in the mainstream classroom trying to learn curriculum alongside their English proficient classmates (Fu, Houser, & Huang, 2007). This is a challenging situation for all involved. The English language learners may feel lost because there seems to be no connection between the pull-out ESL class and the mainstream class. 'Chasing the wind' is an expression often used to portray the ELLs in this scenario: They don't appear to be moving forward, but are worn out from the effort of trying (Hruska, 2000). Additionally, the mainstream classroom teacher may wish that the ESL teacher could speed up the process of English acquisition for the ELLs so that these children could participate more fully in the regular classroom, and the ESL teacher may feel that the mainstream classroom teacher is not sufficiently trained to address the needs of the ELLs in the classroom (Fu, et al., 2007). This situation has caused tension even though all of the teachers want the same result: The ELLs are learning and growing within the school community (de Jong, 1995; Roessingh, 2004; Schnorr & Davern, 2005).

Though collaboration between the mainstream classroom teacher and the ESL teacher may be seen to be a positive force in the school system, there are several roadblocks to

achieving collaboration. Often there is no structure built into the teachers' schedule that would permit time for coordination of instruction to take place (Sakash & Rodriguez-Brown, 1995; Hruska, 2000). There is also the prevalent belief that ESL teachers do not require guidance in order to cultivate collaborative relationships and that simply finding cooperative mainstream teachers in a supportive school environment leads to successful collaboration (Arkoudis, 2003). One final issue to mention here is that ESL teachers are often marginalized within the school setting as the language minority program operates outside of the mainstream classroom and is viewed as secondary to the mainstream classroom content (de Jong, 1995). These may all be reasons that explain why collaborative programs are atypical and difficult to maintain over an extended period of time (Davison, 2006). Certainly all of these issues weighed heavily on my mind as I began my action plan of collaboration. Would it be possible to overcome the obstacles and together with the mainstream classroom teacher create a realistic and workable model for collaboration given the constraints of time imposed on the classroom teacher by a very busy school day and the constraints imposed on me of an itinerant schedule that required that I travel between four different schools in a school day. Within this model of collaboration I wanted to find out if ESL students would benefit from the *robust vocabulary instruction* created by Beck, et al. (2002) for the mainstream classroom student population when used as a preteaching strategy for academic vocabulary for English language learners.

Purpose of the Research

For the past two years I have been a traveling English as a Second Language (ESL) teacher for K-5 students in a large suburban school district. Many of my students have

been second and third-graders whose social English is fairly proficient. They are able to successfully communicate with their fellow classmates in any given social setting within the school day. Often the regular classroom teacher will comment on her surprise that my student is still receiving ESL services as the student's English seems to be on a par with a native English speaker. However, my students' classroom formal and informal assessments in science and social studies reflect another reality. My students' lack of command of the academic vocabulary needed in these two areas hinders their ability to understand the material, and therefore hinders their ability to participate fully in the classroom activities in science and social studies. The purpose of this research is to use Beck, et al.'s (2002) model of explicit vocabulary instruction to preteach Tier Two and Tier Three words found in science and social studies texts. I want to know if this method of instruction will help my ELLs to develop the academic vocabulary that is needed for communication in and understanding of the content of the mainstream classroom science and social studies. In addition, I want to know if collaboration between the ESL and the mainstream classroom teacher in choosing the words that are to be pretaught help both teachers to focus on making connections between the ESL and mainstream classroom that will result in learning benefits for the English language learners.

Background of the Researcher

My fascination with vocabulary and how one develops it began with my years as a high school Spanish teacher. Through professional development workshops and personal research I began to understand that vocabulary development was a complex and recursive enterprise that needed constant attention. When I began to teach Advanced Placement Spanish I saw the critical role that mature language played as my students were asked to

respond orally and in written text to prompts about scientific, political and social issues as part of the Advanced Placement test.

My interest in language and vocabulary acquisition continued as I began to volunteer and then teach Adult ESL classes. My students ranged in educational background from adults illiterate in their home language to students holding advanced degrees from their home country. The levels of proficiency in English also had a wide range from newcomers with no or very little English to students wishing to improve their academic reading and writing in English. One of my favorite classes in which I volunteered was the General Equivalency Diploma (GED) class. In this class adult students were studying science, math, history, and English in hopes of passing the GED exam in order to receive a diploma which is equivalent to a high school diploma. I was assigned to help native Spanish speakers work their way through the GED book. It was in this class that I clearly saw the stumbling block that a lack of mature word knowledge was for the students as they tried to process the information in each subject area. Though I was not aware at the time of Beck et al.'s categorization of Tier Two and Tier Three words, I did understand that my students were encountering many of the same words throughout all of their texts (Tier Two words) and were encountering words that were specific to a content area (Tier Three words). Both types of words required explicit instruction from me and various opportunities for exposure to these words so that the students could process the text and understand and respond to the questions that followed each section of text.

Last year I took a position in a school district as an itinerant ESL teacher for the grade levels of K-5. One of the schools I have been assigned to is a Title I school. In the past this school failed to meet Annual Yearly Progress (AYP) as dictated by the federal No

Child Left Behind Act of 2001. One of the measures taken to address this issue is that the school has adopted a state reading initiative program for language arts. The hope is that this program will provide the needed support and strategies to improve the students' scores on the yearly state test mandated by the No Child Left Behind Act of 2001. This reading initiative program model uses leveled readers so that each child may choose a book at his or her level and work in groups and also meet individually with the teacher to work on strategies. It was my initial plan to work on Tier Two vocabulary words within the language arts program with my students, but the structure of the reading initiative model made that impossible as my students were all reading different books. I decided then to use the Tier Two and Tier Three vocabulary in the science and social studies texts as each student has the same text and must master the same vocabulary in order to comprehend the text. Though Beck et al. (2002) classify Tier Three words as low frequency, I found that at the second-grade level Tier Three words within the science and social studies texts were important words that the students would need to learn well in order to understand the science and social studies concepts presented in the texts.

I wanted to take this idea of robust vocabulary instruction and collaboration with the mainstream teacher and find ways to efficiently and effectively integrate them within the science and social studies curriculum. This put me in the role of an action researcher in my own ESL pull-out sessions. My goal was to help my students build a strong foundation of academic vocabulary so that they could understand and use language that would afford them success in the academic content of science and social studies in the mainstream classroom. I was hopeful that through this research the mainstream classroom teacher and I could formulate a model of collaboration that realistically worked for both

teachers, and was beneficial in helping our English language learners develop the vocabulary needed for academic success.

Guiding Questions

The guiding questions for this study revolve around the idea of how to encourage and increase understanding of and oral production of Tier Two and Tier Three vocabulary words. Specifically, I pose the following questions: 1) Is the model of vocabulary instruction proposed by Beck, McKeown, and Kucan an effective method for preteaching Tier Two and Tier Three vocabulary words from science and social studies texts to second grade English language learners? and 2) Does collaboration between the ESL teacher and the mainstream classroom teacher in choosing the words to be pretaught help both teachers to focus on making connections between the ESL and mainstream classroom that will result in learning benefits for the second grade English language learners?

Chapter Overviews

In Chapter One I established the rationale and the importance of this research and why it should be conducted. The framework of the study was included along with the role, preconceptions, and beliefs of the researcher. Also included in this chapter was the background of the researcher. In Chapter Two I supply an examination of the literature applicable to vocabulary development and which strategies and methods support vocabulary acquisition. I also include a review of the literature germane to collaborative teaching between the ESL and the mainstream classroom teacher, and what the circumstances are in which such a model can be created and continue to grow. Chapter Three describes the action research within the pull-out sessions and the curriculum used

to establish whether Beck et al.'s (2002) model of robust vocabulary instruction is effective as a pre-teaching strategy for Tier Two and Tier Three words from science and social studies texts. This chapter also includes the methodology used in assessing the effects of the instruction. Chapter Four analyzes the data from this approach to pre-teaching Tier Two and Tier Three words found in science and social studies texts to ELLs. In Chapter Five I summarize and reflect on the data and the research study itself. Included in this chapter is a discussion about future study in this area of vocabulary acquisition through pre-teaching of Tier Two and Tier Three words found in science and social studies texts, as well as the need to research possible methods of collaboration that would fit into the ESL pull-out model.

CHAPTER TWO: LITERATURE REVIEW

The guiding questions for this study are 1) Is the model of vocabulary instruction proposed by Beck, McKeown, and Kucan (2002) an effective method for preteaching Tier Two and Tier Three vocabulary words from science and social studies texts to second grade English language learners? and 2) Does collaboration between the ESL teacher and the mainstream classroom teacher in choosing the words to be pretaught help both teachers to focus on making connections between the ESL and mainstream classroom that will result in learning benefits for these second grade English language learners?

This literature review will address vocabulary development, the significance of academic language for English language learners, the explicit instruction of vocabulary, and the role that collaboration between the ESL and the mainstream classroom teacher plays in connecting curriculum. The many facets of collaboration are reviewed with a focus on which factors lead to the success or failure of a collaboration model. This chapter also attends to the model of robust vocabulary instruction in preteaching vocabulary words using the varied methods suggested by Beck et al. (2002).

Vocabulary Development

A growing vocabulary is a singularly important factor in young children's verbal development and that vocabulary is also a vital component in reading and critical thinking for adolescents and adults (Farstrup & Samuels, 2008). Oral vocabulary will be

discussed here for its importance as a gateway to literacy. Academic vocabulary will be discussed here for its importance in reading comprehension. The section Closing the Gap looks at studies that have shown promise for increasing vocabulary knowledge for English language learners. Robust vocabulary instruction is explained in terms of what strategies are used in this model of teaching vocabulary.

Oral Vocabulary

Children learn their first language through listening and speaking and this foundation for language seems particularly important in light of the research regarding the first years of exposure to language. Children reared in home environments rich in language and literacy historically perform better in school than children who are not reared in such environments because listening and speaking are intrinsically tied to reading and writing. The language that children acquire through listening and speaking plays a role in their ability to read and write, and their ability to read and write contributes back to their listening and speaking skills (Strickland, 2004), making this interplay of language domains a recursive process. One of the most important studies investigating the relationship between vocabulary and early childhood environments is Hart and Risley's 1995 study in which 42 families with children ages six to nine months were observed for two years. The sample of families observed included those of upper, middle, and lower socioeconomic status. The foremost finding from this study is that there was a considerable difference in the amount and quality of the language encountered in the home as a result of social and economic status. The less affluent families communicated less often and used less complex language. Also noted in this study is that the language used by less affluent families was more punitive in nature and did not often exhibit the

encouraging nature prominent in the language used by more affluent families. The study demonstrated that there is an observable relationship between language input and vocabulary development. Though this study did not specifically mention whether immigrant families were a part of the samples, it may be true that some less affluent immigrant families do exhibit this family dynamic of using less complex language in the home. Even the children of vocabulary-rich immigrant homes will probably not be learning this rich vocabulary in English. Garcia (1991) noted in her study of Hispanic bilingual fifth and sixth-graders that even those students with a large oral vocabulary in their native language did not perform as well as their native English-speaking classmates in reading comprehension tests in English. One of the factors that contributed to the lower performance level of the Hispanic fifth and sixth-graders was their lack of knowledge of the English vocabulary terms used in both the comprehension questions and the answer choices.

One of the most disturbing of all the findings in Hart and Risley's 1995 study is that the vocabulary gap continues to widen as children continue in their school years. Perhaps this gap continues to widen because historically vocabulary instruction has been neglected as the prevailing belief has been that vocabulary acquisition comes naturally from spoken and written discourse (DeCarrico, 2001). It may be that the gap continues to widen because not much has been done to effect a change in vocabulary development for at-risk learners (Beck et al., 2002). Authors and educators seem to have the belief that the vocabulary gap continues to widen, but there is a need for more research to confirm this belief and to better understand its causal factors.

Recent research has begun to highlight the importance of oral vocabulary and its ties to literacy as the more oral language that children are exposed to, the more word meanings they have in their schema to call upon when learning to read (National Institute of Child Health and Human Development, 2000). Bialystok, Luk, and Kwan (2005) studied four groups of first grade children. Three of these groups were bilingual learners, and one group was comprised of monolingual speakers of English. From their study, the authors determined that attention should be paid to oral language acquisition of English language learners for reading to successfully follow. Oral vocabulary development has also been shown to be an important factor in developing reading comprehension skills for English language learners (Droop & Verhoeven, 2003). Oral vocabulary skills have consistently been one of the predictors used for reading comprehension (Cutting & Scarborough, 2006; Strickland, 2004).

Academic Vocabulary

Oral communication is the singular source from which young children learn the vocabulary that they know and use, but this source of vocabulary knowledge is no longer effective after children enter school as daily conversation seldom includes more than the most common words (Cunningham & Stanovich, 1998). As children enter school, the focus shifts from oral to written language as children begin to tackle academic curriculum. Children now need to acquire a scholastic language that is abstract and requires a more complex metalinguistic awareness and word consciousness.

It has been proposed that new vocabulary is acquired incidentally through reading and that wide reading is a rich source of vocabulary acquisition (Krashen, 2002; Ponniah, 2009). However, Swanborn and deGlopper (1999) propose that the likelihood of

acquiring the meaning of an unknown word incidentally through reading only runs around 15%, which means that in order for a student to learn a new word through reading, the student would need to encounter that word numerous times in order to assure a high level of probability of learning the word. According to Stoller and Grabe (1995), for English language learners this reliance on reading as a source of vocabulary acquisition is even more problematic as they are less skilled in using context to infer the meanings of words and less skilled in using linguistic clues to infer word meaning. A lack of knowledge of academic words encountered in school texts hampers the comprehension of these texts, which subsequently hampers the expectation that vocabulary will be learned from these texts (Carlo, et al., 2004). In addition to these comprehension issues of gleaning meaning from text, Carver (1994) notes that reading texts in which more than two percent of the vocabulary words are unknown will result in students' inability to understand the text. Beck et al. (2002) add to this research by including the findings that many children who are lacking in vocabulary knowledge do not read widely nor read text difficult enough to encounter unknown words and do not have the lexical skills to derive meaning from the unknown words. Also problematic for English language learners is that they may not possess adequate word-attention skills and so may skip over words they do not know perceiving them to be unimportant (Hulstijn, 1993).

Closing the Gap

What can be done to close this academic vocabulary gap that English language learners face in school? Beck et al. (2002) put forward that perhaps this gap has not been closed, not because it is an impossible task, but because little has been done to affect

a change in this situation and that explicit vocabulary instruction is one method of intervention that may help to close this vocabulary gap. There is research which supports this idea.

Carlo et al. (2004) conducted a 15-week study in which explicit vocabulary instruction was given to fifth-grade ELLs and native-speakers of English students following Beck et al.'s (2002) model of robust vocabulary instruction using various activities from the model. Each instructional week began on a Monday with the introduction of 10 to 12 target vocabulary words. Instruction was carried out in four 30-45 minute lessons with explicit vocabulary taught every Thursday. The researchers chose vocabulary activities such as word association tasks and synonym/antonym tasks to increase the students' depth of knowledge of the target vocabulary. The researchers concluded that this model was effective in increasing students' word knowledge and reading comprehension for both English language learners and English only learners. Similarly, Bauman, Ware, and Edwards (2007) conducted a yearlong inquiry into vocabulary instruction with a class of diverse and low-income fifth grade students who were African American, European American, and Latino. Explicit vocabulary instruction using various activities and word play was part of the instruction. Included in the instruction were activities from Beck, McKeown, and Kucan's 2002 book *Bringing Words to Life.* This study also showed positive results in vocabulary development especially with students who were below average in vocabulary at the beginning of the study. This is encouraging as many English language learners are below average in English vocabulary knowledge and this explicit instruction in vocabulary has great potential for helping these students to increase their vocabulary knowledge. Since the research to date seems to suggest that one major

dynamic of poor reading comprehension for struggling readers is lack of vocabulary (National Institute of Child Health and Human Development, 2000), then an increase in vocabulary knowledge might be an ameliorating factor in reading comprehension as this seems to be a reciprocal process in which vocabulary supports reading comprehension and reading comprehension increases vocabulary development (Carlo et al., 2004).

A study of English language learners in a university preparation academic English course (File & Adams 2010) supports the research that explicit vocabulary instruction results in learning more vocabulary than incidental exposure through texts. The researchers suggest that isolated instruction followed by meaningful practice with the vocabulary word allows the student to better understand the word when later encountered in text. Dobison (2001) conducted a study of 24 ELLs from the ages of 16 to 40 to determine the relationship between classroom interaction and the learning of new vocabulary. The study suggested that overall the students were able to recall and retain those vocabulary items that received focus during the lesson. Coxhead (2000) advocates that even in the realm of teaching English for Academic Purposes (EAP), a program preparing nonnative speakers of English for university study in English-speaking countries, that a balance of direct teaching of vocabulary, vocabulary exercises, and opportunities to encounter vocabulary in text and in listening supports English language learners in their quest to increase academic vocabulary.

Robust Vocabulary Instruction

Beck et al. (2002) characterize robust vocabulary instruction as instruction that is engaging, lively, fun, and thought-provoking for native English-speaking children. The belief is that children who find words interesting in the classroom will then notice words

outside of the classroom and develop a curiosity and enthusiasm about words that will serve them well in vocabulary development in and out of the classroom. Providing students with student-friendly definitions of new vocabulary words is a critical first step in this model of direct instruction. This definition should focus on how the word is typically used and be given in everyday language. Embedding in the definition an example of how the word is used is encouraged as this helps students to visualize the meaning of the word. Following this step of presenting student-friendly definitions, Beck et al. (2002) have created a variety of activities that should be used immediately following the introduction of the student-friendly definitions so that students have to deal with the meanings of the new words right away.

Some of the activities created for robust instruction are

- *Word associations*—In this activity, students are asked to associate a new vocabulary word with a word or phrase presented by the teacher. (Which word goes with future?) *(predict)* Of great importance is that the students follow up their choice of word by explaining their reasoning for making the association giving the students the opportunity to process and manipulate the information.
- *Have you ever…?* Students are asked to associate the newly learned vocabulary words with their own experience. By associating the new words with their own schema the students learn that the new words have a place in their lives and vocabularies. (Describe a time when you *predicted* something would happen).

- *Applause, Applause!* In this activity, students are asked to show by clapping how much they would like to be described by the target word. Again, it is critical that the students explain why they feel as they do about being described by the word. In this way, the teacher can check for understanding and the student has the opportunity to use the word in context.
- *Idea completions*--Students are given a stem sentence to complete. As the stem sentence includes the vocabulary word, the student must understand this word in context in order to complete the sentence. (I was *astonished* when I saw…..).
- Another activity is to simply ask students questions using the new vocabulary word. (When would you be *gleeful?* Why would you feel *gloomy?)*

All of these activities require that the students manipulate the language in a playful manner giving the students the time and practice to internalize the word. Beck et al. (2002) also encourage the teacher to create other activities that employ the basics of these engaging activities.

Relationship of Research and This Study

Vocabulary instruction must be given a place of greater prominence in the school curriculum in order for native English-speaking students to develop a greater breadth and depth of vocabulary knowledge (Beck, et al. 2002). As the research shows, this issue of a deficit vocabulary can be attended to through the implementation of a robust vocabulary instructional program that explicitly teaches vocabulary and then allows the students to see and use the word in multiple contexts. In this study, robust vocabulary instruction is characterized by providing students with student-friendly definitions, various examples of

the word in multiple contexts, opportunities for the student to explain and use the word, and repeated opportunities to hear and produce the word. Intricately woven through all of these activities is the belief that all of these activities be engaging, enjoyable, and stimulating for the student (Beck et al. 2002; Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006). Though this model of vocabulary instruction was created for native English-speakers, these are the types of activities that have been suggested for direct vocabulary instruction with English language learners (Garcia, 1991; Rivera, 2008; Schmitt, 2008). My action research project focuses on employing this method of direct vocabulary instruction with second grade ELLs in collaboration with the mainstream classroom teacher.

Collaborative Teaching

It seems that change in the educational system is difficult to implement and modifications in instructional models are among the most challenging areas to effect change (de Jong, 1995). Change is uncomfortable and not so much fought as ignored by schools. However, the changing face of the school population, the diversity of cultures now in our schools, the exigent needs of the students, and the realization that effective instruction must follow best practices all demand that change be examined, embraced, and implemented when it works for the betterment of the educational system (Hruska, 2000).

Kang (1994) advocates a collective responsibility by all teachers involved in the education of ELLs in order to provide continuity for these students during the school day. Collective responsibility demands that the classroom teacher and the ESL teacher combine their knowledge and expertise to address the academic needs of the ELLs and

work together to so that the ESL teacher can sequence the ESL classes to reflect the content area of the mainstream classroom.

The classroom teacher often works alone in an isolated classroom and this creates an atmosphere of seclusion (Elmore, 2000). When teachers engage in collaborative practices, this sense of isolation is diminished as teachers share their expertise and learn to support one another. As staff developers, Dove and Honigsfeld (2010) found that mainstream classroom teachers often acknowledged that they did not fully understand the linguistic and academic needs of their ELLs and admitted that they were unsure of how to incorporate meeting the needs of the ELLs in their lesson planning. When given the opportunity to engage in collaborative teaching practices with the ESL teacher, these classroom teachers recognized the value of sharing expertise and came to welcome the opportunity to give input as to how the ESL program functions in their school.

Collaborative teaching is an idea that has been offered as part of the solution to addressing the diverse needs of students in the rapidly changing classrooms. It seems that talking about this idealized teaching reform may be easier than implementing it as all staff members may not have the same interpretation of what constitutes collaborative teaching (Corrie, 1995). When there is no agreement among staff as to what collaborative teaching looks like, then the program is most likely doomed to fail and go the way of many “buzz words” that come and go in education. In looking at the staff of five different schools and their understanding and practice of collaboration, Corrie (1995) notes that the school with the most successful and coherent policy on collaboration was the one in which shared meanings among the staff led to reflective thinking and positive changes.

Teamworks

The state of Illinois has taken this idea of forming new partnerships in teaching and recognized that in order to best serve its ELL population, the bilingual program and the general education program could not operate in isolation from one another. The Illinois State Board of Education asked its school districts to respond to this need for integration of programs in order to align practice with the federal guidelines of forming partnerships to educate America's children (National Clearinghouse for Bilingual Education, 1995). Teamworks was a three-year project created to address the need for greater collaboration and teamwork between the mainstream classroom teacher and the ESL/bilingual teacher by providing professional development and support. A qualitative descriptive analysis of the project details why some schools were considerably more successful than others. The factors that produced a model that worked well were as follows: 1) A supportive and involved principal who respected the efforts of the teachers involved in the Teamworks project. 2) Committed and persistent teachers who exhibited leadership in facing obstacles to the program. 3) A school faculty that did not engage in divisive practices by forming factions or cliques (Sakash & Rodriguez-Brown, 1995).

Obstacles on the Road to Collaboration

There are, however, roadblocks to collaborative teaching and one of those roadblocks is that there is no time set aside during the school day for teachers to work on collaborative teaching of curriculum (Fu et al., 2007; Hruska, 2000). This means that teachers willing to work collaboratively must find time in their workday to plan together. This translates into meetings before and after school and when possible during lunch. Though this is certainly not optimal, benefits reaped by both the teachers and the students

are a motivating factor for the teachers to devote the extra time to make it work (Fu, et al., 2007). Researchers in special education have provided evidence that teacher collaboration between the mainstream classroom teacher and other specialists serving the students benefits the special education students (Santamaria & Thousand, 2004; Villa, Thousand, Nevin, & Liston, 2005) and this idea of collaborative teaching has been adopted by many ESL teachers in working with the classroom teacher. However, in order for these practices to adequately meet the needs of ELLs in the classroom, teachers need time built into the school day for planning together and this is not a common practice (Dove & Honingsfeld, 2010).

Another obstacle in the way of collaboration is that ESL teachers and the ESL program are often marginalized in the school setting and not viewed to be as vital a presence in the school as the mainstream curriculum and the mainstream classroom teachers (de Jong, 1995). This is inherent in the practice of setting the time table for regular classes, special classes, Title One reading, Speech and Language and then giving this schedule to the ESL teacher, who has to find open slots to schedule ESL instruction (Hruska, 2000). Arkoudis (1994) notes that in one school, in which she was an ESL teacher, it was common practice for the faculty coordinators to assign ESL classes to mainstream teachers if these mainstream teachers needed another class during the day in order to fill up their instructional time. In essence this practice undermined the professionalism of the ESL staff by promoting the idea that the ESL teachers had no special skills or knowledge and any teacher with time could instruct English language learners. Arkoudis (1994) adds that these same faculty coordinators would never have

considered replacing an English teacher with a math teacher, implying that ESL teachers were not considered to be teachers of a curriculum.

There are several key components that must be in place in order to create an effective collaborative model, but Davison (2006) advocates that it is most important that the teachers involved in the collaboration have a clear conceptualization of the task. Without this in place he warns that teachers' roles are not defined and the result may be that the ESL teacher becomes subordinate to the content teacher. This results in a disparity of power within the relationship, leaving the ESL teacher without authority, responsibility, or input (Arkoudis, 2006).

Teachers as Leaders

Across the United States ESL teachers and mainstream classroom teachers are now sharing their collective knowledge and working together in cooperative organization and planning to better understand and address the needs of the English Language Learners that they teach: These ESL and mainstream classroom teachers who are committed to this idea of collaboration often work together with little or no support and assistance from administrators and are motivated by the desire to improve student learning (Dove & Honigsfeld, 2010). This collaboration offers both teachers peer support and the prospect to engage in peer coaching (Dunne & Villani, 2007). Collaboration has been shown to be more effective when teachers are given the opportunity to facilitate the change rather than having a program of change forced upon them by administrators (Davison 2006). Dellicarpini (2008) advocates that when teacher collaboration is driven by personal questions about practice and student learning, teachers become empowered leaders who promote the idea of reflective practice. It is important to note, however, that for

collaboration to be sustained over the long term, the support and strong leadership of the principal is a key factor (Theoharis & O'Toole, 2011). Effective principals may foster leadership in their teachers by helping their teachers to stay focused on the overall purpose of collaboration, which is to help their students to learn through constructive planning (Riley, 2001).

Professional Learning Community

After reviewing 20 years of research on what constitutes exceptional professional development for teachers, Darling-Hammond and Richardson (2009) concluded that the most successful model of professional learning for teachers is professional learning communities. Professional learning communities are an organizational arrangement of teachers and administrators who constantly search for and share knowledge with one another and then implement what they have learned for the benefit of the students in the school. The basis for the claim that professional learning communities are the most successful model of professional learning is that the structure of professional learning communities supports the belief that teachers learn best when professional development focuses on (a) teacher content and how to transmit that knowledge of content to students by understanding how students gain new knowledge; (b) teachers' need to actively participate in their own learning; (c) the importance of teachers feeling empowered enough by new knowledge to apply it in the classroom and then reflect on the results; (d) collaboration that is characterized by mutual respect and a communal purpose; and (e) the need for professional development to be long-term, rigorous, and embraced by all in the school community.

Connection between Research on Collaboration and This Project

Last year my district adopted the Professional Learning Community (PLC) model, which is based on the premise that teams of teachers must identify and pursue goals that are specific and measurable, and that student achievement is the means of measuring success. The underlying belief that drives this model is that in order for schools to realize systematic results-oriented collaboration that impacts teacher practice, teachers must have comparative student achievement data and be able to use that data within an environment that fosters mutual respect and commitment to the process. What is unique about the PLC model is that its mission is not to ensure that students are taught, but rather that students learn (DuFour, 2003). This turn of phrase is critical when one understands that the focus for this model is to measure the effectiveness of teacher practices on student achievement. This is also the focus of my action research for this paper. I want to know if there are measurable results in students' acquisition of vocabulary as a result of specific teacher practices. The idea of collaboration that is imbedded in the PLC model dovetails with my belief that the ESL and the mainstream classroom teacher can and should work together to ensure student learning.

Gap in the Research

As this chapter reports, the importance of vocabulary development for children in school who are native English-speakers is the subject of much research. English language learners need this instruction as well, for it is a major component in their second language acquisition process. My goal in this research is to find out whether this robust instruction that has seen success with English speaking students is effective in helping ESL students to develop a deep knowledge of those important Tier Two and Tier Three

words that are so essential in understanding text and communicating on a higher level in the science and social studies curriculum. This knowledge of content area vocabulary provides the groundwork for success in intermediate, secondary, and university learning (Carlo, et al., 2004). Though there have been studies using the model of robust instruction to teach academic vocabulary to English language learners, a gap exists in the research as there have not been enough studies using this model of robust instruction as a pre-teaching tool to prepare ELLs for the science and social studies curriculum that employs Tier Two and Tier Three words within the classroom lesson. A gap also exists in the research regarding collaboration between the ESL teacher and mainstream classroom teacher in choosing the Tier Two and Tier Three words which will be the focus of the instruction during both the ESL pull-out sessions and the mainstream classroom. Therefore, the questions for this action research are as follows: 1) Is the model of vocabulary instruction proposed by Beck, McKeown, and Kucan an effective method for preteaching Tier Two and Tier Three vocabulary words in science and social studies texts to second grade English language learners? and 2) Does collaboration between the ESL teacher and the mainstream classroom teacher in choosing the words to be pretaught help both teachers to focus on making connections between the ESL and mainstream classroom that will result in learning benefits for the second grade English language learners?

Many of the ESL students that I have worked with from kindergarten through adulthood lack the necessary Tier Two and Tier Three vocabulary words that mark a growing and maturing vocabulary. I have seen how this lack of vocabulary knowledge has been a hindrance to oral communication and reading comprehension of academic

texts. I intend to find out during this research if preteaching Tier Two and Tier Three words, chosen in collaboration with the mainstream classroom teacher, through using the model of robust vocabulary instruction is effective in helping English language learners to develop a greater breadth and depth of the vocabulary found in science and social studies texts. I hope to be able to show that it is possible to create a working model of collaborative teaching of Tier Two and Tier and Tier Three words and that both teachers and students may benefit from the focus that collaboration brings to instruction.

Chapter Summary

This chapter reviews the literature on vocabulary development, academic vocabulary, robust vocabulary instruction, and collaboration between the ESL and the mainstream classroom teacher. Vocabulary is an important component of oral communication, reading comprehension, and writing across the curriculum. Many ELLs enter school with vocabularies below those of their English-speaking classmates and so would benefit from rich and intensive vocabulary instruction and the opportunities this instructional method offers for increasing breadth and depth of word knowledge. The end result would be that ELLs would acquire new words and ways to use them that would benefit them academically. How we are able to express ourselves and understand our world is expanded when we can understand and use vocabulary that is expressive, mature, and meaningful (Scarcella, 2003).

In Chapter Three I present the methodology used in this research. This was an action research study done to measure the effects of the preteaching strategies through pretest, posttests, and delayed posttests. I also kept journals to record the collaborative sessions with the mainstream teacher and to monitor my students' engagement and participation

during the instructional sessions. The journals also served as a means of reflecting on the many facets of the study and the questions that the study generated.

CHAPTER THREE: METHODOLOGY

The purpose of this study is to determine whether Beck et al.'s (2002) model of explicit robust vocabulary instruction is an effective method for preteaching Tier Two and Tier Three vocabulary words in science and social studies texts to second grade English language learners. Collaboration with the mainstream teacher on choosing the target words for each cycle of instruction is an integral part of this research. In this study I want to know the following: 1) Is the model of vocabulary instruction proposed by Beck, McKeown, and Kucan an effective method for preteaching Tier Two and Tier Three vocabulary words from science and social studies texts to second grade English language learners? and 2) Does collaboration between the ESL teacher and the mainstream classroom teacher in choosing the words to be pretaught help both teachers to focus on making connections between the ESL and mainstream classroom that will result in learning benefits for the second grade English language learners?

Overview

The methods chapter begins with a detailed description of the action research methodology employed in this study. This includes a description of the participants, the setting, the data collection procedures, the instructional activities used, and the assessments given including the pretest, posttest, and the delayed posttest procedures. In order to integrate all procedures that are part of this study, a qualitative action research methodology was used.

Research Design

According to Tetnowski & Damico (2001), a characteristic of qualitative research is that it provides a rich description of the research that is conducted in the natural setting in which the individuals participate as a matter of course (as cited in Mackey & Gass, 2005). The strength of qualitative research lies in its reflective nature that drives the ongoing process of questioning and reshaping those questions as the research continues (Agee, 2009). Through the use of multiple methods of data collection the research can present a more complete picture of the phenomena being studied and provide more detailed interpretations of said phenomena.

Action research is the driving methodology of this research as the ultimate point of this study is to evaluate the practice of preteaching Tier Two and Tier Three words from the science and social studies texts within my pull-out sessions with my ELLs. According to Sax and Fisher (2001), action research allows the teacher to follow an organizational model of envisioning, implementing, and assessing potential classroom pedagogical practices. Though it seems there is no universal accord for a comprehensive definition of action research, it seems safe to say that action research is employed in various ways within the classroom when teachers recognize a question or problem, gather the data surrounding this problem, analyze and interpret that data with the ultimate goal of finding and implementing a practice that addresses the question or solves the problem (Mackey & Gass, 2005).

To my knowledge, there are only a few other studies which apply Beck et al.'s (2002) rich and intensive method of vocabulary instruction for preteaching Tier Two and Tier Three vocabulary words from science and social studies texts to English language

learners. Due to the scarcity of studies utilizing the rich and intensive method of vocabulary for ELL instruction, I was not able to employ the manner of quantitative research comparing my results with the results of other studies making norm-referenced research for this project an impossibility. This project must be categorized solely as criterion-referenced research as the assessments were only able to compare the individual student's performance to a standard of performance (Bond, 1996).

Steps in action research

The first step in action research is to recognize and identify the problem that is happening in the classroom. In my action research, this first step was the recognition that my students did not understand Tier Two and Tier Three words in the science and social studies texts. This resulted in the students not being able to comprehend the science and social studies texts, as well as being unable to express themselves during the science and social studies lessons. To address this lack of vocabulary, I chose to use Beck et al.'s (2002) model of robust vocabulary instruction to preteach vocabulary as I felt that I had achieved a modicum of success over the past two years in using this model in my previous school. To gather the data I chose to use a pretest, a posttest, and a delayed posttest. With each step of this process, I kept a reflective journal as each step of action research requires reflective thought to keep the process both dynamic and unbroken (Kennis & McTaggart 2000). As part of this reflective process I determined that the preteaching strategies would be successful if a majority of my students scored 80% or above on the posttest and the delayed posttest.

Participants

Participants in this study were four second grade ELLs from the same mainstream classroom. Spanish was the home language for all four students. According to district policy, each student that enters the district are given a Home Language Survey (HLS). This survey is the first step in determining whether a student needs to be assessed for ESL services. The HLS allows the ESL teacher to see the child's language story. See Table 1 for the breakdown of student languages and country of origin of participants.

Table 1

Study Participants

Participant Pseudonym	Country of Origin	Native Language
Lorenzo	Mexico	Spanish
Marisela	Mexico	Spanish
Nayyara	Mexico	Spanish
Yolanda	Mexico	Spanish

Last year my school district chose to join the World-Class Instructional Design and Assessment consortium (WIDA), which requires that all students take the WIDA-ACCESS Placement test (W-APT) as a preparation to take the ACCESS test in January. Though having to retest all students in the ESL program at the beginning of the year was a source of frustration to the other ESL teachers in my district, this was a perfect opportunity for me to sit with my new students and administer a test measuring their academic language. This began the first entries into my journal as I recorded my

impressions of each student's abilities and level of confidence with English as I administered the test to them. I felt that I was lucky to have this opportunity to test the students before beginning the pull-out sessions.

The W-APT test was administered to all the students in this study. The W-APT assessment tests all four domains of language: listening, speaking, reading, and writing. Each domain is scored separately and then a composite score is created from these separate scores. The results of the W-APT test administered to my students show a range of proficiencies from 1 to 6. A 6 is the highest score given for the W-APT assessment and a 1 is the lowest. The 2004 English Language Proficiency Standards of the WIDA (World-Class Instructional Design and Assessment, 2004) consortium define the levels in terms of what students are able to process, understand, produce, or use. See Appendix A for the WIDA Consortium's complete explanation of the performance definitions.

Six months after taking the W-APT assessment, the students were given the state ESL assessment from WIDA which is called ACCESS. The level of assessment that each child was given was based on the score from the W-APT assessment. For the ACCESS test, all of the girls were given the Tier A test and Lorenzo was given the Tier B test. The tests are tiered and the decision of which tier to give is based on the student's score on the W-APT, with A being the lowest level, B the middle level, and C the highest level.

Table 2 shows the W-APT scores and WIDA ACCESS scores broken down in the four domains tested as well as the composite score. Scores on the WIDA ACCESS test my students took show a range from 2.6 to 6.0. The WIDA Consortium defines these scores as follows: 1 is Entering, 2 is Beginning, 3 is Developing, 4 is Expanding, 5 is Bridging, and 6 is Reaching (World-Class Instructional Design and Assessment, 2004).

Table 2

W-APT/ACCESS Scores for Study Participants

Participant Pseudonym	Lorenzo	Marisela	Nayyara	Yolanda
	W-APT/ACCESS	W-APT/ACCESS	W-APT/ACCESS	W-APT/ACCESS
Listening	2.0/4.9	2.0/4.0	3.0/4.0	2.0/4.0
Speaking	6.0/6.0	2.0/3.2	4.0/6.0	2.0/6.0
Reading	5.0/5.0	3.0/4.0	1.0/4.0	1.0/3.9
Writing	3.0/3.5	2.0/2.8	2.0/2.7	1.0/2.6
Composite	4.0/4.4	2.3/3.3	2.1/3.8	1.3/3.7

It should be noted that when I administered the W-APT assessment to my students I was a complete stranger to them as it was the first week of school, and I was new to the district. They were painfully shy with me and a little frightened of the assessment. I do not believe that they did their best on the W-APT because of these emotional issues. When I administered the ACCESS test to my students we had been together for six months, and they were neither shy nor scared when taking this assessment with me. Certainly they improved in their academic English over the six months we worked together, but I believe that the W-APT scores indicated less proficiency than my students really possessed at the beginning of second grade.

Research Site

This study took place in a suburban K-5 elementary school in a metropolitan area in the Midwest located outside of a principal city. The population of the school is a little over 500 students of which 25 are English Language Learners. Most of the ELLs in this school are Spanish speakers, although throughout the district there are students from a variety of linguistic backgrounds. Based on an economic survey of free and reduced

lunches, this school has been designated a Title I school, which means that federal grant money is directed to this school for programs that aid students in becoming effective and efficient learners (U.S. Department of Education, Title I, Part A Program, 2008).

The ESL model used in this school is the pull-out model. Students requiring services are given individual or small group intensive instruction with a certified ESL teacher in a room separate from the mainstream classroom. The room used for this study was a quiet room in the back of the school out of the way of most walking traffic throughout the school. It was pleasant to teach in and we were rarely interrupted while engaged in our lessons.

Procedure for Instruction

Each cycle of instruction began with a collaborative effort between me and the mainstream classroom teacher. We individually read the text that was to be taught in the mainstream classroom and made a list of Tier Two and Tier Three words that we thought were important for understanding the science and social studies texts and the classroom lessons. Then we sat down together to compare and discuss our lists. In this way we questioned, discussed, and reflected before making a final decision. The decision to choose 10 words per instructional cycle was based on Beck et al.'s (2002) recommendation that 10 words per week would allow enough time to visit each word 8 to 10 times in our day-to-day vocabulary activities. For the two instructional cycles of science vocabulary the classroom teacher and I did choose ten words for each lesson. However, for the instructional cycle on social studies words we agreed to include 12 words in the lesson. This was based on our belief that all 12 words were important for the students to comprehend the text.

The two instructional cycles on the science vocabulary lasted six days and took two weeks to complete because I was only able to meet with the students three times per week for 30 minutes in my pull-out schedule. The instructional cycle on the social studies vocabulary lasted seven days and took a little over two weeks to complete. All of the cycles included a discussion of the student-friendly definitions after they were presented to the students. I believed that this discussion step was important for two reasons. I wanted to give the students the opportunity to talk about the definitions so that they could question anything they did not understand or were unsure of, and I wanted to be sure that my student-friendly definitions were understood before we moved on to any activities. Each day of the cycle we revisited the words we had already covered as multiple opportunities to use new words will aid the students in learning these words on a deep level (Blachowicz & Fisher, 2006). I initiated a word wall and gave each student the opportunity to write out a new word from our targeted vocabulary list and add it to our word wall. I wanted the students to understand that this was their word wall and that they should own it. The students were very pleased that it was their writing up on the wall and each had chosen their own color of sharpie pen for all of the word walls. Being allowed to use a sharpie pen was cause for great excitement. I also allowed the students to choose the color of the paper we would use for each word wall. I presented them with the choices of paper that I had and let them discuss which color they wanted as a group. I stayed out of this discussion and only asked that they explain their decision-making process to me. It may seem that sharpie pens and colored paper are small matters, but I felt that every opportunity I gave them for input into our sessions was another way to create a cohesive group and to give them ownership of their own learning. I also chose to

involve the students in the game *Word Wizard* as Beck et al. (2002) propose this game as a way to have students notice the targeted words outside of class. It is another strategy to reinforce vocabulary while helping students to connect learning language to both the classroom and the real world. The *Word Wizard* as I used it is explained in detail after the list of activities employed in my classroom.

Curriculum

Vocabulary knowledge, both in breadth and depth, and written vocabulary are two of the elements of academic language (Rivera, 2008). As students move through the levels of education the importance of academic language increases (Krashen, 2002). Scarcella (2003) states that in order for students to acquire academic language, students must interact with people who use academic language, be given opportunities to learn and use academic language, and receive explicit instruction in academic language that includes adequate scaffolding. All of these factors were on my mind as I created my curriculum for this action research.

The curriculum incorporated the following activities:

1. *Student-friendly definitions and explanations* which also include one or more examples of the word in its usage. An example for the word *investigate* would be, "When you investigate something you want to find out what happened. Police investigate car accidents to find out what happened and what caused the accident. Scientists investigate diseases to find out why people get sick." To help me formulate student-friendly definitions I often referred to *Collins COBUILD Student's Dictionary* (Collins COBUILD, 2005) as a springboard for ideas. This dictionary always provides examples of the word used in a sentence as well as

definitions which are much easier for the students to manage than the standard dictionary definitions.

2. *Word associations* ask students to associate their new words with a word or phrase given by the teacher. An example for *peak* would be, "What word goes with pointy?"
3. *Have you ever*? asks students to connect the new words with an activity from their own life experience. An example would be, "Can you describe a time when you *predicted* that something might happen?"
4. *Applause Applause* is an activity in which students are asked to clap to indicate how much or how little they would like to be described by the targeted words. Though Beck et al. (2002) use this activity for adjectives, I found I could use it for nouns as well. An example would be, "Would you like to be described as a *mountain*?" Students were expected to explain their answers and we all commented on one another's explanation.
5. *Making Choices* requires that the children listen to a list of phrases that may or may not apply to the new word. An example would be, "If any of the things I say make you think you need to use *force* to do them, then say *force*. If you don't think you need *force* to do them, then say nothing. a. hammering a nail b. pushing hard on a door c. reading a book d. opening a window that is stuck e. opening a bottle of soda." This activity always led to the most discussion among the students as there were disagreements from time to time.
6. *Idea completion* requires the students to understand the meaning of the targeted word in its context in order to be able to explain a situation. The teacher provides

the sentence stem that includes the targeted word and the student must complete the given sentence. The students had the list of words on the wall so that they could refer to it. An example for the word *investigate* would be, "Last night I heard a strange sound in the kitchen and I wanted to find out what it was, so I got up to …….”

7. *Examples and non-examples* is an activity in which the students are asked to make choices about the characteristic of the targeted word. An example for *island* would be, "Where would you expect to find an island, in the middle of the ocean or the middle of the desert?"

Beck et al. (2002) encourage the teacher to create her own activities for student instruction in vocabulary. They advise the teacher that the criterion for such activities be the students' engagement in dealing with the meaning of the words. With that advice in mind, I created the following two activities.

8. *I am* is an activity that I created in which I described the word and the students had to tell me what I was describing. An example for the word *incline* would be, "I am a diagonal. People need me to push wheelchairs into a building because it is not possible to push a wheelchair up the stairs. Also, skateboarders use me so that they can skate up and then skate down." This was another opportunity to present the student-friendly definition and give more examples. At the end of each cycle we played a card game version of this activity in which the students drew a card with a targeted word and they had to describe it for the other students. This activity was extremely popular and generated much excitement. After the first time we played it, the students themselves decided that whoever answered

first got to keep the card and the student with the most cards at the end of the game was the winner. It was not my intention to set this up as a competitive game, but since it was my students' idea to do so, I went along with it.

9. *The Question Is* was the second activity I created. The students and I randomly chose one of the targeted vocabulary words written on an index card and had to create three questions about it using the question words which were written on chart paper and up on the wall for easy referral. I gave them a few minutes to formulate their questions. The students asked their questions to the group eliciting answers. Then, anyone else in the group could ask another question using that targeted vocabulary word and a question word not yet used. Before I did this activity for the first time, I did model how to do it. I chose to use a word we were familiar with from our study of prefixes and from the students' lesson in the mainstream classroom on recycling. I asked the students *"Who should recycle? Why do we recycle? Where do the things that we recycle go? Which kinds of things can we recycle?"* We then looked at the question words up on the wall to see if there were other questions we could ask. To give them more scaffolding when we began the activity, I was the first person to ask the three questions with the targeted vocabulary word I had randomly picked from the pile of index cards. I did not employ this activity until the end of the instructional cycle as I believed the students needed multiple exposures to the word before they were able to formulate and answer the questions.

I chose and created all of these activities because they are engaging, interactive, and necessitate that the students generate responses. The different features of each activity

give the students multiple opportunities to mentally manipulate the word to form responses that add to the students' depth of knowledge of the word.

Word Wizard

Word Wizard has great appeal as it helps the students to tune in to the world around them in order to learn new words, and it is a way for the students to connect what they have learned in class to the outside world. I wanted my students to see for themselves that the words in our class were the words they would see and hear everywhere. I put up a poster entitled "Word Wizard" and the students were encouraged to see if they heard or read one of our targeted Tier Two or Tier Three words outside of the ESL session. Every time a student heard or saw one of our targeted words outside of the ESL session she would come to class and tell us how she came across this word. Then we would discuss it and see if we could think of other ways to use the word. The child who brought the word would write it on a precut piece of paper that said, "This word _____ was brought to class by_____." It was my hope that by showing excitement when a child brought a word in and also giving this child acknowledgement on the poster that this would be sufficient to generate interest and excitement. The Word Wizard was extremely successful during our school's science fair when the fourth and fifth grade students had their science boards displayed in the hallways of the school. My students saw many boards displayed with science words we had studied such as *investigate, observe, data, predict, interpret, and inquiry*. I had to give multiple credits on the Word Wizard wall to keep the peace.

What follows is an explanation of the format of the cycles. I viewed all of the above activities in a holistic manner believing all of them effective in teaching the targeted

vocabulary words. However, I believed that the activities of *I Am* (the card game version) and *The Question Is* were best left to the end of the cycle as both activities required that the students had enough practice with the vocabulary in order to successfully participate in the activity.

Cycles

On each day of the cycle I introduced two words using student-friendly definitions followed by a discussion of the definitions in order to give the students the opportunity to ask questions and show me that they understood the definitions. This was followed by one of the activities. The next day we revisited the definitions of the new words and did another activity before the next two words were presented. We continued to do one activity with the new words and then another activity with all the previously learned words. Some of the activities were repeated as we added new words. Initially I was hesitant to repeat activities fearing that the students would lose interest in activities we had already done. However, I found that the students liked repeating activities as they felt especially confident when doing an activity a second time in the cycle. They would get excited and tell me and each other that they remembered this activity from the other day. On the last two days of the cycle we did two more activities with all of the targeted words. In this way the students were given multiple opportunities to use and manipulate the word with the idea that varied exposures would allow the students to own the word. The posttest was given on the last day of the cycle and the delayed posttest was given two weeks after the posttest.

Assessment

I chose to pretest the words before each cycle began, believing that this list of ten or twelve words would be much more manageable for students than the complete list of 32 words that were to be covered throughout the action research time period. These were second graders who would have been overwhelmed by a list of thirty words. I used the same assessment for the pretest and the posttest. This was a simple matching of the word to the definition. In using a simple matching as the posttest the students were again exposed to the target words and their definitions. To measure their retention I posttested them on these same words two weeks later and did that throughout the cycles of instruction. The delayed posttest was set up as a sentence completion assessment requiring the students to exhibit a deeper level of understanding of the vocabulary than what is required by simple matching. I believed that over time and after repeated uses of the words that the students would be able to understand the meanings of the words well enough to be able to fit them successfully into sentences.

Data Collection Technique One: Teacher Observation Journal

One of the methods of acquiring qualitative data is the use of journals (Mackey & Gass, 2005). During qualitative research new questions may arise, especially what Agee (2009) defines as sub-questions that the researcher must reflect upon. I kept two separate journals to record my own and my students' responses and interactions during the instructional sessions. The students' journal allowed me to record progress or no progress on the part of my students and to reflect upon why by noting misunderstandings that I addressed immediately and wanted to address again in the next session. I did not keep a daily count of each student's participation within the lessons as these four students

were always vocal in our ESL sessions and I knew that participation would not be an issue. Within this students' journal I also made entries after each pretest, posttest, and delayed posttest so that I could compare the students' scores as we moved through the sessions. I also used this journal to note gaps in my students' understanding and use of English so that I could create future lessons that would address the issues. This practice of keeping a notebook with me during all my sessions to note student errors that I wished to address became the norm for me with all of my students. As an itinerant teacher traveling to four different schools, I found that the fast pace of the school day required more than a mental note about future lessons I wished to create.

In my other more personal journal that I kept I wrote about what surprised, puzzled, frustrated, and delighted me about the sessions, the students, and my teaching strategies and techniques. I also used this journal to note conversations I had with the classroom teacher about her observations of my students as we made our way through the instructional cycles. This became a personal journal that I used as a sounding board to read over and reflect about the process.

Data Collection Technique Two: Pretest, Posttest, and Delayed Posttest

The pretest and the posttest are tests designed to measure knowledge of specific lexical items. The pretest and the posttests are simple matching of vocabulary to the definition. Because some of my students are struggling with reading, I read the test to them as they followed along. I followed some of the guidelines from Nation's Levels test as this test is viewed as a reliable assessment of breadth of vocabulary knowledge (Read & Chappelle, 2001). The guidelines that I chose to abide by (Schmitt, Schmitt, & Clapham, 2001) are as follows: 1. The definitions contained words that the students

already knew so that student answers were not compromised by a lack of vocabulary within the definition. 2. Students were advised not to guess if they did not know the word. The scores on the pretest and the posttest were compared in order to measure the gains that had been made after treatment was given.

The delayed posttest was more complex than the pretest and posttest. Within the daily curriculum of the ESL pull-out session the students engaged in many activities that encouraged production of the target vocabulary and structures. It was important to see if this sort of language production was long term. The delayed posttest was structured as a sentence completion assessment. An example for the word *surface* would be, "When we look at the moon we cannot see inside of it. We can only see the_____ of it."

Verification of Data

Many tactics are employed to ensure validity in the research study. Methodological triangulation requires multiple methods of measuring data to get a more compelling estimate of the results of the study (Mackey & Gass, 2005). Triangulation allows the researcher to gather insights that may have been missed by using only one method of data gathering. I felt that the two journals, the classroom teacher's observations, and the data from the pretests, posttests, and delayed posttests afforded me a wider perspective and a deeper understanding of the research as it progressed and a greater wealth of information at the end of the project.

Ethics

Before this study began I received permission to conduct this study from the parents and guardians of all the student participants. I sent a letter home in Spanish explaining

what I was doing and asked the parents to sign and return the permission form if they agreed to allow their child to participate. I got the permission of my district through my superintendent to conduct this research. I also followed the protocol of Hamline University and completed all necessary paperwork to obtain permission for human subject research. Because the privacy of my students was essential, each student was given a pseudonym and no one but I was able to access that information. In order to be sure that all test papers were kept confidential, each student chose a color and wrote only that color as their name of the test. The names and matching colors as well as the tests themselves were kept in a locked file at all times. In this way I felt that I was protecting the students and keeping my promise of confidentiality that I made to their parents and my district.

Chapter Summary

Action research requires that the teacher go beyond the normal daily routine and embrace a reflective and pragmatic view of the classroom. The steps of action research demand that the teacher focus attention on the value of the instructional practice through data collection, analysis, and thoughtful consideration throughout the process. In this study preteaching Tier Two and Tier Three science and social studies words following Beck at al.'s (2002) model of robust instruction in collaboration with the classroom teacher was examined using activities and strategies created to encourage and support language production. The two journals, the daily monitoring of the students' productive vocabulary and engagement in the classroom, and the summative assessments offer the researcher multiple forms of data in order to view a more comprehensive picture of the process. The next chapter reports on the results of this research.

CHAPTER FOUR: RESULTS

In this chapter, I will give an analysis of the results of the action research project. At the core of this research are the questions: 1) Is the model of vocabulary instruction proposed by Beck, McKeown, and Kucan an effective method for preteaching Tier Two and Tier Three vocabulary words from science and social studies texts to second grade English language learners? and 2) Does collaboration between the ESL teacher and the mainstream classroom teacher in choosing the words to be pretaught help both teachers to focus on making connections between the ESL and mainstream classroom that will result in learning benefits for the second grade English language learners? The results of the research will show whether the students were successful or not in increasing their science and social studies vocabulary as a result of their participation in the instructional model.

Pretesting

I gave the students a pretest before each lesson cycle containing all the targeted words that I intended to teach from the science or social studies text. I did this in order to ascertain how many of the targeted words were familiar to my students and to obtain a baseline score of their knowledge of the targeted words. The students had not previously studied these words with me. The pretest was a simple matching test of the targeted words. The students were to match the targeted vocabulary words to the simple student-friendly definitions provided on the test. I tried to be careful not to include any words in the definitions that the students might not know so that their answers would not be

compromised by a lack of understanding of the language used in the definition. In spite of my best efforts, I did miss two important words in the third cycle that I believe compromised the students' understanding of one of the definitions. This will be clarified in the explanation of cycle three.

Posttesting

I gave the students a posttest after each lesson cycle containing all the targeted words of that cycle. The posttest was the same test as the pretest so that the scores on the pretest and the posttest could be more easily compared. The posttest was given after we had worked together using the activities previously explained in the methodology chapter of this paper. The classroom teacher and I timed my lesson cycles so that the students would begin the classroom lesson on science or social studies after I had completed the pre-teaching of the targeted words and had given the posttest and the delayed posttest. In this way we felt that the students would be prepared for reading the text, viewing the videos, and participating in the classroom curriculum.

Delayed Posttesting

The delayed posttest was given two weeks after the posttest. The classroom teacher and I had decided to begin the classroom lessons immediately after the delayed posttests had been completed. We both felt that this would be an ideal time to introduce the classroom lesson as we both hoped that the results of the delayed posttest would show that the students were ready to negotiate the vocabulary within the classroom science or social studies lesson. The delayed posttest was designed as a completion sentence test. It was more complicated than the simple matching pretest and posttest. I felt that the students had spent enough time learning and working with the targeted vocabulary that

they hopefully would be able to complete more complex sentences and demonstrate a deeper knowledge of the concepts that the words represented. I believed that if the students did well on the more complex delayed posttest, I would have a good indication that the students understood the targeted vocabulary and were therefore well-prepared and confident for the classroom lesson.

Cycle One: Scientific Investigations

This cycle began at the end of January. I had been working with these students for about four months. Before I began the first cycle I explained to the students what I was doing. I explained the letter of consent that I had sent home to their parents. They were very excited that all of their parents had signed the forms and that they were going to be part of this research. I wanted them to understand that these tests that they were taking were only for me to better understand how to teach them. I did not want them to be nervous about taking a test as I know my students generally are very nervous when they have to take their spelling and math tests in class. I felt that having this conversation was important so I took time to have the conversation with them, answer their questions, and relieve their fears. The theme of the first cycle was scientific investigations. We began the cycle with the pretest. After the pretest we began the cycle as explained in the chapter on methodology. I had previously decided that if a majority of my students received an 80% on the posttest and the delayed posttest, I would consider my curriculum a success in aiding my students in their acquisition of new vocabulary. Table 3 shows the results for the pretest, the posttest, and the delayed posttest for the vocabulary on scientific investigations. In retrospect, I believe that the first cycle contained the most difficult words of all three cycles. I have to admit that I was somewhat surprised when

the classroom teacher gave me the text from the science book she was going to use. I believed that the words within this text would be difficult for any second grader, and perhaps more so for an English language learner. When we met to compare our lists, we found that we had both chosen the exact same ten words. See Table 3 for the list of targeted vocabulary words for cycle one.

Table 3

Vocabulary Words for Cycle One: Scientific Investigations

attract	investigate
data	observe
force	poles
inquiry	predict
interpret	repel

In our discussion about what words we had chosen, the classroom teacher and I agreed that we had selected these words because we saw that many of these them would require various explanations before the students would be able to truly grasp their meanings. Table 4 shows the students' performance on the pretest, posttest, and delayed posttest for this cycle over scientific investigations. See Appendix B for the pretest, posttest, and delayed posttest administered to the students for this cycle.

Table 4

Student Performance on Tests for Science Vocabulary over Scientific Investigations

Student	Pretest	Posttest	Delayed Posttest
Lorenzo	20%	90%	90%
Marisela	20%	90%	100%
Nayyara	0%	100%	100%
Yolanda	0%	80%	80%

It should be noted that Yolanda consistently scored lower than the other students throughout all of the cycle tests. She also had the lowest overall scores on both the W-APT and the ACCESS tests. She was the only student in this group enrolled in Title One Reading because her reading was below grade level. Though I read the tests to the students, Yolanda still had difficulty processing the information. However, I was very pleased with her progress throughout the sessions. She was a diligent worker and was always happy to be in the session and participate.

The pretest was a simple matching of the vocabulary to definitions. Again I felt it was vital not to include any words in the pretest definitions that the students did not know so that I was sure that I was measuring their understanding of the vocabulary and not their ability to read. The students took longer to take this first pretest than I had anticipated and it was evident that they were taking it seriously. When the test was over, all of the girls confided that they did not know any of the words, but tried to make good guesses, even after I had instructed them not to guess. This idea of making a good guess is a strategy that they learn in the classroom and I found they had internalized this strategy to such an extent that I was not able to persuade them not to guess, although Marisela was

the only one of the girls who "guessed" correctly on the pretest. Lorenzo stated that he was sure he knew most of the words. Lorenzo's great faith in himself continued throughout the sessions and I did have to speak to him after one session when he declared that he was the smartest person in the room. I did not consider this a discipline problem, but it was an issue that had to be addressed privately more than once.

What surprised me the most about the pretest was the students' understanding of the word *predict.* This word is taught from kindergarten on in reading when asking students what they predict will happen in a story. My matching definition in the pretest for the word *predict* was "to say what you think is going to happen before it happens." Only Marisela answered this matching question correctly, which surprised me as I thought all of the students in the group would be able to correctly match *predict* to its meaning. The classroom teacher and I had included this word in the targeted vocabulary list as a means of reinforcing what we believed was a vocabulary word that was important and already somewhat familiar to our students. When I reported the results of the pretest to the classroom teacher about the word *predict,*we both wondered what we had missed in the students' understanding of the word. Both of us had occasion to hear the students in various lessons say, "I predict that…," and yet they could not identify the definition as saying what is going to happen before it happens. Another word on the pretest that I was sure the students would be somewhat familiar with was the word *force.* Only Lorenzo was able to associate the word with idea of power. When I asked him how he knew that word, he told me he knew that force was power from watching the *Star Wars* movies. None of the girls had seen the *Star Wars* movies. The incident made me wonder about the role that gender plays in what words English language learners acquire from their

exposure to popular culture in the books, movies, and television programs that they prefer.

The posttest was the same as the pretest and I was pleased with the results. Both Marisela and Lorenzo used one of the words twice on the posttest even though I had explained that each word would be used only once. The first item on this posttest read, "A search for information because you have a question about something." The correct answer would have been the targeted word *inquiry*. The eighth item on the same test read, "To try to find out what happened or what is the truth." The correct targeted word for #8 was *investigate.* Marisela chose *inquiry* for both #1 and #8, while Lorenzo chose the word *investigate* for both #1 and #8. When I asked them why they chose the same word twice, they explained that they knew that the correct words were *inquiry* and *investigate*, but could not figure out which word to choose. Yolanda switched the answers for #1 and #8. I believed that these two words were high-level words for any second-grader and so I was pleased to learn that my students understood that both words were related to the idea of getting information. However, the students' inability to choose between the words *inquiry* and *investigate* raised the question of the students' understanding of the parts of speech in English. One of the sentence completions required a noun and the other required a verb. My students clearly did not understand this and so I made a notation in my journal to continue to address the parts of speech in English in our "mini" grammar lessons that I used to begin each ESL session. However, I believed that it would be difficult for any second grader to recognize and or use *inquiry* properly as a noun. I was just pleased that they understood the gist of the word and would have schema to call upon when encountering this word in later grades.

The delayed posttest was a sentence completion test which the students took two weeks after the instructional cycle ended. As a new teacher to the district, I was unaware that this was the time of the year for the fourth and fifth graders to put up their display boards explaining and showcasing their scientific investigations. Every hallway in the classroom was lined with tables showing approximately 150 display boards. On each board were many of the words from Cycle One. The words *investigate, observe, predict, data, interpret, and inquiry* were everywhere to be seen by my students. Additionally, every teacher was required to take the students through the halls to look at the display boards and then discuss them in class. My students had multiple exposures to these words between the posttest and the delayed posttest. The Word Wizard Wall was full of the students' papers denoting that they had seen these words outside of our ESL sessions. I believed that having multiple opportunities to read these words on the science display boards and then talking about these words in the mainstream classroom and the ESL sessions, while posting the words on the Word Wizard Wall, resulted in the students' excellent scores on the delayed posttest.

Based on my belief that I would consider my preteaching curriculum for scientific investigations a success if a majority of my students received an 80% or better on the posttest and the delayed posttest, I felt that the first cycle assessment grades met my expectations. See Table 5 for a breakdown of the students' scores on all three tests over the vocabulary for scientific investigations.

Table 5

Number of Students Out of Four Scoring at Percentage Levels for All Tests over Scientific Investigations

Percentage	Pretest	Posttest	Delayed Posttest
90-100%		3	3
80-89%		1	1
70-79%			
60-69%			
50-59%			
40-49%			
30-39%			
20-29%	2		
10-19%			
0-9%	2		

Cycle Two: Simple Machines

Cycle Two began in the middle of February and our theme was simple machines. See Table 6 for the list of targeted vocabulary words for simple machines. Before we began this cycle, I explained to the students once again that the purpose of the tests was to help me be a better teacher and they should not be nervous about taking the tests. As in the first cycle, we began with the pretest. After the pretest we followed my protocol for preteaching the Tier Two and Tier Three vocabulary words as explained in the chapter on methodology. The instructional lessons were followed by the posttest and the delayed posttest. Table 7 shows the results for the pretest, posttest, and delayed posttest for the vocabulary on simple machines. See Appendix C for the prestest, posttest, and delayed posttest administered for the vocabulary over simple machines.

Table 6

Vocabulary Words for Cycle Two: Simple Machines

incline	plane
machine	simple machine
metal	suppose
moving parts	surface
object	tool

Table 7

Student Performance on Tests for Science Vocabulary over Simple Machines

Student	Pretest	Posttest	Delayed Posttest
Lorenzo	30%	100%	80%
Marisela	20%	100%	90%
Nayyara	20%	100%	80%
Yolanda	10%	80%	60%

Overall, the students did very well, as the above scores indicate. The students had little trouble with the posttest, but we had some issues with the delayed posttest. The delayed posttest was set up as a sentence completion assessment with the hope that the students' understanding of the vocabulary would allow them to correctly fit the targeted vocabulary into the given sentences. I provided the students with a word bank of the targeted vocabulary and also explained that each vocabulary word would only be used once. I felt confident that I had created an assessment in which each targeted vocabulary word could logically fit into only one of the sentences.

Though we had repeatedly discussed that the word *plane* in this lesson did not refer to an airplane, two of the students did use it in their sentence choice with the meaning of an airplane.

Sentence # 7 was, "I would like to build a_____that takes me anywhere I want to go." The word I had anticipated was *machine* as the students and I had talked about building machines that would take them back in time, take them to school so they would not have to take the bus, and even take them to birthday parties when their parents could not drive them.

Sentence # 9 was, "The table was a flat level surface and so I knew it could also be called a _____." This was the sentence that should have been completed with the word *plane*. Both Nayyara and Yolanda switched the answers to #7 and #9. I did mark #7 wrong, even though technically a plane could have fit in that sentence. Marisela did fill in #7 correctly, but filled in #9 with the words "flat surface", which was not even a choice in the word bank. Lorenzo was the only student in the group to choose the word *plane* for sentence #9. Clearly I had not been successful in conveying the meaning of the word *plane* to my students. This perplexed me as I had included the two meanings of the word *plane* in a lesson on words with multiple meanings. We spent three days on this lesson, which took place in the two weeks before the delayed posttest. I included the word *plane* in the multiple meanings lesson because I wanted them to have a word in the lesson they were already familiar with in order to help them with the concept of multiple meanings. They consistently were able to tell me what the two meanings were and use them correctly in the lesson. The fact that three of the students chose to use the idea of

airplane instead of *flat surface* on the assessment made me wonder about the power of first-learned definitions.

I was also frustrated with myself as I thought I should have written a different sentence for the word *machine.* However, had I done that the students might have figured out that *plane* was the only word left and put that as their choice for sentence #7 and I would not have realized that they truly did not understand the meaning of the word *plane* as it applied to simple machines. There was one more issue about the sentence completion that gave me pause. Though the students were given a word bank and the words were still up on the word wall, every student except for Yolanda misspelled words when writing them in the blank, or in Marisela's case filled in the blank with a phrase that was not even an option in the word bank. Though Yolanda had the most incorrect answers, I saw her repeatedly referring to the word bank and carefully copying down the words. I addressed this issue with my students and let them look at the tests and the misspellings. I was trying to understand why they did not take advantage of the fact the words were there for them to copy. Lorenzo told me that it took too much time to look back at the word and copy it, and Nayyara told me that she likes to see if she can remember how to spell words without looking at them. Marisela had no answer and Yolanda informed me that she likes to take her time and copy them right because she learned in first grade that English words had "too many tricks." I chose to make this a teachable moment about being careful in our spelling especially when the word is there for us to copy. I would like to think that I had made an impression and my students took my advice to heart. However, nothing changed and my students continued with their spelling mishaps.

Before beginning this cycle I had determined that if a majority of my students scored an 80% or above on both the posttest and the delayed posttest, I would consider my curriculum of pre-teaching the Tier Two and Tier Three science words for simple machines to be a success. Table 8 indicates that based on these expectations I could consider this curriculum to be successful in helping my students acquire the vocabulary needed for their science lesson on simple machines. However, it was difficult for me to see it as successful when considering Yolanda's score on the delayed posttest.

Table 8

Number of Students Out of Four Scoring at Percentage Levels for All Tests over Simple Machines

Percentage	Pretest	Posttest	Delayed Posttest
90-100%		3	1
80-89%		1	2
70-79%			
60-69%			1
50-59%			
40-49%			
30-39%	1		
20-29%	2		
10-19%	1		
0-9%			

Cycle Three: Landforms

We began the third cycle after Spring break in late March. In this cycle we covered vocabulary from the students' social studies book. The theme for the vocabulary words was landforms. See Table 9 for the list of targeted vocabulary words for landforms.

Table 9

Vocabulary Words for Cycle Three: Landforms

desert	peak
hill	peninsula
island	plain
lake	river
landform	stream
mountain	valley

All of the targeted words from this cycle were Tier Three words and all were nouns. The format was the same as the previous two cycles. We began with a pretest of the twelve words the classroom teacher and I had agreed upon. After the pretest we began the curriculum as described in the chapter on methodology. Upon completion of the cycle the students were given the posttest and two weeks later they were given the delayed posttest. Table 10 shows the results of all three tests over landforms. See Appendix D for the pretest, posttest, and delayed posttest administered over the social studies vocabulary for landforms.

Table 10

Student Performance on Tests for Social Studies Vocabulary over Landforms

Student	Pretest	Posttest	Delayed Posttest
Lorenzo	33.3%	91.6%	100%
Marisela	25%	100%	83.3%
Nayyara	33.3%	83.3%	100%
Yolanda	16.6%	58.3%	75%

It should be noted that Yolanda was absent for two days of the cycle and her posttest score shows that. I was able to work with her once after the posttest one-on-one to present the vocabulary and do the activities that she had missed. I felt that we needed one more session together to help her shore up her knowledge of the words, but there was never another opportunity with my traveling schedule to meet again. I was concerned that she would not be as prepared as my other ELLs for the classroom lesson.

Though I tried to be careful about not including words in the pretest definitions that the students might not know, I realized during the pretest in this cycle that I had made two errors. Both of these errors were in the first definition. For #1 I had written "a body of water that flows" with the expected answer of "river." Marisela stopped me after I read this definition to ask me what a "body" has to do with water and what does the word "flow" mean. Clearly I had not written a definition that was student-friendly enough for my students. I explained both words to my students as I had used them in the definition and we moved on in the pretest. However, I made a note in my journal to do three things: clarify these words for my students as we moved through the cycle on landforms, share the information about these two words with the classroom teacher, and include these two words in a lesson about how we use the same word in different ways in English.

The targeted vocabulary words missed on the posttest indicated that all of the girls had no trouble understanding the phrase "body of water" and the meaning of the word *flow* as used in the definitions. Lorenzo used the word *lake* for two answers. He wrote the word *lake* for #3, which read "This is a body of water that has land all around it or is in the middle of land" and *lake* was the correct answer. However, he also wrote *lake* for #7, which read "This is a little bit of water that flows and when many of them come together

they make a river." The correct answer was *stream*. When we went over the test Lorenzo was frustrated for having made this error, but I believe he made this error because he always wanted to be the first to finish the test and therefore sacrificed accuracy for speed. Nayyara switched the answers for *island* and *lake.* Definition #3 on the posttest read, "This is a body of water that has land all around it or is in the middle of land," with the expected answer of *lake.* Definition #11 read, "This is land that has water on every side of it. You can't leave this place unless you have a boat," with the correct answer being *island.* It is easy to see how a struggling reader would become confused with the definitions of land surrounded by water and water surrounded by land. As with the posttests in cycle one and two, we went over the answers as soon as all the students had completed the test in order to answer questions and clarify answers so that the students could understand their errors and they could give me feedback about the language of the test.

The delayed posttest was a sentence completion test as in cycle one and two. Overall, I was very pleased with the students' scores. However, Yolanda left three of the sentence completions blank. When she handed me her paper, I pointed to the blanks and she shook her head no. Still, it was encouraging to see that she had scored better on the delayed posttest than the posttest which was an indication to me that our one-on-one session did reap some benefits. Marisela switched the answers for *peak* and *hill* which were questions #11 and #12 on the delayed posttest. When we went over the test, I understood how she made that error. She saw the words "mountain" and "top" in the sentence #11 and wrote the answer as *peak.* She had seen the two words she associated with the word *peak* and so wrote that as her answer. Since she had scratched off all of the

words but *hill,* that is what she wrote for #12. Even though I continued to read the tests to the students, I found that they did not always process all of the information and missed important context clues imbedded in the sentences. As in the previous two cycles, I had decided that if a majority of my students scored an 80% or above on both the posttest and the delayed posttest, I would view my curriculum of pre-teaching the Tier Three social studies words for landforms to be a success. Table 11 shows the performance levels of the students on the tests over landforms.

Table 11

Number of Students Out of Four Scoring at Percentage Levels for All Tests over Landforms

Percentage	Pre-test	Posttest	Delayed Posttest
90-100%		2	2
80-89%		1	1
70-79%			1
60-69%			
50-59%		1	
40-49%			
30-39%	2		
20-29%	1		
10-19%	1		
0-9%			

I believe that the results of the posttests and the delayed posttests from all three cycles demonstrates that the rich and intensive method is an effective strategy for preteaching Tier Two and Tier Three vocabulary words from science and social studies texts. I felt that the activities embedded in this strategy gave the students multiple opportunities to manipulate the language and gain a deeper understanding of the targeted vocabulary

words. However, there was a second question in my action research regarding collaboration between the ESL teacher and the mainstream classroom teacher that needed to be answered.

Collaboration

Does collaboration between the ESL teacher and the mainstream classroom teacher in choosing the words to be pre-taught help both teachers to focus on making connections between the ESL and mainstream classroom that will result in learning benefits for second grade English language learners? I had hoped that by collaborating with the classroom teacher in the choice of which vocabulary words to pre-teach, we would begin a working relationship so that we could connect the curriculum of the ESL sessions to the curriculum of the mainstream classroom. Working together with the classroom teacher would allow me to know what was being taught in the classroom, and would allow the classroom teacher to know how I was preparing the ELLs for the classroom lessons. This opened the door for communication between us and led to our sharing observations, concerns, and student progress. Informing the ELLs that their classroom teacher and I were working together was an important part of this procedure so that the students understood that the purpose of our ESL sessions was to help them prepare for the classroom lessons. In this way the students could also make the connection between the ESL sessions and the classroom content. This communication between all three parties involved in the lessons resulted in more positive benefits than I had anticipated.

I had asked the classroom teacher to observe the participation of my ELLs in the classroom lessons after I had completed the pre-teaching of the targeted words. I did not ask her to keep track every time one of my students answered a question or offered an

observation in class. She was a seasoned teacher and I trusted that she would be able to quietly observe and note my students' behavior in class. According to this teacher, my ELLs had a history of staying quiet and below the radar in class. She was well aware of their reticence to speak up in class. I wanted to learn from her observations if knowing the main vocabulary words in the lesson would give the ELLs the confidence to participate in class discussions, group work, and pair work. I was hoping that the classroom teacher would see a change in this behavior because hopefully now the students felt confident enough to become involved in and make contributions to the classroom activities.

The Classroom Lessons

As the classroom teacher presented her lesson on scientific investigations, she observed that my ELLs remained quiet during whole class discussions, but were vocal in small group work and paired work. This was a change from their usual behavior of allowing the native speakers to control the group dynamic by simply following along in the group and staying quiet. Even Yolanda was observed talking in her group. I believed that this was an important first step for my students. I encouraged my students when we were in our ESL sessions to continue to participate in their groups in the classroom, telling them that their teacher told me that they were talking more in class. I high-fived them and hoped my enthusiasm would spur them on to eventually participate in whole class discussions. Because the classroom teacher was cognizant of the vocabulary that was pretaught in the ESL sessions, she was able to engage my ELLs in one-on-one conversations about the vocabulary as she walked around the room evaluating all of her students in her informal assessments.

The next lesson that the classroom teacher presented that followed my preteaching curriculum was over simple machines. This time Lorenzo and Nayyara participated in the whole class discussion during the initial presentation of the material. During the small group hands-on experiment with magnets the classroom teacher observed that all of my students were vocal and actively participating within their group. The teacher showed a video about scientific investigations right before one of our ESL sessions. I learned about this video from my students who came running into our session excited to tell me that they knew all the words that were in the video and it was “easy-peasy” for them. They were all talking over one another and their excitement clearly demonstrated to me that our vocabulary activities provided scaffolding for my students to understand the academic classroom material. I felt that the students were able to mentally participate while watching the video as they were not overwhelmed by vocabulary that they did not comprehend.

The final lesson that covered pretaught vocabulary was a social studies lesson over landforms. After the whole class presentation of the material the students worked in pairs on a worksheet over what they had learned. The classroom teacher observed all four of my students actively working with their partners rather than allowing their partners to simply give them the answers to write down, which is generally what my students would do in partner work when written answers are required. My students were also observed by the classroom teacher actively participating with a partner in the visual depiction of a landform. I felt that this was an important step for my students to see themselves as equals with their native English-speaking classmates in the learning process. Though I did not employ any scientific measurement of my students’ confidence levels, I felt that

both I and the classroom teacher had observed a positive change in my students as they were able to connect more with the classroom curriculum.

An incident that highlights the beginning of this positive change was related to me at our end of the school year party. Marisela and Yolanda told me that they had a secret they wanted to tell me, but were afraid that I might get "mad" at them. I assured them I would not and they could share the secret with me. They then told me that when they were doing a worksheet on scientific investigations with their small group, they told the story I had used as an example to explain the word "observe" to the students. As Beck et al. (2002) had suggested that examples that the students could interact with were an integral part of the vocabulary activities, I told the students a story about me observing my birdfeeders to see which birdseed the birds in my backyard preferred. This story became a sort of running joke with my students and they would embellish the story until they had me sitting outside day and night without food or sleep, and even covered in spider webs, while I continued observing my backyard birds. I told Marisela and Yolanda that it was perfectly fine that they told the story to their classmates and that they could share anything we learned in our sessions with their classmates, even silly stories about their ESL teacher. Of course I was thrilled that my two shy little girls had decided on their own to share this story with classmates. I was fairly certain that their familiarity with the concept of "observing" gave them the confidence to share this story with others outside of our ESL sessions.

Post Research Interview

When all of the classroom lessons were completed, I wanted to interview the classroom teacher about our joint venture. Though we had talked throughout the year

about our students, I wanted to schedule some time for us to discuss what she had observed. I created a list of questions and emailed them to her so she could think about them before we talked. The interview itself was certainly a positive experience for me as the classroom teacher repeatedly emphasized that my students' level of confidence during the classroom lessons was very evident and showed in their willingness and enthusiasm to participate. As she knew which words I had pretaught, she was able to engage my ELLs in discussions about the vocabulary as she walked around the room observing and informally assessing. She felt that their knowledge of the concepts before the classroom lessons were presented was critical because she noticed that the students were not stumbling over the new words. She reiterated several times that she noticed the students were much more fluent in their speech as she would go around the room informally assessing their work and asking them questions about what they had learned. It was very gratifying to know that my students' increase in fluency using the targeted vocabulary words was such that the classroom teacher noticed it.

Since this was the first time this classroom teacher had ELLs in class, I asked her about her expectations when she learned she had four ELLs in class. She admitted that she was nervous, even after reading the students' profiles from the previous teacher, which indicated that the students had good social English, she wondered how she would communicate the classroom lessons to the students. I also asked her if she would consider working again with an ESL teacher in coordinating academic vocabulary for classroom lessons. She enthusiastically told me she would absolutely do it again and felt that it was a collaboration that should be practiced by all ESL and mainstream classroom

teachers. The interview left me feeling very positive about my collaborative efforts as I felt I had made a convert.

CHAPTER FIVE: CONCLUSION

This study was designed to ascertain the effectiveness of preteaching Tier Two and Tier Three science and social studies vocabulary to ELLs using the rich and intensive method of vocabulary instruction designed by Beck et al. (2002). This study also investigated if collaborating with the mainstream classroom teacher in choosing the words to be taught resulted in both teachers focusing on making connections between the ESL and mainstream classroom that will result in learning benefits for the English language learners. In the previous chapter I presented the results of the vocabulary assessments and the student engagement observations of the mainstream classroom teacher as she worked through her activities with the class. In this chapter, I will detail the major findings of my research, the implications of these findings for other educators, the limitations of this research, suggestions for further research, and how I will communicate the results of this study.

Major Findings

The rich and intensive method of preteaching Tier Two and Tier Three vocabulary words from science and social studies texts seemed to be an effective method in helping ELLs to acquire the new vocabulary needed to participate in the classroom lessons over the science and social studies material. It appears that direct vocabulary instruction can help build the necessary academic vocabulary so that ELLs feel more confident and more willing to participate in classroom activities. I believe that this study highlights the

importance of ELLs having multiple opportunities to hear and use a word in order to be confident enough to produce it in the academic setting of the classroom. I was not surprised to learn that my students participated more in class once they had learned the targeted vocabulary words as I know that fear of mispronouncing a word and fear of giving a wrong answer are two of the driving forces that keep my ELLs silent in the mainstream classroom.

There were two learning benefits that I had hoped for but did not truly understand the import of until I witnessed them during our sessions. The first learning benefit was the high level of engagement of the students as we did the activities. There was no need to cajole the students in any way to get them to participate as the very nature of the activities drew them in. During one of our sessions I happened to be observed by my supervisor, the head of Special Services, and his comment to me at the end of the observation was how much fun we all seemed to be having and how cohesive the group was. It was very reassuring to me to hear those words as it confirmed what I believed about my students and our sessions, but wondered if I was too connected to the students and our sessions to be an objective observer. The second learning benefit was the students' excitement once they understood how our sessions were preparing them for the classroom lessons. Perhaps the students' understanding of how we were connecting our ESL sessions to what they were going to learn in the classroom generated excitement because knowing the vocabulary before the classroom lesson began gave the students a little edge in the mainstream classroom as they had something on which to build their knowledge. I felt like the students now had scaffolding to help them understand the academic text and the classroom lessons. The nature of academic vocabulary is such that

it is outside the realm of everyday social English, and so the students have to take some language risks to learn the vocabulary. It may be that the students' excitement mitigated their fears and allowed them to take risks with the academic language. Though it certainly was not possible to measure the level of excitement of my students, I felt that their excitement was an integral part of their success in learning the targeted vocabulary.

What I learned about the difficulty of creating true student-friendly definitions for my ELLs was a major finding for me as a teacher. What I did wrong taught me much more than what I did right in creating the definitions. Each mistake I made helped me to view vocabulary on my students' level. It was an insightful process as I had to carefully consider the words I used in the definitions, always keeping in mind how my students would hear the definitions. I became a true believer in the importance of including examples of how the word was used in sentences as I found a simple definition was not enough for my students to understand the word. Imbedding examples of how the word was used in a sentence within the definitions gave my students the scaffolding they needed to visualize the word. It would be impossible to exaggerate the value of these insights learned from trying to create student-friendly definitions for my ELLs.

Implications

A learning environment for teaching vocabulary to ELLs must be carefully crafted to allow students multiple opportunities to hear and use the words being taught. The students should be guided in their interactions with the words. Biemiller (2001) recommends that more must be done to promote vocabulary in the early elementary school years and that a teacher-directed and curriculum-directed approach would serve to cultivate vocabulary and language growth in all children. Research suggests that even as

late as the fifth grade, almost 80 percent of words learned by children were learned as a consequence of direct explanation because the child requested an explanation or the child was instructed on the meaning of the word (Biemiller, 2006). According to DeCarrico (2001), students who are given multiple opportunities to use new words have a better chance of internalizing those words and thus moving those words into long-term memory. I gave the students both direct instructions on the meaning of the words as well as the opportunity to use the word in numerous activities to hopefully bring these words to life for my students. I believe that the results of the posttests and delayed posttests show that this combination of direct instruction of the targeted vocabulary and multiple opportunities to use the vocabulary as recommended by Beck et al. (2002), is a method that can successfully be used to preteach academic vocabulary from science and social studies texts.

The desire to connect my ESL sessions to the classroom curriculum was the driving force in my decision to collaborate with a mainstream classroom teacher. As research has shown (Fu et al., 2007, Hruska, 2000), it is a challenge for two teachers to try to find time during the school day to work on a collaborative lesson. This lack of time was made even more difficult by my traveling schedule, which required me to teach at four different schools. Another challenge for ESL teachers in finding a mainstream classroom teacher with whom to collaborate is that ESL teachers are often marginalized in the school setting and not viewed by classroom teachers as an integral part of the school community (de Jong, 1995). I faced both of these challenges as three classroom teachers turned down my request to collaborate with them. Two of the teachers kindly explained to me that there was just no time in their schedule for one more obligation, and a third teacher told

me that she knew how to prepare the ELLs in her class for her lessons. Certainly I was discouraged, but the fourth teacher I asked to collaborate with me in my action research project turned out to be a perfect choice. I believe that our collaboration worked well and resulted in learning benefits for our ELLs. Other ESL teachers may face the same rejection by some teachers, but it is worth the time and effort to find teachers who embrace the idea of collaboration with the ESL teacher. Though pleased that I had found a classroom teacher willing to work with me in a collaborative effort to tie our curriculum together, it weighed heavily on my mind that three teachers had refused my request and I felt this was fairly representative of many teachers throughout the district. Clearly this is where the ESL teacher must take on the role of an educational leader to persuade and educate the mainstream classroom teacher on about the benefits of collaboration.

Limitations

There were several limitations to this study. The first limitation was the fact that this was my first year in a new school district and I was unfamiliar with the teachers, the buildings, and the procedures of each different school. It made for an overwhelming year and I wonder if I would have been a better researcher during my second year in the district.

Another limitation was time. I was able to meet with the ELLs in this study only three times a week for 30 minute sessions. Had I been able to meet with these ELLs every day, we would have been able to work together to prepare them for more science and social studies lessons and I would have had more data to consider in judging the effectiveness of my curriculum model. Lack of time also prevented me from being able to observe my students in the classroom during the lessons on science and social studies for which I had

prepared them. Though I certainly trusted the classroom teacher's observations and feedback, I believe that being able to document my students' participation during the classroom lessons and assessments would have been an important component of this action research study.

Another limitation was the sample size of my students and the homogeneous nature of this group of students. There were only four students in this group and for all of them Spanish was their first language. Also, all of these students were fairly proficient in social English and so there were no newcomers in this group, making it impossible to know if my curriculum is a viable method to use with newcomers.

Further Research

Future research into ELLs' acquisition of academic vocabulary using Beck et al.'s (2002) rich and intensive method of instruction in collaboration with the mainstream classroom teacher offers many possibilities for future researchers. More research on the effectiveness of this method with older students, who are more likely than second graders to have classroom tests over science and social studies lessons, would allow the researcher to compare the scores of the ELLs and the native English speakers in the classroom on the science and social studies tests, thereby giving the research another dimension using norm-referencing as a another measure of the effectiveness of the curriculum used by the ESL teacher.

Another possibility for further research would be to follow the curriculum in this action research, but to give the delayed posttest two weeks after the completion of the classroom lessons rather than giving the delayed posttest before the classroom lessons. This would allow the researcher to assess the preteaching and classroom curriculum as a

whole unit to determine if the two processes work together to aid ELLs in the acquisition of academic vocabulary.

For economic and demographic reasons, many school districts employ the ESL pull-out model for instruction of English language learners (Carrasquillo & Rodriguez, 1996). The question of collaboration between the itinerant ESL teacher, who must work within the confines of the pull-out model, and the mainstream classroom teacher is an area that calls for more research in order to find practical means to connect the ESL sessions to the classroom curriculum. With many U.S. school districts still using the pull-out model for ESL instruction, there is a need for this research that would result in a workable model of collaboration between what has traditionally been two disparate lessons of instruction for English language learners. My experience during this research project highlighted for me how beneficial is it for the ELLs, as well as for both teachers, that there is a connection between all of our efforts.

Personal Growth

Constructing and conducting this classroom research project resulted in many benefits for me as a teacher. From the literature review, through the construction of the curriculum model and assessments, to the implementation of the curriculum in the ESL sessions, each step strengthened my academic knowledge of best practices for my ELLs as well as my understanding of the value of reflective study. The results of my study indicate that my curriculum of preteaching science and social studies vocabulary was successful. This success is the impetus that will promote more action research studies in my future. I believe that action research is an invaluable tool for personal and professional insight.

I intend to share my findings with my ESL colleagues in our Professional Learning Community sessions. I also intend to recommend *Bringing Words To Life* (Beck, et al. 2002) for our book study during these sessions. The ESL teachers in my district have requested time during the orientation days for new teachers to give a presentation about English language learners. If we are granted this time, I intend to present to the new teachers the idea of collaboration and its benefits. I am hoping that by sharing my findings about collaboration with these teachers, they will come to understand that not only is collaboration best practice, but it is possible to accomplish within the busy school day. The other ESL teachers are certainly on board with this idea of collaboration as they too believe that coordinating curriculum with the mainstream classroom teacher would enhance the effectiveness of the pull-out ESL sessions.

I have often wondered if teaching should be categorized as a science or an art. I believe now that it is both. The science element of teaching is built around our search for best practices gleaned from data driven research. The art of teaching lies in our creative implementation of best practices in the classroom setting so that students find learning to be engaging, informative, and fun. I also now believe that ESL teachers, especially ESL teachers working within the pull-out model where no program is in place for fostering collaboration, must learn and develop the art of leadership in order to create and nurture a community of teachers that believes in, embraces, and practices collaborative practices so that there is coordination of curriculum between the ESL sessions and the classroom lessons.

APPENDIX A

WIDA PERFORMANCE DEFINITIONS

WIDA Performance Definitions

At the given level of English language proficiency, English language learners will process, understand, produce or use:

6- Reaching	• specialized or technical language reflective of the content areas at grade level • a variety of sentence lengths of varying linguistic complexity in extended oral or written discourse as required by the specified grade level • oral or written communication in English comparable to English-proficient peers
5- Bridging	• specialized or technical language of the content areas • a variety of sentence lengths of varying linguistic complexity in extended oral or written discourse, including stories, essays or reports • oral or written language approaching comparability to that of English-proficient peers when presented with grade level material
4- Expanding	• specific and some technical language of the content areas • a variety of sentence lengths of varying linguistic complexity in oral discourse or multiple, related sentences or paragraphs • 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- Developing	• general and some specific language of the content areas • expanded sentences in oral interaction or written paragraphs • 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- Beginning	• general language related to the content areas • phrases or short sentences • 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- Entering	• pictorial or graphic representation of the language of the content areas • 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 • 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

World Class Instructional Design and Assessment. (2008). Performance Definitions. Retrieved July 30, 2011 from http://www.wida.us/standards/PerfDefs.pdf.

APPENDIX B

CYCLE ONE PRETEST, POSTTEST, AND DELAYED POSTTEST FOR SCIENTIFIC INVESTIGATIONS

COLOR_____

Cycle One **Pretest and posttest** for 2nd grade science—Scientific Investigations

WORD BANK—EACH WORD WILL BE USED ONLY **ONE** TIME.

attract	poles	investigate
observe	data	inquiry
repel	force	predict
interpret		

_____1. A search for information because you have a question about something

_____2. When two things come together

_____3. To push back or push away

_____4. The parts of a magnet that are the strongest

_____5. Information that is made up of facts and often has charts and graphs

_____6. To watch something very closely and pay attention to it

_____7. This is another word for power. To have this is to be strong

_____8. To find out what happened or what is the truth

_____9. To explain the meaning of something

_____10. To say what is going to happen before it happens

Color_____Cycle One **Delayed Posttest** 2nd grade-Scientific Investigations

WORD BANK—EACH WORD WILL BE USED ONLY **ONE** TIME.

attract	poles	investigate
observe	data	inquiry
repel	force	predict
interpret		

1. The TV weatherman's job is to _____the weather for tomorrow so we know what to wear when we are outside.

2. Mrs. Coiro had to _____the birds for a long time to see which birdseed they liked the best.

3. All of these charts and numbers give me a lot of _____so that I can understand the scientific experiment.

4. I like to have flowers in my garden because they_____the pretty butterflies.

5. A magnet has two of these, just like the earth has two of these. These _____are called the north and the south.

6. I heard a noise in my basement and I did not know what it was, so I went downstairs to _____and find out what was going on down there.

7. All these charts and numbers are confusing me. I need some to _____this information so that I can understand it better.

8. I hope this spray helps to_____the mosquitos away from me so that I don't get mosquito bites.

9. The_____of the hammer put the nail into the wall.

10. Our_____into how magnets work taught our class a lot because we had questions about how magnets work.

APPENDIX C

CYCLE TWO PRETEST, POSTTEST, AND DELAYED POSTTEST FOR SIMPLE MACHINES

COLOR_____

Cycle Two **Pretest and posttest** for 2nd grade science—Simple Machines

WORD BANK—EACH WORD WILL BE USED ONLY **ONE** TIME.

Incline	machine	metal
object	plane	moving parts
simple machine	suppose	surface
tool		

_____1. Something that is flat like the top of a table

_____2. Something you hold in your hand that helps you to fix a broken machine or put a nail in the wall to hang a picture.

_____3. This is a diagonal or a slant. We need these to push wheelchairs up and down to get in and out of buildings.

_____4. These are parts of a machine that move and you can see them moving.

_____5. This is the outside of something that you can see, like the outside of a box, the outside of your skin, or even the outside of the moon.

_____6. This is a machine that has no parts or few parts that move.

_____7. This is a word that we use that is another way to say the word THING.

_____8. This is a hard material that we use to make rings for our fingers, legs for our desks, or even to make tall skyscrapers.

_____9. This is something that needs an engine in order to work. Your car would be one of these. Or maybe you have to plug this thing in so it will work. What your mom uses to wash the clothes would be one of these.

_____10. To wonder or imagine what might happen

COLOR_____

Cycle Two **Delayed posttest** for 2nd grade science Simple Machines

WORD BANK—EACH WORD WILL BE USED ONLY **ONE** TIME.

incline	machine	metal
moving parts	object	plane
simple machine	suppose	surface
tool		

1. Let's _____that we got lots of snow tonight. What do you think would happen tomorrow? Would we have school?

2. I cannot fix this television with my hands. I will need a _____to fix it.

3. This machine is NOT complicated. In fact, it has no moving parts. It is a _____ _____.

4. When we look at the moon we cannot see inside of it. We can only see the_____of it.

5. The wheelchair cannot go up the stairs. We will have to put an _____over the stairs so that he can use his wheelchair.

6. This machine has a lot of_____ _____that go up and down and back and forth.

7. I would like to build a_____that takes me anywhere I want to go.

8. I looked in the box and saw a thing I have never seen before. I wonder what that _____was.

9. The table was flat surface and so I knew that it could also be called a _____.

10. The ring was hard and I could not bend it so I knew it was made out of_____.

APPENDIX D

CYCLE THREE PRETEST, POSTTEST, AND DELAYED POSTTEST FOR LANDFORMS

Color_____Cycle Three **Prestest/posttest** 2nd grade social studies--Landforms

WORD BANK—EACH WORD WILL BE USED ONLY **ONE** TIME.

mountain	stream	desert
river	valley	island
peak	peninsula	plain
lake	landform	hill

_____1. This is a body of water that flows.

_____2. This is a landform that is much higher than the land around it and often has snow on the top of it.

_____3. This is a body of water that has land all around it or is in the middle of land.

_____4. This is flat land that does not have mountains and is good for growing corn and wheat.

_____5. This is the low area between two mountains.

_____6. This is a dry area of land that does not get a lot of rain.

_____7. This is a little bit of water that flows and when many of them come together they can make a river.

_____8. This is the shape or form of different kinds of land on earth.

_____9. This is land that is higher than the land around it, but it is not as high as a mountain.

_____10. This is land that has water on all sides except for one. In other words it is surrounded by water on three sides.

_____11. This is land that has water on every side of it. You can't leave this place unless you have a boat.

_____12. This is the high point or top of something, like the top of a mountain.

Color_____ Cycle Three--**Delayed posttest--** 2nd grade social studies—Landforms

WORD BANK—EACH WORD WILL BE USED ONLY **ONE** TIME.

mountain	stream	desert	plain	river	hill
valley	island	peak	lake	peninsula	landform

1. A mountain or an island is called a _____because they are examples of shapes of land on our planet earth.

2. I wanted to climb to the very_____of the mountain so that I could look around and see everything below me.

3. Well, there is not very much rainfall here and it feels so dry. I must be in a _____.

4. I am in the middle of this_____in a boat and when I look around I can see land all around me.

5. I can look up at the mountain and see many_____flowing down and coming together to form a river.

6. I live on an_____and if I want to leave it I need a boat because there is water all around and I cannot walk on top of water!

7. This water is called a _____and was made by many flowing streams that came together.

8. I live here in this low_____and I can look up and see mountains on both sides of me.

9. This state that we live in is on a_____ because it is flat without mountains and it is good for growing corn and wheat.

10. I live on a _____ and it has water on 3 sides, but I don't need a boat because one side is connected to other land and I can walk or drive away from where I live.

11. I can climb to the top of this_____because It is not as high as a mountain and so it is easier to climb.

12. This_____is very tall and has snow on the top of it because it is so cold this high up in the air.

APPENDIX E

POST RESEARCH INTERVIEW QUESTIONS

FOR CLASSROOM TEACHER

POST RESEARCH INTERVIEW WITH CLASSROOM TEACHER

1. Having never worked with ELLs before what were your expectations?

2. How did you feel about my request to work with you in pre-teaching academic vocabulary in science and social studies?

3. Did you find working with me too time-consuming, complicated, or otherwise just plain annoying?

4. Did our ELL students participate more in these lessons in the classroom because they were more familiar with the academic vocabulary in the lesson? What were your observations of their participation in whole class, small group, and paired work?

5. Do you think their confidence level was greater when knowing the vocabulary before classroom lessons began? What did you observe about their confidence level?

6. Would you consider working again with an ESL teacher in coordinating academic vocabulary for lessons? Why or why not?

7. Is there anything else you would like to say about this joint adventure of ours?

APPENDIX F

CONSENT LETTER

El 24 de enero, 2011

Estimados Padres,

Yo soy la maestra de Inglés como Segunda Lengua para su niña. Estoy completando una licenciatura superior en Inglés Como Segunda Lengua a la Universidad de Hamline. Una parte importante de conseguir esta licenciatura requiere que yo realice una investigación y escriba una tesis explicando la investigación y los resultados. Me gustaría realizar esta investigación durante las sesiones diarias que yo tengo con su niña del 28 de enero al 22 de abril, 2011. Ya tengo el permiso de la directora de la escuela, y del director del distrito, así como La Escuela de Posgrado de Educación de la Universidad de Hamline. El propósito de esta carta es pedir su permiso que su niña participe en mi investigación.

La instrucción del vocabulario es una parte importante de aprender inglés como segunda lengua y yo estaré trabajando con la maestra de la clase para escoger y enseñar el vocabulario necesario para la ciencia y los estudios sociales. Hace dos años que yo uso este método y ahora quiero analizar y publicar los resultados de este método en mi tesis. En resumen yo voy a hacer lo que yo hago normalmente en las sesiones con su niña pero lo que es diferente es que durante este tiempo de la investigación yo le daré a su niña una evaluación escrita antes, durante, y después de las instrucciones sobre el vocabulario para determinar cuán efectivo es este método. Esta tesis se publicará y estará disponible por el Internet por la Universidad de Hamline para que otros alumnos y maestros puedan leerla y quizás aprender más de este método de enseñar el vocabulario.

Aunque esta tesis esté disponible a otros, quiero que Uds. sepan que ni el nombre de su niña, ni el nombre de la escuela, y ni el nombre del distrito escolar no será incluído en esta tesis. Es una parte importante de cualquier investigación que todos los participantes se quedan desconocidos y toda la información se queda privada. Si Uds. no quieren que su niña participe, está bien. También, su niña puede parar participar en cualquier momento que Uds. deseen.

Si Uds. tienen preguntas favor de contactarme por llamar a la escuela. Favor de firmar y devolver el permiso por el 28 de enero. Hay dos copias de este permiso para que Uds. tengan una copia y su niña pueda traerme la otra copia firmada. Muchas gracias por su cooperación.

Atentamente,

Mrs. Beverly Coiro
Maestra de Inglés como Segunda Lengua
El 24 de enero, 2011

Sra. Coiro,

Yo he recibido y leído su carta de hacer una investigación del método de enseñarle vocabulario a mi niña durante las sesiones diarias con Ud. Yo entiendo que su propósito es comprender mejor como se enseña y se aprende vocabulario cuando inglés es la segunda lengua.

Yo le doy permiso para que mi niña_____
participe en este proyecto que es parte de su programa para conseguir su licenciatura superior. Yo entiendo que los resultados se quedarán confidenciales y anónimos y que mi niña puede parar su participación en cualquier momento sin consecuencias negativas.

Firmado,

_____
(Padre o Madre)

Fecha:_____

REFERENCES

Agee, J. (2009). Developing qualitative research questions: A reflective process. *International Journal of Qualitative Studies in Education, 22*(4), 431-447.

Arkoudis, S. (1994). Changing the role relationships between the classroom teacher and the ESL teacher. *Prospect: The Journal of Adult Migrant Education Program, 9*(3), 46-53.

Arkoudis, S. (2003). Teaching English as a second language in science classes: Incommensurate epistemologies. *Language & Education: An International Journal,17*(3), 161-173.

Arkoudis, S. (2006). Negotiating the rough ground between ESL and mainstream teachers. *The International Journal of Bilingual Education and Bilingualism, 9*(4), 415-435.

August, D., Carlo, M., Dressler, C., & Snow, C. (2005). The critical role of vocabulary development for English language learners. *Learning Disabilities Research & Practice (Blackwell Publishing Limited), 20*(1), 50-57. doi:10.1111/j.1540-5826.2005.00120.x

August, D., & Shanahan, T. (Eds.). (2006). *Developing literacy in second-language learners: Report of the national literacy panel on language-minority children and youth*. Center for Applied Linguistics. London and Mahwah, NJ: Erlbaum

Bauman, F., Ware, D., & Edwards, E. (2007). "Bumping into spicy, tasty words that catch your tongue": A formative experiment on vocabulary instruction. *The Reading Teacher, 61*(2), 108-22.

Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York: Guilford Press.

Bialystok, E., Luk, G., & Kwan, E. (2005). Bilingualism, biliteracy, and learning to read: Interactions among language and writing systems. *Scientific Studies of Reading, 9*(1), 43-61.

Biemiller, A. (2001). Teaching vocabulary early, direct, sequential. *American Educator, 25*(1), Retrieved January 31, 2011 from http://www.aft.org/newspubs/periodicals/ae/spring2001/biemiller.cfm

Biemiller, A., & Slonim, N. (2001). Estimating root word vocabulary growth in normative and advantaged populations: Evidence for a common sequence of vocabulary acquisition. *Journal of Educational Psychology, 93*(3), 498-520.

Biemiller, A., Boote, C. (2006). An effective method for building meaning vocabulary in primary grades. *Journal of Educational Psychology, 98*(1), 44-62. doi: 10.1037/0022063.98.1.44

Blachowicz, C.L.Z., & Fisher, P. (2006). *Teaching vocabulary in all classrooms* (3rd ed.), Upper Saddle River, NJ: Prentice Hall.

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

Bond, L. (1996). Norm-and-criterion-referenced test. *Practical Assessment, Research & Evaluation, 5*(2). Retrieved February 3, 2012 from http://PAREonline.net/getvn.asp?v=5&n=2

Carlo, M.S., August, D., & McLaughlin, B., Snow, C.E., Dressler, C., Lippman, D.,…White, C. (2004). Closing the gap: Addressing the vocabulary needs of English-language learners in bilingual and mainstream classrooms. *Reading Research Quarterly, 39*(2), 188-215.

Carrasquillo, A., & Rodriguez, V. (1996). *Language minority students in the mainstream classroom.* Bristol, UK: Multilingual Matters.

Carver, R. P. (1994). Percentage of unknown vocabulary words in text as a function of the relative difficulty of the text: Implications for instruction. *Journal of Literacy Research, 26*(4), 413-437. doi:10.1080/10862969409547861

Collins COBUILD Student's Dictionary. (Third ed.). (2005). London: HarperCollins.

Corrie, L. (1995). The structure and culture of staff collaboration: Managing meaning and opening doors. *Educational Review, 47*(1), 89.

Coxhead, A. (2000). A new academic word list. *TESOL Quarterly, 34*(2), 213-238. doi:10.2307/3587951

Cunningham, A.E., & Stanovich, K. E. (1998). What reading does for the mind. *American Educator, 22*(1-2), 8-15.

Cutting, L.E., & Scarborough, H.S. (2006). Prediction of reading comprehension: Relative contributions of word recognition, language proficiency, and other cognitive skills can depend on how comprehension is measured. *Scientific Studies of Reading, 10*(3), 277-299.

Darling-Hammond, L., & Richardson, N. (2009). Teacher learning: What matters? *Educational Leadership, 66*(5) 46-53.

Davison, C. (2006). Collaboration between ESL and content teachers: How do we know when we are doing it right? *The International Journal of Bilingual Education and Bilingualism, 9*(4), 454-475.

Decarrico, J. S. (2001). Vocabulary learning and teaching. In Celce-Murcia, M. (Ed.), *Teaching English as a second or foreign language,* (3rd ed.) (pp. 285-299), Boston, MA: Heinle & Heinle.

DeJong, E. (1995). From marginalization to integrated language minority education. Paper presented at the annual meeting of the National Association for Bilingual Education, Phoenix, AZ. (ED394356).

Dellicarpini, M. (2008). Teacher collaboration for ESL/EFL academic success. *Internet TESL Journal 14*(8). Retrieved from http://iteslj.org/

Dobison, T. (2001). Do learners learn from classroom interaction and does the teacher have a role to play? *Language Teaching Research, 5*(3), 189-211.

Dove, M., & Honigsfeld, A. (2010). ESL coteaching and collaboration: Opportunities to develop teacher leadership and enhance student learning. *TESOL Journal, 1*(1), 3-22.

Droop, M., & Verhoeven, L. (2003). Language proficiency and reading ability in first- and second-language learners. *Reading Research Quarterly, 38*(1), 78-103.

DuFour, R. (2003). Building a professional learning community: For system leaders, it means allowing autonomy within defined parameters. *The School Administrator, 5*. Retrieved March 8, 2011, from http://findarticles.com/p/articles/mi m 0JSD/is 5 60/ai 101173944.

Dunne, K. & Villani, S. (2007). *Mentoring new teachers through collaborative coaching: Linking teacher and student learning.* San Francisco, CA: WestEd.

Elmore, R.F. (2000). *Building a new structure for school leadership.* Washington, DC: Albert Shanker Institute.

Farstrup, A. & Samuels, S. (2008). Vocabulary Instruction: A Critical Component for Skillful Reading. In A. Farstrup, & S. Samuels, (Eds.), *What research has to say about vocabulary instruction* (pp.1-5). Newark, NJ: International Reading Association.

File, K. A., & Adams, R. (2010). Should vocabulary instruction be integrated or isolated? *TESOL Quarterly, 44*(2), 22-249.

Francis, D., Rivera, M., Lesaux, N., Kieffer, M., & Rivera, H. (2006). Research-based recommendations for instruction and academic intervention: Practical guidelines for the education of English language learners. (Under cooperative agreement grant S283BO50034 for U.S. Department of Education). Portsmouth, NH: RMC Research Corporation, Center on Instruction. Retrieved from http://www/centeroninstruction.org/files/ELL1-Interventions.pdf.

Fu, D., Houser, R., & Huang, A. (2007). A collaboration between ESL and regular classroom teachers for ELL students' literacy development. *Changing English: Studies in Culture and Education, 14*(3), 325-342.

Garcia, G.E. (1991). Factors influencing the English reading test performance of Spanish-speaking Hispanic children. *Reading Research Quarterly, 26*(4) 371-392.

Gass, S. M., & Selinker, L. (2008). *Second language acquisition: An introductory course* (3rd ed.). New York: Routledge/Taylor and Francis Group.

Hart, B., & Risley, T.R. (1995). *Meaningful differences in the everyday experience of young American children.* Baltimore: Brookes.

Hiebert, E. H., & Kamil, M. L. (2005). *Teaching and learning vocabulary: Bringing research to practice*. Mahwah, N.J.: L. Erlbaum Associates.

Hruska, B., (2000, Oct.) *Prioritizing needs/negotiating practices: Student placement at River Valley Elementary*. Paper presented at the Puerto Rican Studies Association Conference, Amherst, MA.

Hulstijn, J. H. (1993). When do foreign-language readers look up the meaning of unfamiliar words? The influence of task and learner variables. *Modern Language Journal, 77*(2), 139-147.

Kang, H. (1994). Helping second language readers learn from content area text through collaboration and support. *Journal of Reading, 37*(8), 646-7.

Kennis, S. & McTaggart, R. (2000). Participatory action research: Communicative action and the public sphere. In N. Denzin & Y. Lincoln, (Eds.), *The Sage handbook of qualitative research* (pp.559-604). Thousand Oaks: Sage Publications.

Kindler, A. L. (2002). *Survey of the states' limited English proficient students and available educational programs and services: 2000-2001 summary report.* Washington, DC: Office of English Language Acquisition, Language Enhancement and Academic Achievement for Limited English Proficient Students. Retrieved from http://www.centerforpubliceducation.org/Libraries/Document-Library/Survey-of-the-States-Report.pdf.

Krashen, S. (2002). Developing academic language: early L1 reading and later L2 reading. *International Journal of the Sociology of Language*, *155/156*(1), 143-151.

Mackey, A., & Gass, S. (2005). *Second language research.* Mahwah, NJ: Erlbaum.

Mancilla-Martinez, J. (2010). Word meanings matter: Cultivating English vocabulary knowledge in fifth-grade Spanish-speaking language minority learners. TESOL *Quarterly*, *44*(4), 669-699.

Meskill, C. (2005). Infusing English language learners throughout professional educator curricula; The training all teachers project. *Teachers College Record, 107*, 739-756.

Meyer, D., Madden, D., & McGrath, J.D. (2005). English language learner students in the U.S. public schools: 1994 and 2000. *Education Statistics Quarterly, 6.* Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004035.

Milton, J. (2009). *Measuring second language vocabulary acquisition.* Bristol, UK: Multilingual Matters.

National Clearing House for Bilingual Education. (1995). *Forming new partnerships for educating all students to high standards.* Washington, D.C.: NCBE, George Washington University.

National Institute of Child Health and Human Development. (2000). Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.

No Child Left Behind Act of 2001, 20 U.S.C. 6301 et seq. (2002).

Office of English Language Acquisition, Language Enhancement, and Academic Achievement for Limited English Proficient Students. *Biennial report to Congress on the implementation of the Title III State Formula Grant Program,* school years 2006-07 and 2007-08. Washington, D.C., 2012. Retrieved from http://www.ncela.gwu.edu/files/uploads/3/Biennial_Report_0608.pdf

Ponniah, R. (2009). The robustness of free reading in second and foreign language education. *Language in India*, *9*(12), 20-29.

Pressley, M., (2006). *Reading instruction that works.* (3rd ed.). New York: Guilford Press.

Proctor, P.C., Carlo, M., August, D., & Snow, C. (2005). Native Spanish-speaking children reading in English: Toward a model of comprehension. *Journal of Educational Psychology, 97*(2), 246-256.

Riley J. (2001, November). *Team teaching in the elementary school: A long-term qualitative study of teacher planning and decision-making.* ERIC Digest. (ERIC Reproduction Service No. ED 460115)

Rivera, M. (2008). *Teaching academic language to English language learners.* Retrieved from http://secc.sedl.org/events/08/esl-institute/files/19_rivera_esling08_acadlang_pres.pdf

Roessingh, H. (2004). Effective high school ESL programs: A synthesis and meta-analysis. *Canadian Modern Language Review, 60*(5), 611-636.

Sakash, K. & Rodriguez-Brown, F. (1995). Teamworks: Mainstream and bilingual/ESL teacher collaboration. ERIC Digest. Washington, DC: National Clearinghouse for Bilingual Education. (ERIC Document Reproduction Service No. ED 24).

Santamaria, L.J., & Thousand, J. S. (2004). Collaboration, co-teaching, and differentiated instruction: A process-oriented approach to whole schooling. *International Journal of Whole Schooling, 1*(1), Retrieved from www.wholeschooling.net:16080/Journal_of_Whole_Schooling

Sax, C., & Fisher, D. (2001). Using qualitative action research to effect change: Implications for professional education. *Teacher Education Quarterly, 28*(2), 71-80.

Scarcella, R. (2003). *Academic English: A Conceptual Framework.* UC Linguistic Minority Research Institute Technical Report 2003-1. http://www.utpa.edu/dept/curr_ins/faculty_folders/guerrero_m/docs/links/Scarcella_academic%20language.pdf

Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research 12*(3), 329-363.

Schmitt, N., Schmitt, D., & Clapham, C. (2001). Developing and exploring the behaviour of two new versions of the Vocabulary Levels Test. *Language Testing, 18*(1), 55-88.

Schnorr, R.F., & Davern, L. (2005). Creating exemplary literacy classrooms through the power of teaming. *The Reading Teacher, 58*(6), 494-506.

Stanovich, K.E. (2008). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Journal of Education, 189*(1), 23-55.

Stoller, F., & Grabe, W. (1995). Implications for L2 vocabulary acquisition and instruction from L1 vocabulary research. In T. Huckin, M. Haynes, & J Coady (Eds.), *Second language reading and vocabulary learning* (pp. 24-45), Norwood, NJ: Ablex.

Strickland, D., (2004). Working with families as partners in early literacy. *Reading Teacher, 58*(1), 86-88. doi:10.1598/RT.58.1.9.

Swanborn, M. S. L., & deGlopper, K. D. (1999). Incidental word learning while reading: A meta-analysis. *Review of Educational Research, 69*(3), 261-285.

Theoharis, G., & O'Toole, J. (2011). Leading inclusive ELL. *Educational Administration Quarterly, 47*(4), 646-688. doi:10.1177/0013161X11401616

Thomas, W., & Collier, V. (2002). *A National Study of School Effectiveness for Language Minority Students' Long-Term Academic Achievement.* UC Berkeley: Center for Research on Education, Diversity and Excellence. Retrieved from: http//scholarship.org/uc/item/65j213pt.

U.S. Department of Education, Title I, Part A Program. (2008). Retrieved August 1, 2010 from http://www.ed.gov/programs/titleiparta/index.html.

U.S. Department of Education, National Center for Education Statistics. (2004). *The Condition of Education 2004(* Report No. NCES 2004-093). Washington, DC: Government Printing Office.

U.S. Department of Education, National Center for Education Statistics. (2007). *The Condition of Education 2006* (Report No. NCES 2007-064). Washington, DC: Government Printing Office.

U.S. Department of Education, National Center for Education Statistics. (2011). *The Condition of Education 2011* (Report No. NCES 2011-033). Washington, D.C: Government Printing Office

Villa, R. A., Thousand, J. S., Nevin, A. I., & Liston, A. (2005). Successful inclusion practices in middle and secondary. *American Secondary Education Journal, 33*(3), 33-50.

World Class Instructional Design and Assessment. (2008). Performance Definitions. Retrieved July 30, 2011 from http://www.wida.us/standards/PerfDefs.pdf.

Zehr, M.A. (2008, March 10). Trends in the education of English-language learners. *Education Week.* Retrieved from http://blogs.edweek.org/edweek/learning-the-language/2008/03/trends_in_the_education_of_eng.html.

Zwiers, J., (2008). *Building academic language.* San Francisco, CA: Jossey-Bass.