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Vocabulary Strategies in an Elementary Classroom in a Third World Country

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COLLEGE OF EDUCATION

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Laurie F. Johnson

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Abstract

Second and 3rd grade Honduran students in a Christian school are not performing at grade level in vocabulary. Students who lag in vocabulary development may not comprehend what they read and are likely to perform poorly in their course work, which may result in repeating the grade. As a result of the students' poor performance, the school implemented vocabulary squares strategy instruction to improve vocabulary development. Guided by the theory of constructivism, the purpose of this casual comparative study was to determine if vocabulary squares strategy instruction resulted in greater word mastery for 2nd and 3rd grade Honduran students than did traditional vocabulary instruction. The control group (n = 16) received traditional vocabulary instruction, and the experimental group (n = 15) received vocabulary squares instruction for a period of 6 weeks. Analysis of gain score differences via an independent t test revealed no significant difference word mastery. The length of time the strategy instruction was implemented may have been insufficient to affect word mastery. It is recommended that teachers employ the vocabulary squares strategy more frequently and over a longer period of time to determine if vocabulary squares strategy instruction results in greater word mastery than traditional instruction. This practice may contribute to positive social change by increasing vocabulary development, which , in turn, affects students' comprehension and course work performance reducing -the number of Honduran students repeating 2nd or 3rd grade.

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Dedication

This work is dedicated to my Lord Jesus Christ; without Him nothing is possible. To my family: my husband, Bruce, who I love very much, and who has stuck with me through many frustrating moments while working on this effort; my children, Heather and Dan'l, who I love dearly and I am proud of, who love the Lord and have excelled as godly parents to be examples for their children–my 11 grandchildren; to my daddy, who has always been encouraging and supportive and never stopped believing in me; to Mrs. Carolyn Herrington who prays daily for me and never fails to lift me up with encouragement; to all my friends who have supported me; and to Baptist Medical and Dental Missions International's support. I am truly blessed and love you all.

Acknowledgments

I remember the first person I talked to when requesting information about Walden University. Although I was fearful and unsure, she was positive and jubilant. When I had a January starting date planned out, she said it was doable for September, and she was right.

This project would not have been completed if not for Dr. Judith Orth and all of her hard work. She supported and guided me and went the extra mile to help me. She not only had the job of checking my work but also inserting positive comments in my work– very encouraging. Those comments kept me grounded and let me know I was on the right track. Dr. Michael Cass who has helped me in his final days before retiring.

And I cannot forget the Walden Library staff–without them I could not get the information I needed because living in a foreign country often leaves me with little to no accessibility. The Walden Library staff always checked back with me to ask if there was anything else they could do for me. To them, I am truly grateful.

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Section 1: Introduction to the Study

Introduction

Honduran schools, specifically the rural schools, present disadvantages for children who start their educational experience after late enrollment or repetition of a grade. In some Honduran communities, causes for late student enrollment are due to a lack of "accessibility of services, particularly in rural areas" (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2007). Additionally, long distances of travel can impede the enrollment of young children in school. Carr (1990) stated that:

> The high rate of illiteracy in Latin America may be viewed as a phenomenon with roots in a historical process. Illiteracy is the reflection and result of the political and socio-economic circumstances that have allowed large masses of people to remain without schooling. (p. 50)

In Honduras, fewer than 70% of children enter first grade at grade and age level (UNESCO, 2007). Six out of 10 children who enter primary school actually complete their primary studies. Less than one third of the children who do finish in the final primary grade are at grade and age level (UNESCO, 2007); that is to say these children are not at the appropriate age for the grade level they complete–many are older than they should be for their level of education. In rural areas, less than one out of 10 completes secondary education. When comparing urban areas to rural areas, there is a completion rate differential of 50%, which represents a significant gap between urban and rural primary school experiences (UNESCO, 2007). This gap is the result of the remote locations of some schools and the reality that parents do not allow their young children to

walk to school alone. Due to these circumstances, it is not uncommon for Honduran children in rural areas to enter school at a later age. Moreover, in many cases, parents themselves lack the experience of an education and do not see the importance of their children attending school. At the Academy, the majority of the students reflect these statistics (UNESCO, 2007).

By midyear of 1st grade, the average Honduran child is just beginning to read whole sentences and paragraphs; at the end of 1st grade, a 1st grader's reading level is at a basic level. In my experiences at the academy and with surrounding area schools, most of students entering second grade are not able to read at a 2nd grade level. While this issue might be attributed to deficiencies in the Honduran educational system, schools are working to improve their instructional methods but lack in supplemental resources to aid the teacher.

As I observed in my experience at the Good Shepherd Christian Academy, vocabulary development instruction is lagging. I first became aware of this deficiency while monitoring the standardized achievement tests, designed and written by academy teachers, as they were taken in a second grade classroom. The classroom teacher read the test questions and the answers to the students who, at the second grade level, should have been reading independently. Again, in the Honduran educational system, students begin to develop their independent reading skills around midyear of 1st grade. Therefore, given that the Academy administers a standardized test at the end of the school year, the reading ability of 2nd grade students should have been approaching the skill level of a new 3rd grader.

My second observation of the lack of reading ability and skills among academy students proved similar to my first observation. In this instance, although a different teacher was providing grammar instruction to the students, I noted that there was no change in student vocabulary development. While the Academy teachers are qualified to teach language and reading development, and the majority attended the Pedagogical University of Honduras, there were still some skills the students could not develop adequately and at basic grade level. This was primarily because the Honduran public schools used a basic Spanish grammar program, which presented a challenge for reading and vocabulary teachers without the proper teaching materials.

To improve the quality of education, the Academy tried changing the 2nd and 3rd grade teachers in the hopes of establishing a stronger vocabulary foundation, but that did not result in a significant change in vocabulary development. This outcome led me back to the original idea that certain skills–sentence structure, grammar structure, and language comprehension–were not comprehensively taught. In 3 years of administering standardized tests, the scores had not shown a significant change. The outcome of these results (see Appendixes G & H) led me to conduct a quantitative study comparing the effects of new vocabulary strategies on vocabulary development in 2nd and 3rd grade students.

Reading comprehension is the goal of any reader, an assertion that has its roots in vocabulary knowledge (Biemiller, 2005). Students in the 1940s knew more meanings of words than those students of the mid-1990s (Manzo, Manzo, & Thomas, 2006). Students in Honduras demonstrate a lack of comprehension; they lack the vocabulary knowledge

needed to understand what they are reading. Subsequently, the inability to comprehend leads students to frustration when learning to read, to grade retention, or to dropping out of school before the 5th grade. Salgado and Solono (2002) asserted that "9.75% of children repeat the first grade, and 3.4% drop out before the fifth grade" in Honduras (p. 115).

The UNESCO (as cited by the EFC/PRELAC report, 2007) best captured the issue of Honduran education when it revealed that "teaching must adapt to students and not students to teaching" (p. 57). There is no one right way to teach a subject to children, especially vocabulary. One of the first steps when learning to read is to develop a working knowledge of vocabulary (Marzono & Pickering, 2003). Currently at the Academy, the Spanish grammar curriculum Diseño Curricular Nacional Básico (DCNB), used to teach vocabulary, does not prepare students for successful reading experiences. According to Biemiller (2003), the inability to effectively teach vocabulary may be due to the curriculum or lack of preparation of teachers (in-service training). Little information has been gathered in this area.

The need for improvement in teaching vocabulary is evident at the Academy, as I observed the only resource used to teach vocabulary was the use of the dictionary. It is imperative to student education that new vocabulary strategies be identified and developed to supplement the current curriculum. Maduro (2000) asserted the premise that teachers in Honduras do not have adequate access to vocabulary strategies to supplement the existing curriculum used in the classroom. These supplemental strategies not only complement the current curriculum but will enhance the student learning experience and

deepen student development of vocabulary skills. While the government works to improve its curriculum, teacher resource centers are not available for supplemental materials. What is available has to be purchased with their own money or borrowed from other teachers; there is no equal distribution of materials.

If the teachers in Honduras were to have access to vocabulary strategies that supplement their curriculum, the following questions would be helpful when making decisions about the appropriate vocabulary strategies needed to bolster their classroom lessons. Chapman and King (2003) have some questions to consider when making decisions about which vocabulary strategies are appropriate to use:

1. What is the skill or concept I am going to teach?
2. How will I assess information the learner needs to know?
3. What are the best strategies to use for this group of students?
4. How will I group the students to teach this strategy?
5. How will I assess the student's ability to use this strategy? (p. 184)

For children to develop a true understanding of vocabulary words, they need to be taught the meaning of these words to include their use in different contexts. Teachers can help students gain understanding of vocabulary by using multiple strategies to connect the meaning of the text to the topics students read (Vacca & Vacca, 2011). A critical role of the teacher is to decide how much time will be spent on vocabulary words, what words to choose, and the appropriate introduction of these vocabulary words into the classroom (Alvermann & Phelps, 2005). Biemiller (2003) recommended spending at least half an hour a day on vocabulary instruction. He asserted that "the fact remains that we ought to

do our best to bring each child to adequate levels of vocabulary knowledge" (p. 330). Vocabulary study equips the students to be confident and motivated readers. To cultivate this confidence and motivation, my intent was to improve student vocabulary through teaching vocabulary strategies that lay a foundation of word knowledge and develop skills that second and third grade students can use throughout their lives.

Hargreaves (2003) defined a knowledge society as a learning society that can "process information and knowledge in way that can maximize learning, stimulate ingenuity and invention, and develop the capacity to initiate and cope with change" (p. 3). As educators we must prepare students, and ourselves, to be successful in today's knowledge society. Hargreaves (2003) said educators need to be able to teach beyond the current knowledge society, to be inventive and extend our approaches to learning beyond what the curriculum has to offer. Considering Hargreaves's assertion, it is important to determine if the need to identify strategies to teach vocabulary is any different than finding strategies to teach the fundamental skills of math or science. Most likely not, as strategies connect key information that students learn and apply automatically as needed; "a *strategy* is a way to learn a skill" (Chapman and King, 2003, p. 183). I asked "How do successful learning experiences promote social change?" Fortenberry (2002) asserted that students will be better speakers and writers, and they will enhance their word knowledge. These experiences help construct a learning foundation that will allow students to excel academically. The foundation deepens as the student pursues a lifelong learning experience and ultimately becomes a contributing member of society.

Background to the Study

Hiebert and Kamil (2005) stated that vocabulary is not a skill you can learn and be done with, but rather one you will develop over the course of your life. Several researchers noted in their studies that vocabulary development and its effects on reading comprehension are related (Biemiller, 2003; Brabham & Villaume, 2002; Marzano, 2001; No Child Left Behind Law, 2002; Rupley, Logan, & Nichols, 1999). Biemiller (2003) stated that by 2nd grade, vocabulary development is at its peak in students and by 3rd grade on a decline and that educators may notice how vocabulary development affects reading comprehension. Biemiller also asserted that, to avoid this phenomenon, educators must begin vocabulary development at the beginning of kindergarten so that "reading comprehension, perhaps, could be improved" (p. 328-329).

Research conducted by Phillips, Foote, and Harper (2008) indicated that the vocabulary preschoolers possess at the start of formal education affects their reading achievement in subsequent years. To ensure a solid foundation in vocabulary skills that will bolster reading comprehension, Brabham and Graves (2011) observed, "In classrooms across the country, teachers are rethinking the teaching of vocabulary, and teacher educators are voicing the need to address vocabulary instruction more deliberately in one's teaching" (p. 541).

Yumiko (2009) stated that in the world there are two main variables that affect learning: one, biological influences, and two, social influences. At the Academy, where 72.5% of the students are wards of the government and less than 1% of the students are from the community (based on previous years' enrollment), the biological and social

variables greatly apply (Escobar & Suárez, 2012). Graves (2011) asserted the idea that it is not that the children cannot learn to process vocabulary, but rather each child has different learning abilities, which affect how difficult learning vocabulary is for the child.

Problem Statement

The Academy received an assessment preparation guide from the government, which provided monthly evaluation assessment tests for Spanish grammar and math. According to the Academy's assessment test results (Appendix G & H), 2nd and 3rd grade students did not demonstrate the retention of vocabulary word development in the areas of sentence structure, grammar structure, and language comprehension for effective reading comprehension.

When preparing students for the assessments, the traditional method of teaching was ineffective. Classroom observations made by an Academy administrator revealed that the students were struggling in reading. A determining factor leading to this study was that the Academy, in administering an end-of-the-year assessment test (first year for giving the test), found that more than half of students in the 2nd and 3rd grade were not reading at grade level (see Appendixes G & H). Through regular school year teaching observations and testing results, the administrator and director of the Academy concluded the students lacked the vocabulary development skills to effectively communicate knowledge within content areas.

The results of this assessment test prompted the Academy to initiate a rethinking of how it taught vocabulary using the government-issued DCNB. The Academy identified that second and third grade teachers needed a strategy that provided a

foundation for vocabulary growth that resulted in a successful reading experience. According to research, it is typical that, as students moved up in grade, their vocabulary and reading comprehension began to decline, and the gap between student vocabulary acquisition in the lowest and highest quartiles doubles by the 4th grade (Eldridge, 2007). Proactive intervention in vocabulary instruction in Kindergarten through 3rd grades can help tighten that gap between the quartiles and improve reading comprehension. This study sought to increase working vocabulary in the 2nd and 3rd grades through the use of a specific vocabulary strategy. An outcome of this study was to equip the Honduran teachers with an alternative to traditional vocabulary instruction, in which they used the dictionary only, by giving them access to new and supplemental materials to improve vocabulary development in their students.

Nature of the Study

I investigated the effect of new vocabulary strategies on the word knowledge of second and third grade students at the academy. Specifically, I hypothesized that students receiving Vocabulary Squares instruction would make significantly greater gains in reading than those students receiving the traditional vocabulary instruction. A more detailed discussion of the study methodology is presented in Section 3.

Purpose of the Study

The purpose of this study was to compare the effect of vocabulary strategies on improving vocabulary development in 2nd and 3rd grade students at the Academy. Taylor, Mraz, Nichols, Rickleman, and Wood (2009) revealed that students need to improve their word knowledge through vocabulary strategies in order to develop skills and experience

better reading comprehension. The critical time to prepare and grow students is in the primary grades when they are beginning to read and write. Understanding how students think and learn is a key factor in improving their reading. It is imperative that teachers have access to a variety of vocabulary strategies to enable student success in improving reading achievement. The Vocabulary Square strategy may help students understand how words work together to create word meanings, and this particular vocabulary strategy activity follows the guidelines recommended for teaching vocabulary strategies (Guidelines listed in Section 2).

In rural Honduras, the socioeconomics and high illiteracy rate among parents perpetuate the struggle teachers have in developing the vocabulary among primary students. To combat this systematic issue, the Academy identified its need to equip the students with vocabulary strategies that provide them with an easily accessible foundation, developed and practiced in the classroom, that they can rely on at home when they do not have the help they need. This study revealed that new vocabulary strategies are necessary to overcome the socioeconomic strains placed upon student learning experiences and are essential to creating a successful reading experience in the 2nd grade and 3rd grade.

A UNESCO (2003) study stated that 40% of Latin-American children repeat the first grade because they do not learn how to read and write, which is a significant statistic in Honduran education. In 1999, FERMA reported that, at the national level, 20% of Honduran 1st grade students were repeaters (FERMA, as cited in Salgado & Solono, 2002). This study was also significant because it advocated for the building of

vocabulary retention by developing useful vocabulary strategies that would increase reading comprehension and lead to continuing education (Chapman & King, 2003).

Fortenberry (2002) stated that solid vocabulary skills make students better speakers and writers, which enhances their word knowledge. These educational experiences help students to construct and establish a strong a foundation in language, allowing students to excel academically. The Academy believes that learning is a lifelong experience that allows its students the opportunity to contribute to society and become productive citizens.

Theoretical Foundations and Conceptual Frameworks

The theory used in this study was constructivism, which is defined "as the theory of learners constructing meaning based upon their previous knowledge, beliefs, and experiences" (Walker, 2002, p.1). Constructivism is not a new theory; Dewey (1916) and Piaget (1954) were pioneers and advocates of this theory. Both theorists asserted that there must be some personal experiences and increase in new knowledge associated with prior experience and knowledge of a subject. Constructivist interests lie in the learning process (Walker, 2002).

The students at the Academy have some personal experiences that they bring to the classroom, but what they lack is the increase of new knowledge given their backgrounds. At the academy, and with this study, the goal was to blend the personal experiences of the students with the educational experiences of the classroom to establish a foundation upon which to use vocabulary strategies. Educational experiences give the students a path and the strategies provide the keys to unlocking learning.

Von Glasersfeld and Steffe (1991) stated, “Knowledge should be seen as a key that unlocks possibilities in our world…” (p. 98). There are many successful vocabulary strategies available, such as Word Map, Four Square, and flashcards to name a few. Additionally, “constructivism sets the ground for an enriched understanding of the learners with whom we interact as teachers, a space of interaction and teaching in which the learner is considered a ‘subject of production’ and not an ‘object of reproduction’” (Proulx, 2006, p.14).

Schema theories are “new information constructed to fit information currently existing in the mind” (Little & Box, 2011, p. 25). When a new topic is introduced to the students, each student has his/her mental picture of that topic from previously learned knowledge and experiences. Jalongo (2011) elaborated that learners take new knowledge and correlate it with prior knowledge. The old ideas the student has then combine with the new knowledge to create meaning from new experiences. Piaget (1952) stated that “this is the reason it is important to understand and use students’ prior knowledge and experiences to plan effectively for new learning” (Chapman and King, 2003, p. 5). Here is an example by Lehr, Osborn, and Hiebert (2004):

> Ramona is four years old. Already she has a fairly large schema for many simple concepts. For example, to her, the word *dog* includes knowledge about the general concept of “dog” as an animal, knowledge of one or two kinds of dogs, such as her Lab, Gus, and her neighbor’s poodle, Misty. It also includes specific information about Gus, such as the sounds he makes, and how he uses his legs

when he runs and walks. As a result, the word *dog* can activate many other words for Ramona to use to talk about dogs (p. 11).

The Vocabulary Square vocabulary learning strategy (details given in Section 2) allows students to retrieve some of those personal experiences and develop them into vocabulary strategy skills. The Spanish grammar teacher modeled this strategy with the treatment group until the students were ready to work independently. This instructional technique is called scaffolding. Wood et al. (1976) first coined this term in education and defined scaffolding as "a process that enables a child or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his [or her] unassisted effort" and many still consider it to be the best, most effective instructional technique today (as cited in Graves, Graves, & Braaten, 1996, p. 90). Most teachers use scaffolding daily in their classrooms, but do not realize they do (Graves et al., 1996).

Operational Definitions

Direct vocabulary instruction: To teach individual words and word learning strategies (Hiebert & Kamil, 2005). Teaching words through direct explanation by others (Biemiller, 1999).

Diseño Curricular Nacional Básico (National Curriculum Basic Design): A Spanish curriculum used by the Honduran educational system; for all purposes of this research specifically, *Español* is equivalent to Language Arts. In preschool, the children start off learning their vowels, alphabet, colors, and numbers. In Kindergarten, this is expanded to from vowels to syllables: ma, me, mi, mo, and mu; la, le, li, lo, and lu; pa, pe, pi, po, and pu; and so on with the rest of the consonants. Spanish vowels have only on

sound. From there, one- and two-syllable words are made such as mamá, mapa, and lupa. This continues into first grade until about midyear when four- and five-word sentences are made: La mamá mima el bebé (The mother cuddles the baby). By the end of the school year, the children are reading.

Grade-level: A level of reading a student should have acquired for a particular grade, usually found in scope and sequence of textbooks (defined by researcher, 2009).

Higher frequency words: Words that appear in text multiple times (Beck, McKeown, & Kucan, 2002).

Lexicon: To get information about a word from a mental dictionary (Moats, 2004). Locating a specific item in the mental dictionary and selecting an appropriate meaning.

Retention: The storage of vocabulary words and information in an individual's permanent memory (Beck et al., 2002).

Schema: How knowledge is stored in the long-term memory in an orderly combination (Little & Box, 2011).

Strategy: A way to learn a skill, such as decoding vocabulary words (Peterson & VanDerWege, 2002, as cited by Chapman & King, 2003).

Vocabulary knowledge: Understanding the meaning of a word or words used in a language or by a person (Beck et al., 2002).

Vocabulary Square: A vocabulary strategy that illustrates the structural parts of a vocabulary word (see Appendix A; Bromley, 2002).

Assumptions, Limitations, and Delimitation of the Study

Assumptions

This study was conducted in a 6-week time period and was based on the following assumptions:

1. The students had not been exposed to any type of vocabulary strategies before the study.
2. Teachers had provided vocabulary instruction in the manner described in study.
3. Students attempted to do their best in answering pre- and post-test vocabulary questions.

Limitations

The following limitations affected the outcome of the study:

1. The treatment teacher may have improperly used the vocabulary strategy.
2. Any preexisting difference between the classrooms that may have affected the results of the significance tests was attributed to these differences and not to the treatment program.
3. Reliability and validity of instrument employed may have affected the findings.

Scope and Delimitations

The scope of this study was delimited to only 2nd and 3rd grade students in rural Honduran schools. The study was delimited to the examination of certain types of

vocabulary training done; therefore, results were only generalizable to 2nd and 3rd grades in rural Honduran schools.

Significance of the Study

This study attempted to help rural Honduran students increase their word knowledge while also addressing a gap in the research literature. Much research has been conducted in vocabulary instruction of elementary school students; however, this researcher has been unable to uncover any studies in vocabulary in which Honduran students served as participants. In Honduran preschool, the children begin learning their vowels, alphabet, colors, and numbers. In Kindergarten, this learning is expanded upon as students deepen their learning from vowels to syllables: ma, me, mi, mo, and mu; la, le, li, lo, and lu; pa, pe, pi, po, and pu; and so on with the rest of the consonants. Spanish vowels have only one sound.

From those vowel sounds, one and two syllable words are made, such as mamá, mapa, and lupa. In first grade, Spanish grammar begins with a review of consonant and vowel sounds, then goes on to syllables, and finally whole words (Calderón, 1960). This continues until about midyear when four- and five-word sentences are formed: La mamá mima el bebé. By the end of 1st grade, the children should be reading. A child's oral vocabulary is greater than his or her reading and writing vocabulary, which is what teachers need to take advantage of (Silverman, 2010). The practical significance of the study was how effective the vocabulary strategy instruction intervention results were in relationship to students' vocabulary development. This study had implications on the way grade-level teachers addressed vocabulary instruction in their classrooms.

I attempted to introduce new vocabulary learning strategies to an already existing DNBC curriculum with the ultimate goal of improving reading ability and comprehension through this study. I tried to provide usable data to teachers who worked with all types of students as a means to enhance vocabulary development. In addition, results may have encouraged teachers to more actively assist students in becoming strategic readers who could make positive contributions toward their own reading success.

The knowledge gained by these teachers will be carried to the students. One study showed that when given alternative vocabulary strategy instruction, students retained the vocabulary words. The study also showed that students needed to be given vocabulary words every day (Austermuehle, Kautz, & Sprenzel, 2007). The new vocabulary strategy instruction needed to be kept simple and clear, while teaching words appropriate for their level of understanding. These two approaches could make the Spanish language come alive for the students.

According to Austermuehle, et al. (2007), the students raised their level of learning and understanding of vocabulary and subsequently had successful reading experiences. The students were able to better communicate in their society. The teachers had a successful alternative vocabulary strategy instruction to share with their colleagues, one that could also be developed for all ages. Overall, the students had a better second and third grade vocabulary development experience that furthered their education and allowed them to become contributors to their communities. The role of oral language is vital in rural communities and their schools because many students come from homes

where their parents cannot read or write, there is no electricity, and there is no running water. Being able to communicate properly using oral language is critical in the lives of these rural students.

Summary

Students at the Academy need to improve their vocabulary development through vocabulary strategies. The purpose of this study was to compare the effect of vocabulary strategies on the vocabulary development in second and third grade students at the Academy. Taylor et al. (2009) stated that students need to improve their word knowledge through vocabulary strategies and that new knowledge can lead to better reading experiences. The time to begin vocabulary development is in the primary grades when students are beginning to read and write. Understanding how students think and learn is a key factor in improving their reading comprehension skills. Therefore, teachers need to have access to a variety of vocabulary strategies to be successful in improving the reading achievement of their students. As all students learn differently, a variety of strategies and resources are critical to meet the various educational needs and learning styles of the students. The Vocabulary Square strategy might help students understand how words work together to create word meanings, and this particular vocabulary strategy activity follows the guidelines recommended for teaching vocabulary strategies (Guidelines listed in Section 2 under "Purpose of Study").

In Section 2, I review the literature on vocabulary developmental stages through 2nd and 3rd grades and research theories on how to effectively teach vocabulary. I also review research studies that examined different types of vocabulary strategies that were

effective in improving vocabulary development in students. In Section 3, I present the methodology of this study. In Section 4, I report on the data collection and analysis of this study. Finally, in Section 5, I present the summary of the procedure, summary of the major findings, conclusion, discussion, limitations of study, and recommendations for further research.

Section 2: Literature Review

Introduction

In this section of the study, I examine literature addressing the vocabulary development, vocabulary strategy instruction, types of learning strategies, and the Vocabulary Square strategy that was used for this research. For the purpose of this study, the Internet was used to locate peer-reviewed journals and current research. I accessed a variety of data sources to identify vocabulary studies available for review, which included the following Walden Library databases: ERIC, Education Research Complete, SAGE, ProQuest Central, and Teacher Reference Center; the Internet; and the local university library (Universidad Pedagógica de Honduras; Pedagogical University of Honduras). Research conducted on Spanish speaking participants living in Latin America was not available in the area of vocabulary instruction. Various terms were researched in the databases, including vocabulary development, prior knowledge, vocabulary comprehension, schema theory, constructivism theory, vocabulary strategies, and specifically vocabulary instruction.

Vocabulary Development

Language development begins at birth. A passage from the book "*The Wizard of Oz*" (Baum, 2002) loosely describes language development. It reads:

> "Can't you give me brains?" asked the Scarecrow.
>
> "You don't need them. You are learning something every day. A baby has brains, but it doesn't know much. Experience is the only thing that brings knowledge…" (Baum, 2002, p.136).

Given the opportunities and the right environment, most children do not have a problem developing their language structure. Once they enter school, students enter the world of a language-rich classroom (Conway, 2005). Chapman and King (2003) asserted that words in a language that have been mastered are what make up a vocabulary. Researchers have said that a rich vocabulary is the mark of a well-educated person (Jenkins, Stein, and Wysocki, 1984, p.767; Stahl, 1999).

All children do not learn in the same way; therefore, as educators, we must have different resources and vocabulary strategies available to teach students. It is critical that these vocabulary strategies be meaningful so that can be effective as noted in Fairbanks (1977), Mezysnki (1983), and Stahl (1985). Fairbanks (1977), stated:

> Three method-specific and two general-setting factors that may influence a method's effectiveness were examined. The three method factors were (a) whether or not a method gives the students examples of each to-be-learned word in context, (b) the types of activities that are required to learn the word, and (c) the number and type of exposures to information about each word. The setting factors examined were (a) the amount of time allocated to vocabulary instruction and (b) whether the lessons were given into groups or individuals (p. 74).

Austermuehle et al. (2007) conducted a research study on teacher-developed vocabulary strategies presented to school-age students. They chose three different vocabulary strategies to introduce at three different sites. During a 4-month period, they taught each strategy for a 3-week duration and then conducted an assessment of the

students in the fourth week. These three strategies were Word Map, Four Square, and flashcards. Teachers also made vocabulary dictionaries available to the students.

The results of their research demonstrated that the students were successful when using Word Maps, but a drawback for the strategy was they were time consuming. The vocabulary strategy Word Map was successful in developing student understanding of synonyms and student mastery of vocabulary definitions. The Word Map was topic-specific and the students acquired a better understanding of the words for individual units, but they did not learn more words using this method. The vocabulary strategy Four-Square had a higher success rate; it was not as complex as the previously used Word Map strategy. Some limitations were that, first, depending on the demographics of the classroom, students encountered unfamiliar words at times; and second, the use of drawing in the pictures and real life examples to fill in the squares was very time consuming for students and for classroom management. The students took less time performing the Four Square activity and liked it better. During the flashcard strategy, students reported that they enjoyed working with the flashcards and liked the interaction with their classmates. I found that the flashcard activities enabled students to add creativity and originality to the activities and to work independently without help from their teacher. Overall, these three chosen vocabulary strategies demonstrated positive results in helping students to retain vocabulary words.

Biemiller (2003) stated that schools do not teach enough vocabulary growth instruction, which is a foundational skill needed for reading comprehension. Instead, this instruction is left for students to learn at home. The failure in this approach is that

depending upon the socioeconomics of these homes, the time that parents can give to support their children in their vocabulary development varies based upon the time and educational background of the household.

In order for students to learn and retain new words and develop a deeper vocabulary, it is imperative to connect words with the learning environment. This approach enables students to map the words and their meaning to memory for future use. It is important that vocabulary be taught in a way that the students will want to learn, and so, will want to read. Johnson and Johnson (2004) asserted that "a rich vocabulary is essential to successful reading comprehension" (p.1). The National Reading Panel (NRP) (2000) revealed that vocabulary instruction is a key element in improving reading achievement: "Reading is a cognitive process that integrates complex skills and cannot be understood without examining the critical role of vocabulary learning and instruction in its development" (p. 41). However, teachers spend only 1% to 6% of their teaching time on actual vocabulary instruction (Durkin, 1979; Scott & Nagy, 1997).

Stahl and Fairbanks (1986) estimated that about 4,000 vocabulary words are taught a year and about 75% are actually learned. According to Marzano, Pickering, and Pollack (2001) using picture models was one of the best ways to learn new words. As teachers, we cannot teach a child all the words he or she needs to know, so we must make sure the child's decoding skills are strong for the time when he or she encounters new vocabulary while reading independently. The estimated word growth by 2nd grade is 3,100 to about 7,500 in 5th grade. In the primary years, teachers must strive to make

significant advancement when teaching decoding skills because teachers will not teach the same children the following year (Biemiller & Slonim, 2001).

On other research about vocabulary development, Stahl and Fairbanks (1986) summarized Scott and Nagy's (1997) logic as an academic vocabulary program. Specifically, they identified the program as one that teaches 10 to 12 words a week, which equates to roughly 400 words annually. Of that annual total, maybe 75% or 300 words were actually learned and used by students. Stahl and Fairbanks argued that this method and its approach did not prepare students at a level that allowed them to adapt to learning new vocabulary.

Furthermore, Bromley (2007) found that curious and enthusiastic teachers who teach vocabulary can pass on these same traits to their students. Bromley (2007) stated that "word learning is a complicated process. It requires giving students a variety of opportunities to connect new words to related words, analyze word structure understand multiple meanings, and use words actively in authentic ways" (p. 536). Teachers may not have a clear understanding of all that learning encompasses in relation to how much time needs to be devoted on vocabulary instruction in the classroom (Bromley, 2007). For students, prior knowledge is an integral part of learning vocabulary. However, the lack of understanding about how to effectively access that stored information in a student's mind can be a stumbling block for teachers (Swan, 2003). In the next section, I address prior knowledge and what effects it can have on vocabulary development in students.

Prior Knowledge

When children enter preschool, their minds are not blank pages, but rather pages that have already been written upon and added to by their teachers (Proulx, 2006). Hence, researchers advise connecting a new word to the prior knowledge of a student (Bromley, 2002; Nagey, 1998; Bromley, 2007).

Prior knowledge is defined as what a person already knows and is the key to the learning process (Alvermann & Phelps, 2005; Proulx, 2006) and includes attitudes, life experiences, and skills (Bromley, 2007). Nichols and Rupley (2004) stated that prior knowledge is "in an endless state of development" (p. 56).

Prior knowledge is also known as a person's schema. Rea and Mercuri (2006) defined schema as "little pictures made in the mind while reading" (p. 47). Moreover, Anderson (1994) said, "Schema theory attempts to explain how knowledge is represented in the mind and how these representations facilitate comprehension and learning" (p. 472). The "little pictures" that Pearson and Spiro (1982) referred to were divided into two categories by Marzano et al. (2001). These categories are the linguistic form and the imaginary form. As a student reads and encounters a difficult word, the linguistic form activates, which contains statements in long term memory, or the imaginary form triggers, which consists of mental pictures or physical sensations (the senses).

Avery (1995) conducted a study that relied on right-brain learning, which drew upon vocabulary that was appropriate for the learner and built upon the vocabulary learned in previous grades. Twenty 3rd grade students participated in the study. In the 3rd through 5th grades, the teachers had been using a cooperative share approach. While the

students in each grade were doing well with the vocabulary assignments, there was a lack of retention or an inability to remember or practice what they learned. The students would perform well on their weekly vocabulary and spelling tests but that could have been attributed to simple rote memorization. However, when it came time for the state assessment tests, the students could not recall the information. The assessment scores indicated that early intervention could help student retain the vocabulary. The school administration realized that its Whole Language Program, while not a bad idea, needed to be tweaked using a strategy approach, specifically implementing the use of graphic organizers, because not all children learned in the same way. The researchers adopted a new strategy by using a three-pronged approach. They applied right-brain reinforcements, contextual clues, and former learning because these approaches demonstrated a correlation between how the vocabulary information was received and direct student improvement on tests.

Avery (1995) used a pretest, posttest, and cumulative test-retest design was used because all tests were scored using the same procedure and criteria. The posttest measured the validity of the three approaches chosen, and the results indicated that the weekly tests brought about a significant increase in scores from the pretest. The mean had risen from 42.9% to 99.2%. A cumulative test was given every 4 weeks on the same words. Furthermore, a test-retest was given three times during the 12-week period with just two words a week taken from the original tests. This test-retest was used to determine the effectiveness of the three approaches practiced. After using the right brain strategy approach, the vocabulary program evaluations proved the program a success.

There was a 3% increase in the 3rd graders' vocabulary scores. Some limitations for the study were limited admissions to the school and biases, for example, (a) average or above average intelligence only need apply, and (b) no capacity to attend to the gifted or learning disabled. That is to say this was a small predominately white ethnicity private school (98%; Avery, 1995, ED 393 069).

In another study on right-brain strategies, Sinatra and Stahl-Gemake (1983) found that one hemisphere of the brain can be stimulated over the other by using right-brain strategies. This is the creative side of the brain. The right side of the brain helps us think using images, metaphors, synthesis, and analogies. One such right-brain strategy was known as webbing, which was very useful in language arts development. Children put themselves or imagined themselves as the main character in a story while the teacher read aloud. These methods of metaphor, imagery, and analogy actually gave the students a clearer understanding of the vocabulary, and they were able to retain and recall their vocabulary words at any given time. These webs were also spatially and visually pleasing to the learning process. Students began with a central node, which contained the principal word and triggered the imagery association process. Students then built and expanded out the vocabulary with descriptive words. These satellite nodes contained the categories of words that were learned.

Biemiller and Slonim (2001) found that "without knowledge of appropriate target words, it will be extremely difficult to run a program that is worth using classroom time" (p. 241). Vocabulary instruction learning takes place when a word is taught in multiple ways to students (Heibert & Kimel, 2005; Moats, 2004; Rupley, Logan, & Nichols,

1999). The findings of the National Reading Panel (NICHD, 2000) agreed that depending on more than one vocabulary instructional method will optimize learning. The NICHD (2000) list, *Summary of the national reading panel's specific conclusions about vocabulary instruction*, put the multiple instructions suggestion at Number 2 out of the list of eight. The panel went on to mention that students with enriched vocabularies came from classrooms in which teachers taught vocabulary in multiple ways, which allowed the students to learn and interact with words (Hiebert & Kamil, 2005). The key was making the connection between prior knowledge and the new information. Stahl (1999) asserted that students demonstrated mastery of vocabulary when they stored the meaning of the word in long term memory and then recalled and used the words when needed. In addition, Rupley et al. (1999) noted that "the key to successful vocabulary instruction builds upon students' background knowledge and makes explicit the connections between new words and what they already know" (p. 346). In the next section, I outline how direct vocabulary instruction influences reading comprehension.

Direct Vocabulary Instruction

Reading comprehension is influenced greatly by direct vocabulary instruction (Bromely, 2007). Scientifically-based research tells us "students learn vocabulary directly when they are explicitly taught both individual words and word-learning strategies" (p. 35). Berne and Blachowicz (2008) conducted a survey on successful instructional practices that best improved student vocabulary knowledge. The following information denotes the most successful instructional practices gleaned from the Berne and Blachowicz (2008) survey: Focusing on word relationships/word parts,

read-alouds and songs, games/play, talk/discussion/think-alouds, word walls/word banks, read-alouds and songs, integrating content across the content areas and exposing students to difficult words.

"Direct vocabulary instruction aids reading comprehension" (Bukowiecki, 2006, p. 31). Regarding the importance of vocabulary instruction in reading comprehension, Armbuster et al. (2003) asserted "direct instruction helps students learn difficult words, such as words that represent complex concepts that are not part of the students' everyday experiences. Direct instruction includes: a) providing students with specific word instruction and b) teaching students word-learning strategies" (p. 36). Marzano et al. (2001) stated that direct vocabulary instruction has a remarkable record of improving students' background knowledge and understanding of academic content material. Direct instruction of vocabulary allows educators to help all students, whether they have large or small vocabularies, learn new vocabulary words in meaningful and engaging ways (Sibold, 2011).

Kropinack (2010) conducted a study comparing read-alouds with direct vocabulary instruction to determine which one was more effective. Participants were taken from two 5th grade classrooms with a total of 46 students. The experimental group was read aloud to daily from a book with emphasis on vocabulary words taken from the book. These vocabulary words were displayed as a word wall. The control group received no specific assignment but could independently look at the treatment groups' material. Results indicated a positive relationship between read aloud material and direct vocabulary instruction. The experimental group also demonstrated improvement in

reading comprehension, understanding word meanings, identification and comprehension of story elements, and the ability to make intelligent contributions to discussions. Some limitations of the study were: the effectiveness of read-aloud material with the experimental classroom; effectiveness of mixing other reading strategy materials improperly with this one due lack of teacher training; the researcher was not available for observation in the classroom daily; assessments scores of the measurements used may not have been valid; and, a generalization of the data cannot be assumed (UMI No. 3397209, 2010).

Choosing Vocabulary Words

Phillips, Foote, and Harper (2008) asserted not all words need the same attention. The teacher should choose the most important words to learn and place focus on those. If left to the student to choose, most any new words would be viewed as important. Researchers suggested that vocabulary words should be chosen carefully because they are integral to developing reading comprehension skills. There should be a connection to other words the students will be learning or those that students already know; and, in this case, less is more. Vocabulary instruction should include key words that help readers (a) make sense of text, (b) recognize words frequently encountered, (c) identify words with multiple meanings, and (d) note words that are part of idiomatic expressions. That is to say, when a child reads and repeatedly comes across the same word, the unknown word will be remembered and a better understanding achieved of the word (Jalongo and Sololak, 2011).

Guidelines had been established by researchers to help educators choose which vocabulary words to teach. According to Kelley, Lesaux, Kieffer, and Faller (2010) effective vocabulary should meet the following criteria:

1. Since we cannot know everything about every word, the focus should be on a small number of words in relation to their elements and rich contexts (e.g., Graves, 2000, 2006; Scott & Nagy, 2006, as cited by Kelley, Lesaux, Kieffer, & Faller 2010);
2. These carefully chosen words should be words whose meaning is in the content of the reading passage instead of choosing low-frequency words; especially for students with low vocabularies (Beck et al., 2002; Graves, 2000, 2006; Stahl & Nagey, 2006); and
3. The words should be ones you can use both direct instruction and vocabulary strategies. When the students used their morphological skills (the ability to recognize derivational suffixes that distinguish nouns, verbs, adjectives, and adverbs [Green, 2009]) they "gain the cognitive tools they need to learn a large number of words independently" (Berninger & Abbot, 2006; Fukkink & de Glopper, 1998; Kieffer & Lesaux, 2007, as cited by Kelley, Lesaux, Kieffer & Faller, 2010, p. 6; Swanborn & de Glopper, 1999).

In a study performed by Kelley et al. (2010) the students significantly improved their vocabulary development. This was measured through their success of a "multiple-choice test of academic words, a curriculum-based measure of deep knowledge of the

words taught, and a test of students' ability to break down words into word parts (i.e., morphological awareness)" (p. 7).

Moats (2004) posited that words have "phonological form (sounds, syllables), morphological form (meaningful parts), spelling patterns (orthographic form), meanings and meaning networks, syntactic roles, and linguistic history (etymological features)" (p. 6). She asserted that vocabulary knowledge is related to reading comprehension. The National Reading Panel (2000) confirmed "that the depth and breadth of a learner's vocabulary contributes substantially to proficient reading" (p. 7). If a student decoded and pronounced a word, but had no idea of the meaning, then that student's comprehension was impaired (Moats, 2004).

Beck and McKeown (2007) recommended that teachers vet vocabulary words by reconciling the convenience, recurrence, and simplicity of the words with how easily a student could restate the significance of the vocabulary using their own particular words. The researchers divided the words into three tiers. Tier one consisted of basic words English-speaking students already knew, such as *mom, dad, dog,* and *cat (*Wosely, 2009). Tier two words were the high-frequency words that enriched a learner's vocabulary. Tier two vocabulary words were those that (a) mature language users used in conversation and that are seen frequently in written text; (b) could be taught, demonstrated, and connected to other words in context; (c) the students already had some prior knowledge of and this prior knowledge was enhanced by the teachings of tier two methods. Tier two words were the builders of an individual's vocabulary.

Tier three words were (a) used less frequently, (b) geared towards specific subject material, and (c) learned when needed. A criteria in word selection used by Beck et al. (2002) was: "(a) the nature of the word (i.e., is it concrete: Can it be demonstrated?); (b) cognate status; (c) depth of meaning (i.e. the number and richness of the way a word is used); and (d) utility" (p. 123). The next section examines vocabulary strategy instruction and worthwhile use of classroom time.

Vocabulary Learning Strategies

Rupley, Nichols, Mraz, & Blair (2012) stated that vocabulary instruction does not solely consist in copying a list of words and then looking up the definitions of those words. This was simply a rote activity that did not give the student "access to the meaning of words representative of the concepts and content of what they read" (p. 300). Instead, Rupley et al. (2012) insisted vocabulary instruction allowed students to "practice immersed in language-rich activities that teach words as part of meaningful reading experience" (p. 300).

Main Elements of Vocabulary Learning Strategies

Teaching vocabulary strategy instruction gives students who have difficulty learning vocabulary multiple opportunities to build their vocabulary knowledge. Moats (2004) suggested that the following guidelines for teaching vocabulary strategy instruction could be most helpful:

- Directly explain the strategy and why it is helpful.
- Model how to apply the strategy while thinking aloud.

- Practice application of the strategy with guidance and teacher feedback and assistance.
- Apply the strategy many times until it is used independently (p. 177).

The Vocabulary Square strategy used in this research study implemented these guidelines. Rupley, Nichols, Mraz, and Blair (2012) stated "A classroom example to illustrate the relationship between understanding and vocabulary knowledge is the use of a graphic organizer to help students infer the meanings of unknown words" (p. 301).

Austermuehle et al. (2007) conducted a study on improving the knowledge and application of vocabulary within content areas. They wanted to build upon and improve the students' vocabulary skills. Students in the 3rd through 5th grades received the interventions. The strategies used were Word Map, Four Square, and flashcards, all of which were supplemented with vocabulary dictionaries. Results indicated that the students improved their use of vocabulary within content areas and that when learning new vocabulary, the students favored the use of flashcards and Four Square strategies. Some limitations in this study included students with learning disabilities and ELL (English Language Learners). The ELL students did not have English as their primary language. The students in these two categories did not perform at grade level in reading and other core subjects.

While the dictionary is a most helpful tool in learning vocabulary and its meaning, it can also be a difficult tool to use. Further, the dictionary is not the only tool in use anymore. Over the years educators and researchers found that the dictionary limited student vocabulary development because the entries had incomplete definitions or parts

were cut off. As students enter school with their various differences and ways of learning, educators needed to provide other strategies for vocabulary instruction (Moats, 2004).

Stahl (1999) asserted there was not a specific formula to follow to fix the "language gap that is a critical challenge to teachers and educators at every grade level" (p.13). Stahl (1999) stated that, when teaching vocabulary, using everyday language was better understood by the students and made the vocabulary accessible and personal to the student.

Types of Vocabulary Learning Strategies

Ms. Maria Thomas was a teacher who recognized "that vocabulary is the glue that holds stories, ideas, and content together and that it facilitates making comprehension accessible for children" (Rupley, Logan & Nichols, 1999, p. 339 – 345). Ms. Thomas successfully used the concept wheel, semantic word map, semantic web, concept of definition, and semantic feature analysis, which are all strategies related to direct instructional methods of vocabulary teaching.

Dalton and Grisham (2011) identified digital solutions to the vocabulary gap: Two digital vocabulary strategies called *Wordle* and *Wordshift.* These digital tools are word mapping tools based on the frequency of words in a text. A word cloud is created by incorporating words from a particular text in the cloud. Fonts, color schemes, and the size of words can be manipulated within the cloud. These clouds are used to stimulate discussion for pre-reading or post-reading material.

Other strategies that Chapman and King (2003) recommended were vocabulary strategy visuals such as "Critter Crawl, Design Signs, Door Magic, Give Yourself a Hand, Ribbon Wall, Stick Picks, Stomp Romp, Vocabulary Vine, Word Collection Bank, Word Wall" (p. 93 – 118). Bromley (2002) addressed some visual vocabulary learning strategies in her book, *Stretching Students' Vocabulary: Best Practices for Building the Rich Vocabulary Students need to Achieve in Reading, Writing, and the Content Areas*. Among the strategies Bromley (2002) cited were Vocabulary Anchor, Picture Walk Words, S2-D2 (Spell, Say, Define, Draw), Concept Definition Map, Zooming In and Zooming Out, Guessed Meanings, Word Detective, Super Word Web, Vocabulary Squares, and Word Tree (p. 118 – 127).

After reviewing an analysis of School Improvement Plans, Elliott, Formhals, and Wheat (2002) found that "classroom vocabulary instruction was inadequate, exposure to meaningful spoken language was insufficient, prior knowledge was limited, and achievement in reading was affected by the limited understanding of vocabulary" (p. 9). Using questionnaires, they gathered information from parents, teachers, and students on vocabulary knowledge and instruction. That gathering of information resulted in the researchers conducting a study on multiple vocabulary strategies.

Elliott et al. (2002) used participants in Kindergarten, 1st grade, and 4th grade. With the Kindergarteners they used the concept wheel, word wall, picture dictionary, Venn diagrams, and Know, Want to Know, and Learned (KWL) chart strategies. In the 1st grade class, students used semantic word webs, picture dictionary, journal writing, Venn diagrams, partner reading, role playing, and semantic mapping strategies. The 4th

graders were given word detective, word wall, picture dictionary, journal writing, and word map strategies.

The study was conducted over an 18-week period. Each week new vocabulary words were introduced to each grade level using no less than three strategies. All three grades were given a pre assessment, called the Peabody Picture Vocabulary Test, and a post assessment called the Expressive One-Word Picture Vocabulary Test-R. The overall result of the scores demonstrated increased vocabulary development increased for all three grades.

May (2004) conducted a study to see if the word wall vocabulary strategy, which visually displays words in alphabetical order, increased her students' knowledge of frequently used words. The study used 20 1st graders over a 6-week period. Thirty high-frequency words were chosen from the school curriculum. Two methods used for teaching the words were flashcards and word wall, which involved cheering, writing the words, and playing games with the words from the reading series. During the first 3 weeks of the study, the flashcard strategy was used; during the second 3 weeks of the study, the word wall strategy was used. Five new words were taught each week. The students were given a spelling test, a word test, and a sentence test at the end of each week to assess the effectiveness of the methods used. The results revealed an overall improvement with the use of the word wall strategy. Some limitations I noted were (a) the quality of the assessments of student work, which was attributed to the fact that there was no formal testing done in 1st grade, (b) not all students were present each day due to

Title 1, ESL classes, (c) the limited amount of words chosen when compared to the annual learning of words, and (d) the level of exposure to words chosen before the study.

Vocabulary Square Strategy

Conventional vocabulary instruction guides a learner from learning a new word, then defining the word, to using the word in context, and finally to understanding the meaning of the word. When the conventional instruction does not work for students, we bring in vocabulary strategy instruction (Sibold, 2011). Vocabulary Square is a pre-assessment type of strategy. The Vocabulary Square strategy connects prior knowledge with a new vocabulary word by incorporating art skills, higher thinking skills, and creative thinking skills. It is used to focus specifically on the vocabulary words the students need to have reinforced due to misunderstanding the meaning in the first teaching. The reinforced words are chosen at the discretion of the teachers (Bromley, 2002). Bromley's (2002) *Stretching Students' Vocabulary* demonstrated the adaptability of their model for vocabulary use across the curriculum. The Vocabulary Square strategy model is further discussed in Section 3 of this research paper.

Summary

This review of literature focused on research using vocabulary strategies in vocabulary instruction to improve vocabulary development. The research found on vocabulary strategy instruction suggested that vocabulary should be presented and taught in multiple ways in order to connect with the different learning styles of the students (Moats, 2004). One study found that using the Four Square strategy in vocabulary

instruction had positive results in the implementation of the strategy; one drawback of its use was time management (Austermuehl et al., 2007). The same study reviewed research studies conducted on different types of vocabulary strategies that were effective in improving vocabulary development in students. Children are constantly attempting to construct meaning from the printed page. When that meaning is disrupted, the student pauses. The teacher's reaction to that pause determines what kind of reader that child will become.

Research has shown that students who have received vocabulary strategy instruction will use those vocabulary strategy skills in reading to construct meaning from the text (Taylor, Marz, Nichols, Rickelman, & Wood, 2009). Research reviewed in this section has shown that using vocabulary strategies word wall, wordle, and vocabulary anchor successfully has a positive impact on vocabulary development. Research also showed that vocabulary words led to improvement in the areas of (a) reading comprehension, (b) understanding word meanings, (c) understanding and identification of story elements, and (d) the ability of students to make intelligent contributions to discussions. Research demonstrated that, for the more difficult vocabulary words, the Frayer model, through different modifications made by researchers i.e. Ryder and Graves (1994) and me (2013), was the preferred vocabulary strategy to use as stated by the researchers Austermuehl et al. (2007) in Section 2. Since students do not learn in the same manner, new words need to be taught using a variety of strategies.

This study was designed to examine the influence of vocabulary strategy instruction on improving vocabulary development of second and students, possibly

providing the inclusion of these vocabulary strategies instructions into existing 2nd and 3rd grade DCNB in Honduras at the Academy. Stahl and Fairbanks (1986) found that vocabulary instruction does directly improve reading comprehension (as cited by Stahl, 1999). Section 3 presents the methodology used. Section 4 presents data collection and analysis. And Section 5 presents summaries, conclusion, problems encountered, and recommendations.

Section 3: Research Method

Methodology

The purpose of this quantitative study was to investigate the effect of the vocabulary strategy Vocabulary Square on vocabulary development in the 2nd and 3rd grade. The quantitative measure was the vocabulary pre and posttest. In this section, I explain the research design and methodology used on the 2nd and 3rd grade students using the vocabulary strategy, Vocabulary Square.

I examined the influence of teaching this specific vocabulary strategy to 2nd grade students. In this section, I explain the specific vocabulary strategy instruction, the classroom setting, the materials, teacher training, and data analysis. The independent variable was the method of the vocabulary strategy instruction, Vocabulary Square. The dependent variable was the gain scores of the vocabulary pre and posttest.

Research Design and Approach

A quasi-experimental casual comparative group design study was used. There was only one section of 2nd grade students and one section of 3rd grade students at the Academy. The experimental group had 16 participants (A) and the control group had 15 (B).

A quantitative approach was chosen due to the type of hypothesis and research questions. Creswell (2003) asserted that "the hypothesis and research questions are often based on constructivism theories that the researcher seeks to test and a quantitative approach is the best" (p. 119). Creswell also stated that quantitative research contains highly systematic procedures. Creswell characterized quantitative research as that which

includes experiments, surveys, collection of data, and statistical data. This quantitative research study used both collection and analysis of numeric data.

Quantitative research also questions a hypothesis in the form of acceptance or rejection with specific variables (Creswell, 2003; Newman & Benz, 1998). Newman and Benz (1998) stated that qualitative-quantitative research has been debated since 1844. Due to the methods that were used in research, that is, hypothesis, data gathering, and statistical results, quantitative research dominated the 20th century until the mid-1960s when a shift to qualitative research took place. Influential scientists such as Kuhn and Piaget (1954) started questioning human nature and social interactions, variables that did not fit with the requirements of quantitative research but were fit for qualitative research. Even with the introduction of qualitative research, quantitative research still dominated social and behavioral science.

This research was not conducted to meet any requirements from any educational system but specifically to increase student vocabulary to improve vocabulary development, which leads to better reading comprehension. This study remained within the guidelines of the "Estándares Educativos Nacionales" (2000 updated; translation: National Education Standards) of Honduras. This research study was one mechanism designed to examine whether application of vocabulary strategy instruction in the classroom could help to overhaul the instruction of vocabulary in the Honduran educational system. The vocabulary strategy Vocabulary Square was selected for its ease in translation and multiple uses of a vocabulary words. I created the pre and posttests,

which verified whether word knowledge could be improved by supplementing classroom teaching and lessons with vocabulary strategy techniques.

Setting and Sample

I used a convenience sample because, as Creswell (2003) said, the participants were already assigned to their classrooms. This may have brought up some issues and threats to the external and internal validity, which are covered in the data analysis section.

The setting for this study was a small private parochial school in rural Honduras. It was a private rural school and the majority of the students came from a home for children located on the same property as the school. The academy had an enrollment of 118 students in preschool through ninth grades. Approximately 27.5% of the total enrollment was made up of students from around the community. The total number of students in 2nd grade was 16 and 3rd grade was 15. The total number of participants in this study was 31.

This study took place over a 6-week period and a convenience sample was used due to the fact, as noted by Creswell, (2003) that the students were already assigned to their grades or "naturally in groups" and the population chosen would only affect the Academy (p. 164). Table 1 explains the characteristics of the sample chosen (all students were of Hispanic/Indigenous decent):

Table 1

Research Population

	Community (children from surrounding area, not wards of the government)	Academy children (wards of the government)	Average age	R	M
2nd Grade	5	10	7 – 13	1	0
3rd Grade	4	12	7 – 13	7	0

Note. (R = repeating grade, M = mainstreamed from an eliminated class, and N=31)

Treatment

The treatment for this study was a specific vocabulary strategy instruction called Vocabulary Square; it was used congruently with the DCNB curriculum. The Vocabulary Square method is a learning activity used to develop vocabulary knowledge through the learner making a personal connection with words (Stahl, 1999). This specific vocabulary strategy was chosen because (a) of its ease of use when revising and translating it into Spanish and (b) for its diversity in the different ways an unknown vocabulary word can be displayed. Chapman and King (2003) believe that vocabulary strategies "engage the student's intelligences and learning modalities. Teachers can meet the diverse needs of each reader in their classrooms through differentiated strategies that can be adapted to the content of the lesson" (p. 94).

Vocabulary Square is a type of strategy that can be used with daily lessons for better understanding of vocabulary words. The Vocabulary Square strategy incorporates art skills, higher thinking skills, and creative thinking skills. It is used to focus specifically on the vocabulary words that students need to have reinforced based on their

misunderstanding of them in the first teaching. This strategy has the potential to tire students who then produce sloppy work, which is why it is used specifically on the vocabulary words the students need reinforced.

The Academy director and Spanish grammar/reading teacher collaborated on the vocabulary words to be chosen. Since there was no available vocabulary word list with the DCNB curriculum of Honduras, they went through each grade level of (1st through 6th grade) *DCNB Lectura* reading curriculum and chose the words. There was an average of 50 to 60 words in each grade list, which encompassed the Spanish curriculum for each grade. Then, the 20 reinforced words were chosen at the discretion of the grammar teacher.

The researcher, director, and the teacher met three times after the teacher training sessions and agreed upon the vocabulary word list that was used in this study. The list consisted of 20 vocabulary words chosen by the frequency of their use in the 2nd and 3rd grade curriculum including all the basic subjects (see Appendix C). The administrator (me), director, and teacher agreed on a set schedule of what days to use the Vocabulary Square vocabulary strategy.

There was one 2nd grade and one 3rd grade class: one group, the treatment group (2nd grade), received the vocabulary strategy supplement used in conjunction with the DCNB traditional curriculum; and the other group, the control group (3rd grade), received only the DCNB traditional curriculum of Honduras.

Experimental Treatment

Sixteen students in the experimental group were administered a pretest and a posttest. This study took place over a 6-week period with the Vocabulary Square strategy being used twice a week, in conjunction with the DCNB curriculum, after the initial introduction, which took 3 days. Spanish grammar was taught 4 days a week, and the teacher chose to use the vocabulary strategy half that time. The third day, using the Vocabulary Square strategy, I went in to monitor the teacher. I made personal notes on the presentation of the strategy to better help the teacher, if need be. While using Vocabulary Square, I did not interrupt or correct the teacher because I felt this would be a distraction to the students. The teacher divided the chosen words into four lists, with two words to be used twice a week. The Spanish grammar teacher scored the Vocabulary Square strategy using the Vocabulary Square rubric (see Appendix B). This rubric was to help the Spanish grammar teacher check herself in presenting the strategy correctly to the students and to check student understanding of correct usage of the vocabulary square strategy.

The Vocabulary Square strategy (2002) involved two steps. The first was the explanation and modeling of the strategy by the teacher using the first two words on the list, and the second was independent practice. The procedures for this activity were as follows:

In terms of the teacher modeling and explaining Vocabulary Square, the teacher discussed the use and importance of the Vocabulary Square strategy and how it would help further understand vocabulary meaning. The teacher drew a big vocabulary square

on the whiteboard and completed the chart using an already familiar vocabulary word (see graphic in Appendix A) as she explained each square. In the middle of the model was the vocabulary word chosen from the vocabulary list. First, the teacher reviewed the meaning of synonym and then asked for examples from the students. The first square was filled with a synonym generated by students and the teacher in classroom. In the second square was the word antonym, and again the teacher asked for meaning of the word and generated examples from the students. The students then provided an antonym relating to the vocabulary word. If, after explanation, the students struggled in one of the first two squares, they used the dictionary. In the third square, the students wrote the dictionary definition. The teacher stepped in and helped those who had not fully developed their dictionary skills. In the fourth square, the students wrote a sentence relating to the vocabulary word. A discussion followed to clarify student understanding of the vocabulary word. After all questions were answered, the children copied the board model in their notebooks to have as a reference sample. The second example word was given, and the students worked through the example with the teacher generating the questions and the students copying the model from the board. Lastly, the teacher checked the students' notebooks for errors in transcribing the information from the examples and helped each student with corrections where needed.

In regards to the students practicing independently with feedback, the students received printout models of Vocabulary Square. There were not any drawn on the board at this time. The students cut and glued the Vocabulary Square in their notebooks (see Appendix D). The vocabulary words for the day were written on the whiteboard. The

students were allowed to use their drawn model as a reference when filling in their Vocabulary Square graphic. Two words were chosen to complete a Vocabulary Square. The students shared their completed squares with the class. The teacher then collected the notebooks to assess their work using a Vocabulary Square rubric (see Appendix B).

Control Treatment

There were 15 students in the control group. Students in the control group were administered the same pretest and posttest as the experimental group. The control group of students received the traditional Honduran government form of instruction without any vocabulary strategy. A short explanation of how DCNB grammar instruction is taught in the Honduran educational system beginning with preschool is as follows: In preschool, the children start off learning their vowels, alphabet, colors, and numbers. In Kindergarten this is expanded from vowels to syllables: ma, me, mi, mo, and mu; la, le, li, lo, and lu; pa, pe, pi, po, and pu; and so on with the rest of the consonants. Spanish vowels have only on sound. From there, one and two syllable words are made, such as mamá, mapa, and lupa. In 1st grade, Spanish, grammar starts with a review of consonant and vowel sounds, then moves on to syllables, and finally to whole words (Calderón, 1960). This approach continues until about midyear when four- and five-word sentences are made: La mama mima el bebé (The mother cuddles the baby). Then students begin practicing writing short paragraphs. By the end of 1st grade, the children are expected to be reading. In the 2nd and 3rd grades, there is some review with a few more orthographical vocabulary rules added to their learning. The control group was used to

determine whether the specific vocabulary strategy instruction significantly made a difference in vocabulary development as measured by the pretest and posttest scores.

Teacher Training

In order to implement the specific vocabulary strategy instruction, I first had to train the grammar teacher. Due to cultural differences, the grammar teacher had to understand the nature of the study and why it was being conducted (all material was translated in to the grammar teacher's native language, Spanish). I shared relevant journal articles pertaining to vocabulary strategy instruction with the grammar teacher, delivered three workshops explaining and demonstrating the specific vocabulary strategy instruction Vocabulary Square, and required the grammar teacher to model the chosen vocabulary strategy back to me, who then made any corrections necessary.

Two research-based articles and two journal articles were shared with the grammar teacher. The two researched-based articles addressed vocabulary development and vocabulary in the content area (Austermuehle et al., 2007; Berg, Cressman, & Pfanz, 1998). The two journal articles addressed different vocabulary strategies and vocabulary instruction (Barger, 2006; Bromley, 2007). I reviewed these articles and discussed their findings with the grammar teacher, using them as ice-breaker activities, during the first couple of mentoring sessions.

Instruments and Materials

To establish content validity, a researcher must be able to "draw meaningful and useful inferences from scores on the instruments" (Creswell, 2003, p. 157). The changes made by the Honduran government to improve the DCNB Honduran government reading

curriculum have only been released for a couple of years and the teacher had to generate vocabulary lists. There were no specific criteria for teaching vocabulary words using the DCNB and no standardized prevalidated tests of any kind available for this population; criterion validity could not be established or consistent reliability. Materials needed for this study included a pretest and posttest consisting of vocabulary word list.

The vocabulary test consisted of 25 questions (see Appendix F), which were researcher generated, and all 31 students participated in the test. Students were administered the same pretest and posttest. The validity of the assessment was content-validity driven; the assessment directly tested vocabulary words from the vocabulary list. The score of how many correct from the total was collected from each student. Each vocabulary pretest and posttest (dependent variable) was given a score of the total number of correct words out of 25 to measure the gain in scores between the experimental group and control group. The results are posted in Table 3, found in Section 4, and reflect the mean difference.

The study included one 2nd grade and one 3rd grade class in a private school in Honduras. The school was small, and located in a rural area of Honduras, which made it an ideal convenience sample. All participants were pretested and post tested using the same vocabulary test, which I generated. Shuttleworth (2013) mentioned that the pretest/posttest method was used because, for experimental design research, the method been the preferred means with which to compare participant groups and to measure the degree of change that occurred as a result of treatments.

The vocabulary test was made up of three sections. Section one was dictation of five words, which required students to recall prior knowledge. Prior knowledge has been defined as what a person already knows and is the key in the learning process (Proulx, 2006; Alvermann and Phelps, 2005). This section had the lowest scoring possibly due to the fact that in the Honduran curriculum there is no spelling curriculum.

Section two consisted of 10 fill-in-the-blank sentences with a word bank of one word per sentence provided. This section assessed the students' knowledge and understanding of the reading process and the extent of students' vocabularies and knowledge of word meanings. This section had the highest score for both groups. One particular word in the bank was continually misused. It was the word cafeteria (coffee plantation), which was repeatedly written as cafetera (cafeteria) by the students. Even though the teacher pronounced all the words correctly, the students still perceived the word as cafeteria.

The third section consisted of an exercise in which five words were given to the students to represent in an image form and then to use the word correctly in a sentence (one point for the picture and one point of the sentence was given). The students were required to write simple sentences by using key words commonly used in the classroom that followed Spanish syntactical order. The purpose of the picture drawing was to communicate understanding of the mental development of the word.

Vygotsky (1962) posited the basic principle underlying one of his theories was that language plays a central role in mental development. This third section had mixed scoring in both groups. Two of the five words were not widely known although they

were in the reading curriculum. The words cigüeña (stork) and concha (shell) were the confusing words. With regards to the word cigüeña, students had the idea it was a bird and with concha they had the wrong idea altogether. They thought it was the skin on fruit, which is cascara.

Validity

A study can be very useful and affect change in public policy if it has sound research validity. David & Morrison (2005) asserted there are two types of validity that have been developed, which are "internal and external, where the former refers to the accuracy or authenticity of the description being made, and the latter refers to its application to other cases, across place and time" (p. 253).

The researcher must be able to draw meaningful and useful inferences from the scores gathered by the instruments (Creswell, 2003). In quantitative research, validity asks does the instrument used to measure do exactly that – measure what it was supposed to measure. To ensure the content of this instrument appropriately measured what it was intended to, the researcher extensively perused the instrument in its Spanish form and deemed it appropriate. I used construct validity to establish evidence that the data supports the theoretical framework and statistical conclusion validity to ensure the research findings were credible because I measured the two variables: (a) the effect of the instructional method, and b) student learning (Creswell, 2003).

All participants were administered a 20-question vocabulary test, which I created. Since criterion validity could not be established, an attempt was made to establish content validity. The instrument directly tested the 20 questions in the pretest and posttest I

created using Cronbach's Alpha (1955). Cronbach and Meehl (1955) asserted that content validity is established when test components are chosen to represent the proposed learning environment to be studied. Content validity is ordinarily to be established deductively from this sample (Cronbach and Meehl, 1955). Johnson and Larry (2008) said that "A popular rule of thumb is that the size of coefficient alpha should generally be, at a minimum, greater or equal to .70 for research purposes." The Cronbach's Alpha for this pretest/posttest was -0.035.

Internal Validity

Creswell (2003) asserted internal validity is a "measure of accuracy and whether it matches reality" (p. 253). He defined internal validity threats as "experimental procedures, treatments, or experiences of the participants that threaten the researchers; ability to draw correct inferences from the data in an experiment" (p. 171). David and Morrison (2005) wrote about Campbell and Stanley's (1963) criteria's of internal validity as (a) history whereas the participants have an experience outside of the group and it is mistakenly taken as an inside group experience and ultimately affecting the study's results. For example, in this research performance may be affected by a death in the family, lack of sleep, or family arguments; (b) maturation where participant's behavioral characteristics change. For example, in this research a haircut, fatigue, or puberty, and credit unduly given to the research; (c) pretest sensitization where participant's try to overachieve; (d) test reliability if not accurately given for the purpose of the study valid data can be affected; and, (e) selection accuracy in choosing the control group and experimental group is vital to the study to prevent selection bias.

Borg (1984) wrote that Campbell and Stanley (1963) ruled out their original eight threats to internal validity experiments in 1979, "by the use of control group design and random assignment of subjects to the various groups" (p. 11). By the use of this same method, mentioned above, four threats to internal validity were added in the same year:

1. Diffusion or imitation of treatment where the participants of the experimental group and control group can communicate and then the control group proceeds to imitate the experimental group;
2. Compensatory equalization of treatments where desirable behaviors are rewarded in both groups and you no longer have valid data to compare between the experimental and control groups;
3. Compensatory rivalry by respondents receiving less desirable treatments (also known by the "John Henry Effect") where the participants have knowledge of group assignments before actually being assigned and because of this their responses are not firsthand responses but already predetermined by them, themselves; and,
4. Resentful demoralization of respondents receiving less desirable treatments where what can spur other participants in the control group to imitate the desirable can also at the same time, in some participants of the control group, bring down emotions in the control group as to where they do not want to respond to anything.

External Validity

External validity "is a measure of generalizability" (David & Morrison, 2005, p. 253). Creswell (2003) defined external validity threats as "incorrect inferences from the sample data to other persons, other settings, and past or future situations" (p. 171).

David and Morrison (2005) wrote that Campbell and Stanley (1963) listed a number of threats to external validity that included (a) replicating the study, (b) proper recognition of the experimental and control group in comparison to the larger population, (c) replication of variables to real-life situations, and (d) the assurance that threats to internal validity will not affect external validity. There is always the possibility of the "Hawthorne Effect" (Merrett, 2006) where the participants of the study are aware they are part of a study.

Quantitative measures were used to analyze the data from this research study. An attempt was made to establish content validity by having the director of the academy and the Spanish grammar teachers met and chose vocabulary words from the DNCB Spanish reading/grammar curriculum for 1st through 6th graders. The pretest and posttest I generated are found in Appendix E. Some of the words chosen account for words students may come across in literature through independent reading and teacher read-alouds. The word lists were then passed on to the researcher where a 3-part pretest and posttest were generated consisting of a total of 20 questions. Part 1 had five spaces for words that were dictated. Part 2 had 10 fill-in-the-blank sentences. Part 3 had five words that were represented by drawings and then used in a sentence (this section was counted as two points each answer: one for the drawing and one for proper use in a sentence).

Total point scoring was 25. The purpose of the design of this test was to assess word meaning in context and words used in spoken language. Part 2 and 3 assessed word meaning in context and Part 1 assessed words used in spoken language. There was no prevalidated test available for this population, so criterion validity could not be established. All raw data was stored in a folder in the grammar teacher's file cabinet.

Data Collection and Analysis

Research Question and Hypothesis

The researcher investigated the effect of new vocabulary strategies on the word knowledge of 2nd and 3rd grade students. The research question that guided this study was as follows: Is there a statistical significant difference in student word knowledge gain scores as a result of vocabulary training? Specifically, it was hypothesized that the students receiving Vocabulary Squares instruction would make significantly greater gains in word knowledge than students receiving traditional vocabulary instruction. The results of the assessment pretest and posttest were compared at the end of the study for the control group and experimental group. The score of how many correct from the total was collected for each student. Each vocabulary test was given a score of number correct out of 25. The participant's identification number, the student's grade, the student's group (A=control, B=experimental), and scores from both tests were entered into WinStat for Excel program (R. Fitch Software, 2009). An independent *t* test was used to test the null hypothesis that students receiving Vocabulary Squares instruction would not make significantly greater gains in word knowledge than students receiving traditional vocabulary instruction.

Ethical Consideration

First, a request was submitted to the Institutional Review Board (IRB) to ensure ethical research practices. After being approved by the IRB, (#01-23-13-0052215) the following steps were taken to ensure protection of the participants. First, names and other identifying information were left out of the study; second, the participant's rights were protected by giving each participant a code; and third, a consent letter was not needed because the daily routine of teaching was not interrupted.

The grammar teacher and I were the only persons with this information, which was securely stored on the researcher's computer. Ethics were upheld and approved by the IRB. The results of this research will be shared with the teachers at the academy.

Role of the Researcher

I was the founder of the Academy and an active participant in education at the Academy. I have held numerous roles, which have varied over the years; I developed a good working relationship with the teachers and all participants.

My primary role has been that of principal and instructional leader. As the principal, I found that the teachers looked for effective instructional leadership, specifically in curriculum development and in professional development. During this study, I (a) met with the Spanish grammar teacher to discover if there was any alternative vocabulary strategy instruction offered by the Pedagogical University of Honduras to students studying to become teachers, (b) met with the Spanish grammar teacher professionally during the Honduran school year on three separate occasions, and, (c) met with the director of the Christian Academy to discuss what alternatives the educational

system of Honduras had to offer. When meeting with the Spanish grammar teacher several things were decided. First, the vocabulary words to be used to reinforce with the vocabulary strategy were chosen; second, the scheduling of class time for the researcher to observe the experimental group and the control group was addressed; and, third, discussions about how to teach the vocabulary strategy Vocabulary Square (see Appendix A) for actual student sample of a vocabulary square instruction in Spanish.

I adopted the role of observer and was not given access to testing data so as not to taint the data collection process. I was allowed access to the student's notebooks when observing. Since I was also the administrator of the school, I had a dual role in the study. There was an intricate balance maintained between the internal and external roles.

Summary

This quasi-experimental study examined whether there would be any relationship between vocabulary development and using a vocabulary strategy in a rural Christian Academy in Honduras. Quantitative data was collected from the pretest and posttest scores. The grammar teacher and I were the only persons with this information, which was securely stored on my computer. Ethics were observed and upheld and approved by the IRB.

Section 4: Results

The purpose of this quantitative study was to examine the effectiveness of using a vocabulary strategy on improving vocabulary development in 2nd grade and 3rd grade students. A quasi-experimental design was used in this research. Results of this study revealed no significant difference between the treatment and control groups in improvement in vocabulary. In this section, I review the data analysis and summarize findings in response to the following research question: Are there significant differences between two classrooms using different vocabulary strategies?

Data Analysis

The study hypothesis was restated in the null hypothesis that there would be no significant difference between the traditional vocabulary group and the vocabulary strategy group in terms of the number of vocabulary words mastered following training. An independent *t* test was used to compare the differences in gain scores between the two groups. The independent variable was the vocabulary strategy used, and the dependent variable was the vocabulary gain score. Posttest scores were compared with the pretest scores. The gain score was calculated by subtracting the pretest score from the posttest score. All students' scores from the pretest and posttest for the treatment group are shown in Table 2, which displays the number of correct pretest and posttest response and gain(s), if any, made by the 16 participants in the treatment group during the 6 week study. Fourteen out of the 16 participants made gains except student number A7 and student number A12. Student A12 was repeating 3rd grade. She had been diagnosed with

schizophrenia and was on medication, but not when the pre/posttest was administered. There was an average of 25% gain in scores.

Table 2

Pre-Test and Post-Test Standard Scores From the Treatment Group

Student	Pretest	Posttest	Gain/Loss
A1	9	14	+5
A2	16	18	+2
A3	17	18	+1
A4	17	18	+1
A5	19	22	+3
A6	19	23	+4
A7	20	20	0
A8	20	23	+3
A9	21	23	+2
A10	14	21	+7
A11	12	20	+8
A12	21	6	-15
A13	22	23	+1
A14	11	22	+11
A15	11	22	+11
A16	8	22	+14

All students' scores from the pretest and posttest for the control group are shown in Table 3, which illustrates the number of correct pretest and posttest responses and gain(s), if any, made by the 15 participants in the control group during the 6 week study. All 15 had a gain in scores. There was an average of 27% gain in scores.

Table 3

Pretest and Posttest Standard Scores From the Control Group

Student	Pretest	Posttest	Gain/Loss
B1	10	16	6
B2	13	16	3
B3	17	19	2
B4	10	19	9
B5	11	19	8
B6	12	20	8
B7	12	21	9
B8	14	21	7
B9	14	21	7
B10	14	21	7
B11	16	22	6
B12	16	22	6
B13	19	22	3
B14	19	22	3
B15	21	23	2

The *WinSTAT for Excel* software program (Fitch, 2009) was used to analyze the pretest and posttest data. An independent sample *t* test was used to determine if there was a statistical significant difference between the gain scores of the students in each group using different vocabulary strategies. A significance level of .05 was used for statistical testing (Gravetter & Vallnau, 2005). The independent sample *t* test establishes whether or not the mean difference is due to the treatment or sampling error. When a *t* test reveals a significant difference, the alternative hypothesis is accepted and the null hypothesis is rejected. Table 4 reveals no significant difference between the groups, $t = 2.66(29) = 2.66$, $p = 0.79$, thus the null hypothesis was not rejected.

Table 4

Group Statistics

	Group	*N*	Mean	Standard deviation	Standard error mean
Gain	A	16	1.1875	2.76209	.69052
	B	15	1.6667	6.61888	1.70899

Independent Samples Test

		Levene's test for equality of variances		*t* test for equality of means						
		F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean difference	Std. error difference	95% Confidence interval of the difference	
									Lower	Upper
	Equal variances assumed	7.626	.010	-.266	29	.792	-.47917	1.80042	-4.16144	3.20310
	Equal variances not assumed			-.260	18.485	.798	-.47917	1.84322	-4.34436	3.38603

The vocabulary test was made up of three sections. Section 1 was dictation of five words, which relied on prior knowledge. Prior knowledge has been defined as what a person already knows and is the key in the learning process (Alvermann & Phelps, 2005; Proulx, 2006). This section had the lowest scoring possibly because in the Honduran curriculum, there is no spelling curriculum.

Section 2 consisted of 10 fill-in-the-blank sentences with a word bank of one word per sentence provided. This section assessed the students' knowledge and understanding of the reading process and the extent of students' vocabularies and knowledge of word meanings. This section had the highest score for both groups. One particular word in the bank was continually misused. It was the word cafetera (coffee plantation) was written as cafeteria (cafeteria) by the students. Even though the teacher pronounced the words correctly, the students still perceived the word as cafeteria.

The third section consisted of an exercise in which five words were given to the student to represent in an image form and then to use the word correctly in a sentence (one point for the picture and one point of the sentence was given). The students were required to write simple sentences by using key words commonly used in the classroom that follow Spanish syntactical order. The purpose of the picture drawing was to gain a mental understanding of the word.

The basic principle underlying one of Vygotsky's (1962) theories is that language plays a central role in mental development. This section had mixed scoring in both groups. Two of the five words were not widely known among the students, although they are in the reading curriculum. The words cigüeña (stork) and concha (shell) were confusing words to students. With cigüeña they had the idea it was a bird and with concha they had the wrong idea altogether. They thought it was the skin on fruit, which is cascara.

Summary

Data analysis revealed no significant difference between the experimental and control groups. The null hypothesis that there would be no significant difference in terms of vocabulary growth between students receiving Vocabulary Method A when compared to Vocabulary Method B was accepted. The alternative hypothesis that there would be a significant difference in terms of the vocabulary strategy growth between Vocabulary Method A in comparison to Vocabulary Method B was rejected. In the following chapter, I will summarize discussions, conclusions, and recommendations.

Section 5: Discussion, Conclusions, and Recommendations

Overview

This study was conducted because students' vocabulary development was delayed. According to the Academy's assessment test results, second and third grade students did not demonstrate retention of vocabulary word development for effective reading comprehension. In Honduras, vocabulary instruction does not adequately prepare primary students because that specific vocabulary instruction does not exist. The traditional method of teaching was ineffective. The classroom observations I made revealed that the students were struggling in reading. By introducing vocabulary strategy instruction into the 2nd grade and 3rd grade curriculum, the hope was that students would be better prepared to make successful gains in their own reading experiences and vocabulary development.

The purpose of this study was to compare the effect of vocabulary strategies on improving vocabulary development in 2nd and 3rd grade students at the Academy. Students at the Academy needed to improve their word knowledge through vocabulary strategies to strengthen vocabulary development to have better reading experiences. Quantitative research methods were used to better understand the following research question. Specifically, it was hypothesized that students receiving Vocabulary Squares instruction would make significantly greater gains when learning new vocabulary than students receiving traditional vocabulary instruction. The data collected consisted of pretest and posttest vocabulary scores of the treatment group and the control group. Some examples of the grammar teacher using the Vocabulary Square strategy were also

collected. The study took place during the months of March and April of 2013. The data were analyzed via the WinStat independent sample *t* test software program and no significant differences between the groups were noted.

Interpretation of Findings

The Vocabulary Square strategy did not improve vocabulary development in the experimental group according to the results of the independent sample *t* test. The null hypothesis was accepted and does not infer all vocabulary strategies would result in no significant change, only this specific one, Vocabulary Squares.

The theory used for this study was constructivism. Constructivism is defined "as the theory of learners constructing meaning based upon their previous knowledge, beliefs, and experiences" (Walker, 2002, p.1). As Windschitl (2000) noted, "constructivism is premised on the belief that learners actively create and restructure knowledge, constantly comparing ideas introduced in formal instruction to their existing knowledge" (p.99). In this study, the students read information and participated in discussions. The teacher made a connection, through the text read, by drawing on the prior knowledge and experience of the student to increase their understanding of the vocabulary presented. The findings in this study were not in accord with findings from the previous studies of Stahl and Fairbanks (1986), Austermuehle et al. (2007), Blackwell (2012), and Cockrel (2013), in which vocabulary strategy instruction resulted in gains in vocabulary knowledge. The reasons for these nonsignificant findings may be that the students were not exposed to vocabulary on a daily basis over the course of a minimum of 6 school weeks. Vitolo (1999) and Butler (2007) also reported non-significant

findings and noted that longer treatment times might have produced significant gains in vocabulary. Teachers were trained in the use of the vocabulary strategies employed in the study; however, perhaps training was insufficient or ineffective or they did not implement the strategies in the manner prescribed, thus accounting for the lack of significant findings. Imbimbo and Gilkes (2009) stated that blocks help students learn concepts in depth. Moreoever, Imbimgo and Glikes (2009) alleged that "block scheduling also encourages the use of innovative teaching methods and a greater variety of instructional strategies that address multiple leaning styles" (p. 2). Therefore, significant results might have been obtained if the vocabulary strategy were taught more than three times a week with a 2-hour period blocked off in the Language Arts schedule.

Implication for Social Change

The literature findings reviewed prior to conducting this study revealed that there are a number ways to help students improve their word knowledge through vocabulary strategy instruction. Even though the vocabulary strategy used for this study had negative results, there are more research-supported vocabulary development strategies that teachers can evaluate.

As an administrator of the school, a responsibility to support and make available different vocabulary strategies for the classroom teachers goes without saying. I must evaluate the standard curriculum and ensure vocabulary development is offered across the curriculum. Meeting with the teachers periodically and discussing Spanish grammar issues can help solve some of the instruction problems they may be having in that area. Professional development is best when the teachers involved choose and maintain their

own topics and learn together in an atmosphere that is accepting and nurturing (Lieberman & Miller, 2001).

Specific positive social change that can result from increasing vocabulary knowledge includes students demonstrating greater comprehension and fluency of the written word, higher scores on tests requiring reading skills, higher rates of graduation from high school and full-time employment, and greater levels of reading for enjoyment. More research on vocabulary studies is imperative if we are to focus on improving vocabulary development. The analysis in Section 4 did not reveal a significant difference using one particular vocabulary strategy; however, the research denotes that other vocabulary strategies have revealed significant differences.

Recommendations for Action

This particular study addressed unique conditions regarding elementary school curriculum. Vocabulary is not taught to Honduran students in the elementary grades. It was my goal to introduce vocabulary instruction to Grades 2 and 3 in a private rural school in Honduras. Recommendations based on the current study's findings are as follows: First, conduct investigations evaluating other successful vocabulary strategies. Second, use strategies for a minimum of three times a week for at least 10 weeks. Third, train and monitor teachers implementing the vocabulary strategies.

Other successful vocabulary strategies to be evaluated in the classroom of 2nd and 3rd graders include Vocabulary Squares, flashcards, read a-louds, definitional and contextual information, and mnemonic methods. Vocabulary instruction should be implemented a minimum of three times a week for at least 10 weeks, which allows

teachers to reinforce learned vocabulary strategies and introduce new vocabulary strategies to the students. In addition, teachers need to incorporate vocabulary instructional practices more routinely into their school day (Kinsella, 2005). Finally, teachers need to provide the vocabulary strategy training in the manner prescribed (Kinsella, 2008). Staff development in the area of sound instructional vocabulary strategies is necessary and important to teachers. The ability to introduce and teach vocabulary strategies is a skill that needs constant attention and study. Staff should remain consistent in their development of these skills (Kinsella, 2008). Since it is a new concept at the Academy, several workshops will be held throughout the school year for the teachers. I will work in conjunction with the school director to implement these changes for a smooth transition.

Recommendations for Further Study

Further studies should incorporate the other grades at the Academy. Further research on vocabulary development in primary grades of foreign countries needs to be done, specifically Latin American countries. In searching for periodical articles, I found one study done at the pedagogical university in Tegucigalpa, Honduras.

Parental involvement regarding reviewing vocabulary instruction and strategies at home is also an important component to consider for further studies. Parents can teach various vocabulary strategies to their children at home, reinforce vocabulary skills learned at school, and evaluate strategies that work best for their children. For example, a mnemonic study could be conducted in a school setting using weekly vocabulary words to determine if this strategy assisted students in learning new vocabulary words. An

assessment would be the use of flashcards to determine if student had increased his or her vocabulary knowledge. Finally, the use of word walls should be evaluated to determine if they assist students in learning new vocabulary words.

Now that some of the grades are bilingual, this study can be done in primary grades in English to see how ESL students develop vocabulary knowledge. The bilingual classes still have to have an hour of Spanish grammar taught, so the strategies would not only be cross-curriculum but can also be cross-cultural.

Conclusion

I was not surprised that the control groups' mean differences between the pretest and posttest were so close. The control group subjects were challenged in their comprehension levels; seven of these sixteen 3rd grade students were repeating that grade. The level of advancement for that group takes longer than the 6 weeks taken for this research. On the other hand, I was disappointed that the experimental groups showed no significant gain in scores. However, I have not given up on using vocabulary strategies to improve vocabulary development and understanding. Graves (2011) and Marazono et al. (2006) have stated that the more ways in which a vocabulary word is presented, the better chance the child will of retaining the word and its meaning.

Vocabulary development is a skill that is built upon from year to year, and teachers need to be involved and remain current and relevant on strategies that are successful in the classroom. Enhancing the classroom curriculum with vocabulary strategies will assist students when they are presented with a difficult word in their reading assignments.

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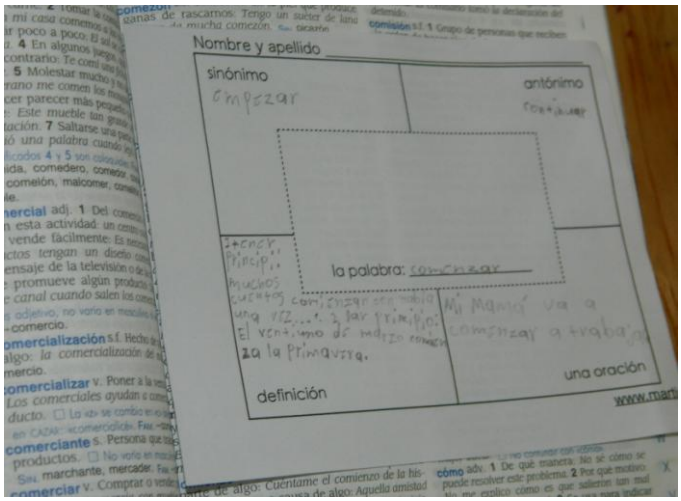
Appendix A: Student Sample of Vocabulary Square Model



Appendix B: Vocabulary Square Rubric

Monitoring and Charting:

Vocabulary Square Rubrics

RATING	**CRITERIA**
EXCELLENT (4)	Correctly filled out all 5 steps of the Vocabulary Four Square Chart. 1. Wrote vocabulary word in center box. 2. Filled in accurate definition of word. 3. Recorded synonyms or antonyms. 4. Used word correctly in a sentence. 5. Drew representation of the word.
VERY GOOD (3)	Correctly filled in 4 of the 5 boxes on the chart.
GOOD (2)	Correctly filled in 3 of the 5 boxes.
NEEDS IMPROVEMENT (1)	Correctly filled in 2 of the 5 boxes.
POOR (0)	Made no attempt to complete the chart or only correctly filled in 1 box.

Vocabulary Square Rubrics (translated)

RATING	CRITERIA
EXCELENTE (4)	Rellenado correctamente todos los 5 pasos del vocabulario de cuatro cuadrados. 1. Escribió palabra del vocabulario en el centro casilla. 2. Lleno la definición precisa de la palabra, en la casilla izquierda, arriba.

	3. Registrado sinónimos o antónimos, en la casilla derecha, arriba. 4. Utilizar la palabra correctamente en una oración, en la casilla izquierda, abajo. 5. Dibujo la representación de la palabra u otro oración, en la casilla derecha, abajo.
MUY BIEN (3)	Debidamente cumplimentado en 4 de las 5 casillas de la tabla.
BIEN (2)	Debidamente cumplimentado en 3 de las 5 casillas de la tabla.
NECESITA MEJORAR (1)	Debidamente cumplimentado en 2 de las 5 casillas de la tabla.
POBRE (0)	No hizo ningún intento para completar la tablao solo rellenado correctamente en una casilla.

Appendix C: Vocabulary Word List

PALABRAS DE VOCABULARIO DEL DISEÑO CURRICULAR NACIONAL BÁSICO
(VOCABULARY WORD LIST)

PRIMER GRADO (highlighted words used in pre/posttest)

abejas	chatarra	gemelos	mariner	rugido
azulejo	chimenea	gorilla	muñeca	sábado
barquito	chocolate	hermano	noche	sapo
burro	ciruela	jalea	paquete	saxofón
caballo	cocinero	jirafa	papá	taxi
cabaña	cubeta	karate	paseo	Teléfono
café	dálmata	loma	pelota	tomate
canguro	dorado	lluvia	pina	vela
caracol	familia	mago	pirate	venado
carrito	fiesta	mamá	pollito	zapato
casita	gallina	maquina	queso	gusano

SEGUNDO GRADO

abecedario	campana	dialogo	historia	paragua	siempre
actividad	cigüeña	dibujo	hormiga	papá	soldadito
alegría	circulo	elefante	infantiles	periódico	tranquilo
alfombra	cartulina	emocionante	jirafa	personaje	triangulo
animals	concha	enfermera	gracia	pregunta	vaquero
artículos	codorniz	escultura	lapicero	princesa	ventana
avión	contento	flauta	lenguaje	palabra	víbora
azúcar	constestar	fuerza	lluvia	pablit	visita
batidora	corazón	girasol	maestro	rápido	zasbomillo
bicicleta	cuchillito	gorrión	noticia	responder	
cafeteria	cuaderno	gracia	paloma	rompecabe	
cambia	Diciembre	grandote	panadero	sandalias	

TERCER GRADO

actividad	conversación	emparedado	ingeniosos	opciones	sentimiento
adivinanzas	convivencia	estaciones	izquierda	oscuridad	significante
albergue	correspondiente	explicaciones	juramento	personajes	situaciones
aterrorizados	declamación	finalmente	manzanilla	pertenece	temblón
característica	desayuno	fotografía	mascota	pobladores	televisión
carnívoro	desconocido	huérfano	molestarlo	puntuación	terremoto
chamarra	diccionario	ilustración	movimiento	refranes	trabalenguas
compañero	diciéndoles	ilustrando	necesitar	representante	trapacista
competencia	difusión	imaginación	observación	selección	transcurrir

CUATRO GRADO

acontecimiento	correspondiente	especializado	introducción	protagonista
alteración	costumbres	extrañeza	divulgativos	recóndito
ambicioso	creatividad	geológico	literatura	reconozco
astronauta	crucigrama	geométrico	meteorología	retuvieron
bibliografía	demostración	ilustración	moribundo	sintomáticas
brevemente	descontaminado	impecable	murmullo	subrayar
calorífico	descubrimiento	incontenible	participante	susceptible
características	desordenado	incredulidad	pertinentes	suspensivos
coloquial	determinante	infructuoso	primogénito	transatlántico
compatibilidad	embarcaciones	insignificante	planteamiento	
complementario	embravecidos	intensidad	primogénito	
conferencia	empaquetar	interacción	profesionalizaci	

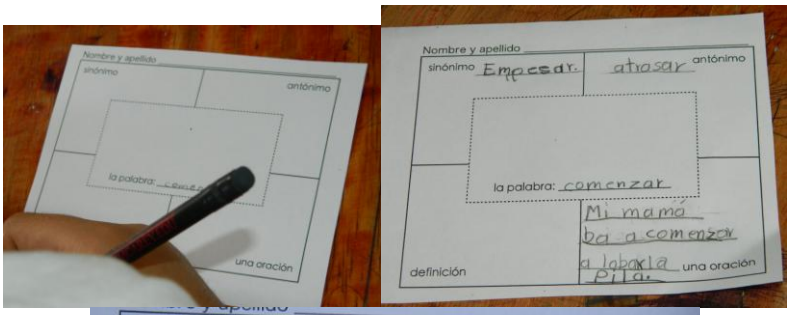
QUINTO GRADO

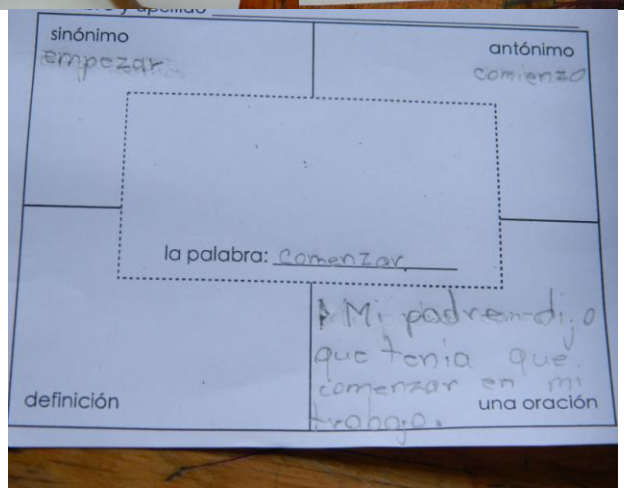
abalanzaste	conductibilidad	esbelta	institucionalidad	preposiciones
abatible	congestionamiento	esquematización	interjección	procedencia
adelgazamiento	creatividad	evidentemente	intervencionismo	realización
aglutinamiento	debatible	esplendido	involucramiento	reconciliación
ahuyentaron	desfavorable	esquematización	malinterpretación	renovación
argumentativo	desaparezcan	expediciones	mordisqueando	resplandeciente
benefactor	desinfectante	extinción	omnisciente	sanguijuela
catalográficas	desorganización	extranjerismo	pavimento	sentimentalismo
circunflexión	determinante	friccionado	persuasivo	simbiosis
circunscrito	diacrítica	hectómetro	peyorativas	sobreviviente
circunstancias	discapacidad	insensible	polisémica	transmisible

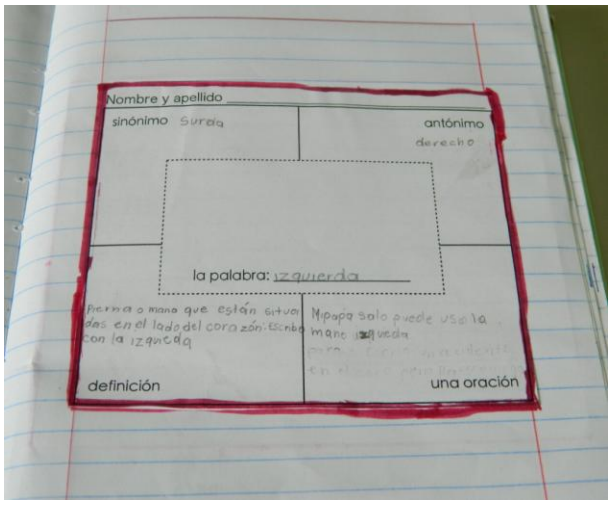
SEXTO GRADO

aceptabilidad	descripción	extinguidores	intoxicación	quincuagésimo
acontecimiento	desconcertado	flexibilidad	intransigente	quisquilloso
acostumbrarme	desfavorable	fragmentación	latinoamericana	subdividirle
advertencia	desquiciado	genuflexión	lingüística	suspensivo
antigüedad	enciclopedia	herbívoro	metamorfosis	transmisible
argumentativo	equinodermo	hermafrodita	nauseabundo	transmitiendo
complementario	equinodermo	heterogéneo	onomatopéyica	transparencia
conversación	escenográfica	impresionante	personificación	
crucifixión	estrepitosamente	imprevisible	pictórico	
demostrativo	evacuación	incoherente	piscina	
desconfianza	exencionado	influyente	pragmático	
desconozco	exhibieron	interactuando	preposiciones	

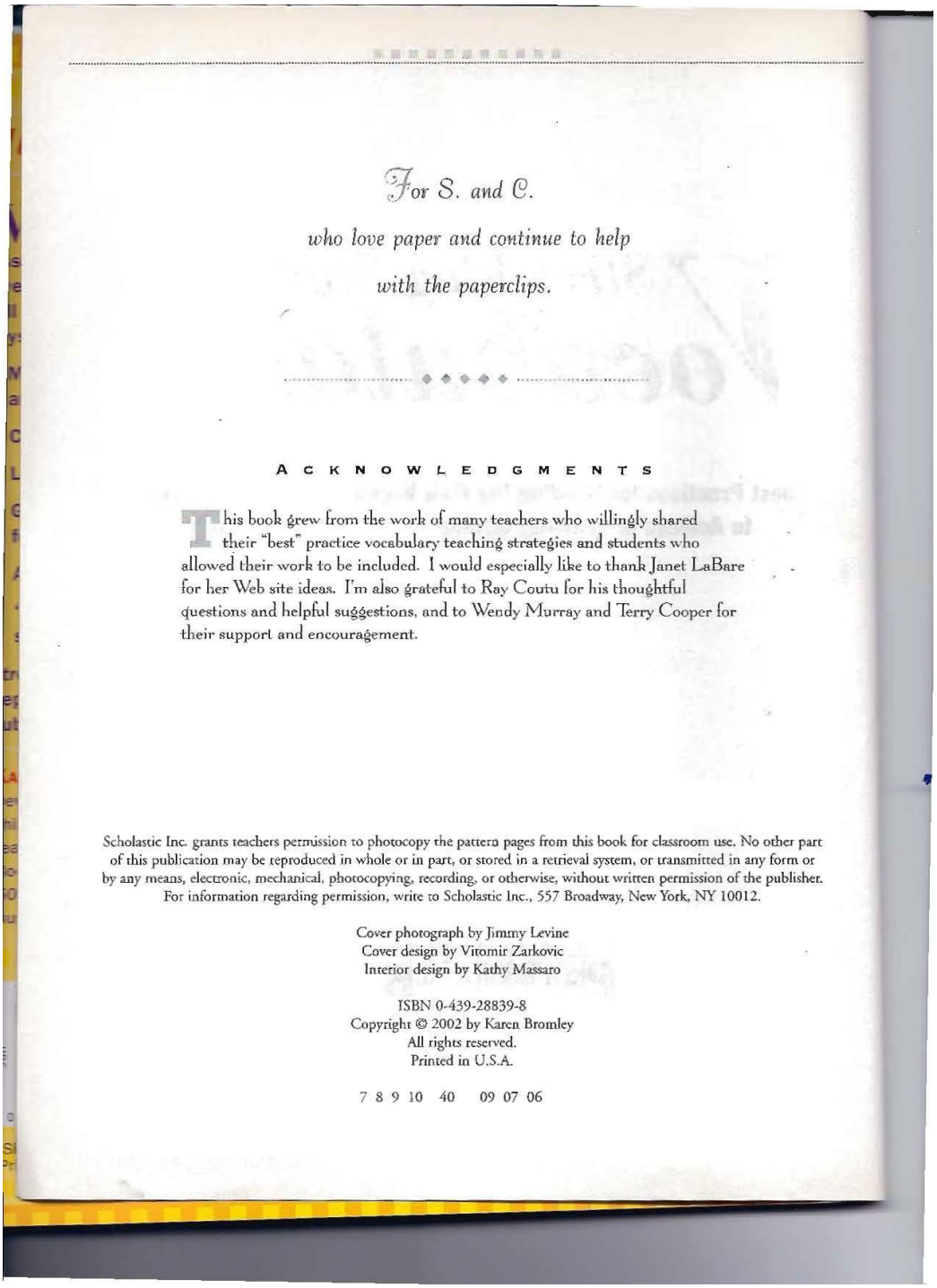
Appendix D: Notebook Samples







Appendix E: Copyright Permission for Vocabulary Squares



For S. and C.

who love paper and continue to help

with the paperclips.

ACKNOWLEDGMENTS

This book grew from the work of many teachers who willingly shared their "best" practice vocabulary teaching strategies and students who allowed their work to be included. I would especially like to thank Janet LaBare for her Web site ideas. I'm also grateful to Ray Coutu for his thoughtful questions and helpful suggestions, and to Wendy Murray and Terry Cooper for their support and encouragement.

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Cover design by Vitomir Zarkovic
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Appendix F: Pre/Post Test (translated)

EXAMEN DE VOCABULARIO

I. 5 palabras dictados.
Direcciones para Maestra: Pronunciar cada palabra dos veces y clarita. Chequear si todos son atentos. (Las cinco palabras dictadas: flauta, avión, terremoto, víbora, desayuno).

Direcciones para los Alumnos: Voy a dictar 5 palabras. Escucha bien la pronunciación. Voy a repetir 2 veces. Escribe bien claro las palabras.

1._____ 4._____

2. _____ 5. _____

3. _____

II. Use las palabras en el cuadro para correctamente contestar las oraciones.
Direcciones para Maestra: Lea las palabras en el cuadro una vez. Después lea cada oración dos veces.

Direcciones para los Alumnos: Escoge una palabra del cuadro para completar la oración.

paloma	cafetera	batidora	bombillo	lluvia	campana
sandalias	jirafa	cambia	rompecabezas		

1. Las _____ son un regalo para Ana.

2. El cuello del _____ es muy larga.

3. Necesita cambiar el _____ de la lámpara.

4. Este _____ tiene quinientos piezas.

5. Mama use él _____ para hacer un pastel.

6. La _____ traía un rama olive en su boca.

7. El dueño del _____ es Juan Valdez.

8. En la noche la _____ cae muy fuerte.

9. La _____ de la escuela suena a las siete y media.
10. El tiempo _____ dos veces al año.

III. Representar cada palabra con un dibujo y use en una oración.
Direcciones para Maestra: Lea cada palabra. Directa los niños a dibujar una representación de cada palabra lo mejor que puede (no es clase de arte). Después, en el mismo espacio use la palabra en una oración.

Direcciones para los Alumnos: Dibujar una representación de cada palabra y escribe una oración usando la palabra, subraya la palabra.

Cigüeña

Ventana

Bicicleta

Concha

Papá

VOCABULARYTEST

CLASS _____DATE_____

I. 5 words dictated.
Directions for Teacher: Pronounce each word twice with clarity. Check if all are attentive. (The five words dictated: flute, aircraft, earthquake, viper, breakfast).

Directions for Students: I will give 5 words. Listen to the pronunciation. I will repeat each word twice . Write the words clearly.

1._____ 4._____
2._____ 5._____
3._____

II. Use the words in the box to correctly answer the sentences.
Teacher Directions: Read the words in the box once. Then read each sentence twice.

Student Directions: Choose a word from the box to complete the sentence.

dove	blender	coffee	rain
hood	bulb	changes	giraffe
puzzle	sandals		

1.The_____are a gift to Ana.

2.The_____'sneckis long. (translated "giraffe's" English only)

3.You need to change the lamp_____.

4.This_____has five hundred pieces.

5.Momused_____to make a cake.

6.The _____brought an olive branch in its mouth.

7.The _____owner is Juan Valdez.

8.At night the_____ falls very strong.

9.Theschool_____rings at half past seven.

10.Time _____twice a year.

III. Represent each word with a picture and use it in a sentence.

Teacher Directions: Read each word. Direct children to illustrate of each word the best they can(not art class). Then in the same space use the word in a sentence.

Student Directions: Draw a representation of each word and write a sentence using the word, underlines the word.

stork

window

bicycle

shell

dad

Appendix G: Spanish Grammar Assessment Results (Only)

CUMULATIVE TEST RESULTS OF SECOND GRADE 2010

CATEGORIES	CORRECT	INCORRECT	% CORRECT
ALPHABETIC PRINCIPAL (1 & 2)	10	9	45%
SENTENCE STRUCTURE (3 – 6)	15	24	34%
GRAMMAR STRUCTURE (7 – 14)	33	48	36%
LANGUAGE COMPREHENSION (15 – 25)	51	63	42%
TYPES OF LITERATURE (26 – 28)	21	24	64%

(The question numbers are in parenthesis.)

CUMALATIVE TEST RESULTS OF SECOND GRADE 2011

CATEGORIES	CORRECT	INCORRECT	% CORRECT
ALPHABETIC PRINCIPAL (1 & 2)	18	15	82%
SENTENCE STRUCTURE (3 – 6)	18	32	41%
GRAMMAR STRUCTURE (7 – 14)	40	63	45%
LANGUAGE COMPREHENSION (15 – 25)	59	83	49%
TYPES OF LITERATURE (26 – 28)	23	21	70%

(The question numbers are in parenthesis.)

CUMALATIVE TEST RESULTS OF SECOND GRADE 2012

CATEGORIES	CORRECT	INCORRECT	% CORRECT
ALPHABETIC PRINCIPAL (1 & 2)	14	34	36%
SENTENCE STRUCTURE (3 – 6)	16	31	75%
GRAMMAR STRUCTURE (7 – 14)	40	52	45%
LANGUAGE COMPREHENSION (15 – 25)	56	74	46%
TYPES OF LITERATURE (26 – 28)	17	15	52%

(The question numbers are in parenthesis.)

After the researcher having to make assessment test the previous years the Department of Education of Honduras created one for all schools; private, public, and bilingual. The assessment was given at the end of the school year in 2013.

CUMALATIVE TEST RESULTS OF SECOND GRADE 2013

CATEGORIES	CORRECT	INCORRECT	% CORRECT
ALPHABETIC PRINCIPAL (1 & 2)	17	25	77%
SENTENCE STRUCTURE (3 – 6)	30	54	68%
GRAMMAR STRUCTURE (7-14)	42	125	47%
LANGUAGE COMPREHENSION (15-25)	95	126	79%
TYPES OF LITERATURE (26 – 28)	25	23	76%

(The question numbers are in parenthesis.)

CUMALATIVE TEST RESULTS OF THIRD GRADE 2010

CATEGORIES	CORRECT	INCORRECT	% CORRECT
SENTENCE STRUCTURE (4,6,7,9,& 1O)	12	10	54%
GRAMMAR STRUCTURE (2,8,11,12,13,20,22,27, & 28)	18	24	41%
LANGUAGE COMPREHENSION (14,15,16,21,24,26,29,& 30)	36	49	41%
TYPES OF LITERATURE (1,3,5,17,18,19,23, &25)	60	74	50%

(The question numbers are in parenthesis.)

CUMULATIVE TEST RESULTS OF THIRD GRADE 2011

CATEGORIES	CORRECT	INCORRECT	% CORRECT
SENTENCE STRUCTURE (4,6,7,9,& 1O)	17	9	77%
GRAMMAR STRUCTURE (2,8,11,12,13,20,22,27, & 28)	19	31	43%
LANGUAGE COMPREHENSION (14,15,16,21,24,26,29,& 30)	40	62	45%
TYPES OF LITERATURE (1,3,5,17,18,19,23, &25)	82	105	68%

(The question numbers are in parenthesis.)

CUMULATIVE TEST RESULTS OF THIRD GRADE 2012

CATEGORIES	CORRECT	INCORRECT	% CORRECT
SENTENCE STRUCTURE (4,6,7,9, & 10)	17	7	77%
GRAMMAR STRUCTURE (2,8,11,12,13,20,22,27, & 28)	17	32	51%
LANGUAGE COMPREHENSION (14,15,16,21,24,26,29,& 30)	74	57	61%
TYPES OF LITERATURE (1,3,5,17,18,19,23, &25)	50	72	76%

(The question numbers are in parenthesis.)

After the researcher having to make assessment test the previous years the Department of Education of Honduras created one for all schools; private, public, and bilingual. The assessment was given at the end of the school year in 2013.

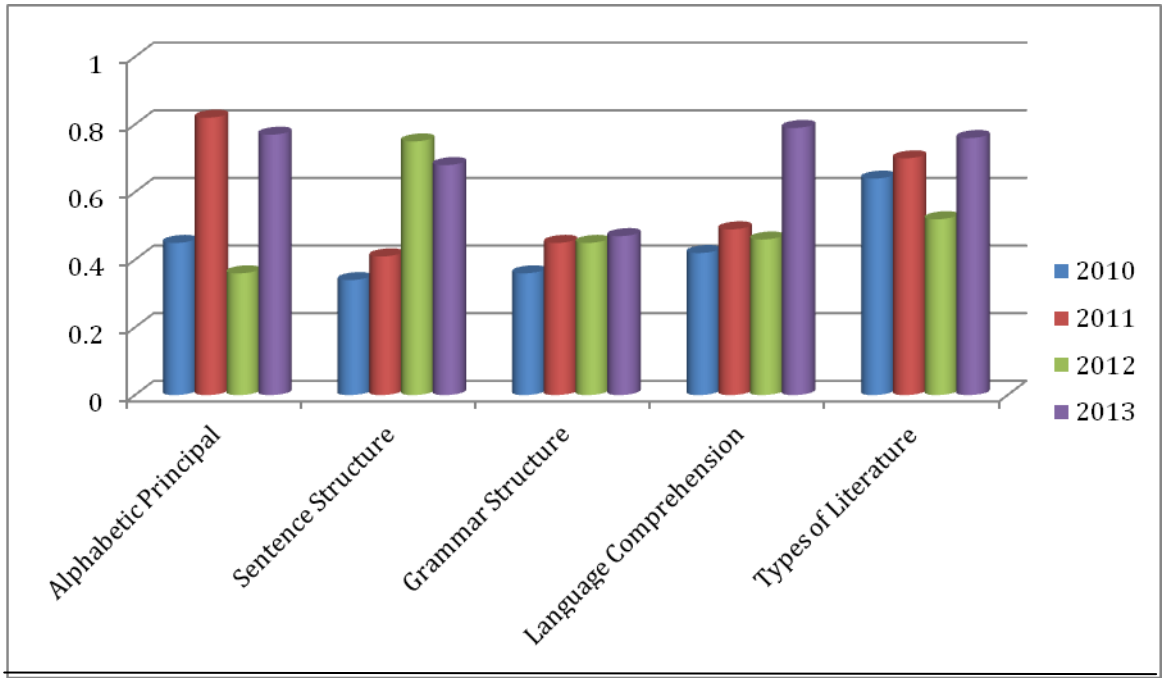
CUMULATIVE TEST RESULTS OF THIRD GRADE 2013

CATEGORIES	CORRECT	INCORRECT	% CORRECT
SENTENCE STRUCTURE (4,6,7,9, & 10)	19	26	86%
GRAMMAR STRUCTURE (2,8,11,12,13,20,22,27, & 28)	32	13	73%
LANGUAGE COMPREHENSION (14,15,16,21,24,26,29,& 30)	37	8	84%
TYPES OF LITERATURE (1,3,5,17,18,19,23, &25)	28	17	85%

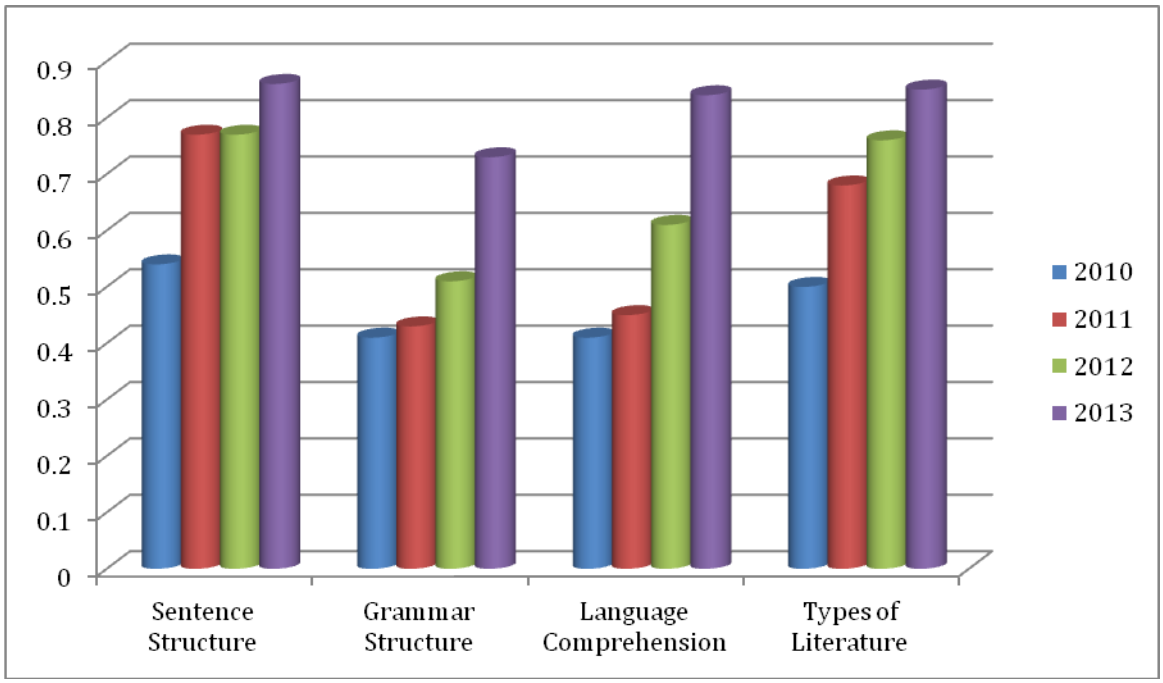
(The question numbers are in parenthesis.)

Appendix H: Graphs

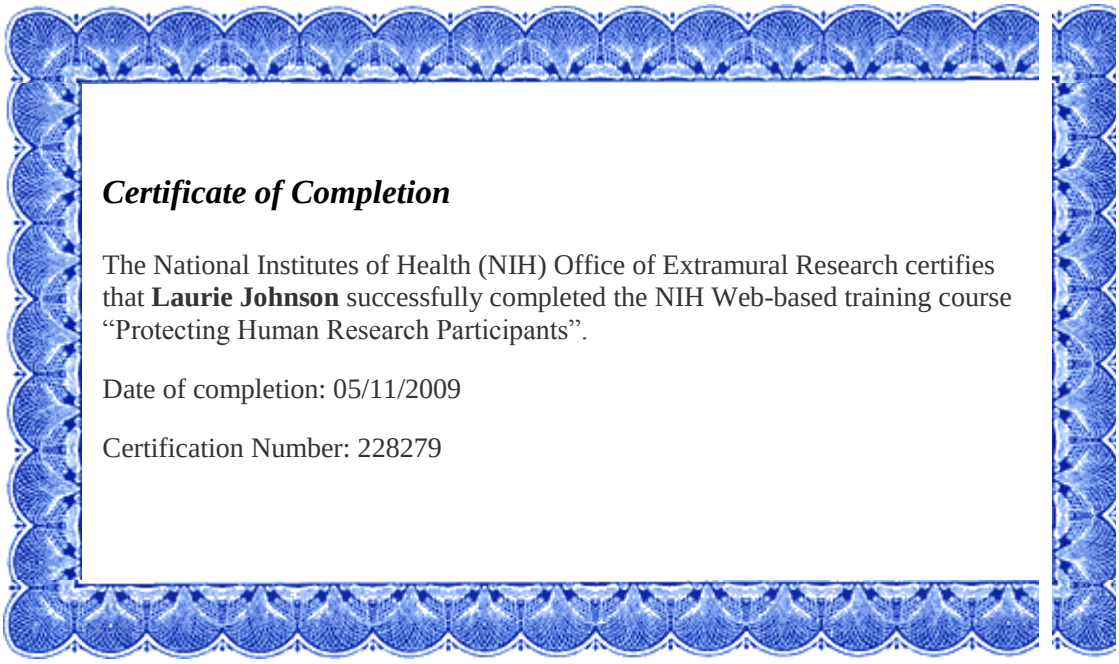
CUMALATIVE TEST RESULTS OF SECOND GRADE
2010, 2011, 2012, and 2013 COMPARISON GRAPH



CUMALATIVE TEST RESULTS OF THIRD GRADE
2010, 2011, 2012, and 2013 COMPARISON GRAPH


0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Sentence Structure
Grammar Structure
Language Comprehension
Types of Literature
2010
2011
2012
2013

Appendix I: Certificate of Completion



Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Laurie Johnson** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 05/11/2009

Certification Number: 228279

Appendix J: Teacher Consent Form (Translated)

LA FORMA DE CONSENTIMIENTO DE PROFESOR

Posibilidades y Determinaciones de Factores para la Mejora de la Experiencia de Lectura

Usted es invitado a participar en un estudio de investigación del uso de estrategia de vocabulario. Usted fue seleccionado como un participante posible debido al nivel del grado que usted enseña en la Academia Cristiana del Buen Pastor. Por favor lea esta forma y haga cualquier pregunta que usted puede tener antes de aceptar esta invitación.

El estudio está siendo conducido por Laurie Johnson, un candidato doctoral en la universidad Walden.

Información previa:
El objetivo de este estudio es aprender como las estrategias de vocabulario de los estudiantes de segundo, tercero y cuarto grado pueden **mejorar experiencias de lectura.**

Procedimientos:
Si usted está de acuerdo con este estudio, los estudiantes serán al azar elegido para ser el lugar en un grupo experimental o grupo de control. Cada grupo tomara una pre prueba y pos prueba. Enseñaran el grupo experimental una estrategia de vocabulario específica llamada la Caja-Esto. El grupo de control no recibirá esta estrategia de vocabulario específica. El investigador coleccionara todos los datos. El proceso de investigación actual durara 6 semanas.

Naturaleza Voluntaria del Estudio:
Su participación es estrictamente voluntaria. Su aceptación o ninguna aceptación no afectaran su posición en la Academia Cristiana del Buen Pastor. Usted es libre en cualquier momento de retirarse del estudio.

Tal como resulto después usted experimenta la tensión o la ansiedad durante su participación en el estudio usted puede terminar su participación. Usted puede rechazar contestar a estresante o confuso.

Compensación:
No habrá ninguna compensación aseguro su participación en este estudio.

Confidencialidad:
Cualesquiera datos coleccionados serán guardados confidenciales. Ningunos jalones de identificación estarán usados. Todos los archives de este estudio serán guardados privados y cerrados con llave en un archive. Sólo el investigador tiene el acceso.

Contactos y Preguntas:
El nombre del investigador es Laurie Johnson. Si usted tiene preguntas más tarde, usted puede ponerse en contacto con el investigador vía el teléfono in o correo electrónico.

Usted recibirá una copia de esta forma del investigador.

Declaración de Consentimiento:

☐ He leído la susodicha información. He hecho preguntas y he recibido respuestas. Consiento participar en el estudio.

Nombre Impreso de Participante Melissa Dubon Flores

Firma Participante _____

Firma de Investigador Laurie Johnson

Appendix K: Teacher Consent Form

Possibilities and Determining Factors for the Improvement of the Reading Experience

You are invited to participate in a research study on use of vocabulary strategies. You were selected as a possible participant due to the subject you teach at the Good Shepherd Christian Academy. Please read this form and ask any questions you may have before accepting this invitation.

The study is being conducted by Laurie Johnson, a doctoral candidate at Walden University.

Background Information:
The purpose of this study is to learn how teaching second grade students' vocabulary strategies can improve reading experiences.

Procedures:
If you agree to this study, the participants, second grade, will be assigned to the experimental group and third grade to the control group. Each group will take a pre-test and posttest. The experimental group will be taught a specific vocabulary strategy called Vocabulary Square. The control group will not receive this specific vocabulary strategy. The researcher will collect all data. The actual research process will last 6 weeks.

Voluntary Nature of the Study:
Your participation is strictly voluntary. Your acceptance or no acceptance will not affect your position at this school. You are free at any time to withdraw from the study.

In the event you experience stress or anxiety during your participation in the study you may terminate your participation. You may refuse to answer any questions you consider stressful or unclear.

Compensation:
There will be no compensation provided for your participation in this study.

Confidentiality:
Any data collected will be kept confidential. No identifying markers will be used. All records of this study will be kept private and locked in a file. Only the teacher has access.

Contacts and Questions:

The researcher's name is Laurie Johnson. If you have questions later, you may contact the researcher via telephone at or e-mail.

You will receive a copy of this form from the researcher.

Statement of Consent:

[X] I have read the above information. I have asked questions and received answers. I consent to participate in the study.

Printed Name of Participant _Melissa Dubon Flores

Participant Signature _____

Signature of Investigator Laurie Johnson

Appendix L: Letter of Cooperation

Letter of Cooperation from a Community Research Partner

April 30th, 2012

Dear Laurie Johnson,

Based on my review of your research proposal, I, Kelly Lawrence, _____, give permission for you to conduct the study entitled Vocabulary Strategies in an Elementary Classroom in a Third World Country within the _____. As part of this study, I authorize you to introduce your vocabulary strategy to _____in the second and third grade classes that she teaches at_____, with the director _____overseeing the procedure. With positive results of the research, workshops will be presented to all the teachers and all materials distributed to them, as well as ideas for the teachers to work on their own vocabulary strategies for their classrooms. This research will help teachers find the best practices and strategies to use for teaching vocabulary to have a better reading experience.

We understand our organization's responsibilities include: The _____ will make available to the researcher the second and third grade classes, the teacher, teacher training time in use of the vocabulary strategy supervised by the director of the academy, _____. All information needed for this research will be turned over to the researcher at the end of the study. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the information collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,
Kelly Lawrence, _____

Kelly Lawrence

Curriculum Vitae

Name:	Laurie Johnson, M.Ed.
Profession:	Administrator and Teacher
Title:	Master of Education, M.Ed.

EDUCATION

September 2006-present	**Walden University**, Minneapolis, Minnesota Ed.D, Specialization in Administrator Leadership for Teaching and Learning, anticipated
January 1996	**Instituto de Lengua Española**, San José, Costa Rica, English as a Second Language
December 1994	**McNeese State University,** Lake Charles, Louisiana, Master's Degree, Elementary Education
July 1987	**McNeese State University,** Lake Charles, Louisiana, Bachelor of Arts, College of Education, Department of Curriculum and Instruction, Elementary Education

EXPERIENCE

2000-present	Founder, Administrator, and Teacher at the an Academy in El Zamorano, Honduras
1989 - 1993	Full-time teacher, sixth grade Moss Bluff Middle School, Calcasieu Parish School District
1988 – 1989	Full-time teacher, sixth and seventh grade, Moss Bluff Middle School, Calcasieu Parish School District
1987 – 1988	Full-time teacher, sixth grade, Moss Bluff Middle School, Calcasieu Parish School District

PROFESSIONAL DEVELOPMENT

Instituto de Lengua Española – 750 hours en San José, Costa Rica 1996

QUATTRO PRO WORKSHOP

Beginner Sign Language

National Science Foundation for Middle School Class, 2 years attendance

Software training for Reading and Math

Introduction to Microcomputers-MS-DOS, Print Shop, Deluxe Paint Animation, &Microsoft Workshop

TI 12 Math Explorer Calculator Workshops

Middle Level Program and Instructional Ideas

Calcasieu Parish Reading Council

Strategies for Science

The 4MAT System Workshop

Cheerleader Sponsor 3 years

4 – H Leader Award

Teacher of the Year School Nominee1996