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The Effects of Vocabulary Instruction in a Second Grade Classroom

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Introduction

“There just isn’t enough time to teach everything.” One of the many challenges for an educator is to work within the confines of the school day, and year, to give each individual student exactly what he or she needs to be successful. This can be a daunting task as classrooms are increasingly more diverse in ability level, background knowledge, language, and culture.

My first year of teaching felt like a battle against the clock. There was so much to cover, and so many things I wanted to do with my students. It never felt like there was enough time. I
noticed this especially with the components of literacy: reading, writing, speaking, and listening. Creating a strong foundation of language helps students to succeed both in school and out of school. Vocabulary development is a key component of language acquisition. Children acquire word meaning first through hearing words spoken and constructing meaning in context. Children who have more exposure to language early on have a better vocabulary by the time they enter school than children who have had limited exposure. But I was unsure about the best, most efficient and effective way to help bridge the gap.

The components of literacy and their development are so crucial in elementary school. My education courses taught me to be critical of “one size fits all” curriculum. I began to wonder if my school’s reading curriculum was the best way to teach, especially when it came to vocabulary instruction. I wondered about the choices of vocabulary words and the amount of time spent on instruction of word meaning and use. I wanted to know more, and to investigate the best way to instruct all students.

When children reach school age, there is already a difference in vocabulary knowledge and this difference is often difficult to change. There has recently been an increase in attention to this gap. Vocabulary has long been accepted as having an impact on reading comprehension (Stahl & Fairbanks, 1986). The bigger a student’s receptive and productive vocabulary, the better they will be able to understand what they are reading. They will also be more able to use strategies to figure out word meanings in context.

Taking education courses in the field of English for Speakers of Other Languages (ESOL) has increased my awareness of explicit strategies for language acquisition instruction. Since 1991 the number of English Language Learners in the US has increased 200 percent (Echevairra & Short, 2010). This diverse group has become an area of national focus for classroom teachers,
districts, and researchers. English Language Learners face a variety of obstacles when trying to access education in the American school system: testing requirements, lack of funding, and limited research on effective methods of instruction.

There is currently research being done and strategies being developed, implemented and tested to help ELLs be successful in a mainstream classroom (Echevaira & Short, 2010). Many states are adopting curriculum for ELD programs. The goal is to provide high-quality instruction to all students. Realizing that all students can benefit from high-quality instruction, I wanted to examine various strategies for vocabulary development and find out which worked best.

The purpose of this study is to examine the effectiveness of different vocabulary instructional strategies in a second grade classroom.

**Literature Review**

The following Literature Review was conducted to explore vocabulary development and the various strategies for teaching vocabulary in elementary school. The review begins with an overview of the links between vocabulary and reading comprehension and moves on to look at students with a high risk for low vocabularies and the implications of a limited vocabulary. The study continues with a review of research-based strategies for vocabulary development, including the SIOP model, Direct Instruction, and the differences between incidental and explicit
vocabulary learning.

**Vocabulary and Reading Comprehension**

Researchers have long acknowledged a strong and reciprocal relationship between vocabulary knowledge and reading comprehension (Stahl & Fairbanks, 1986; Beck & McKeown, 2007). Pearson, Hiebart, and Kamil (2007) discuss the impact of the 2000 report of the National Reading Panel and the use of its’ findings in the 2002 Reading First component of No Child Left Behind. These findings created a renewed focus on vocabulary instruction that continues to be a topic of reading discussion and research.

Pearson et al., (2007) found that vocabulary knowledge predicts comprehension performance consistently with positive correlations typically between .6 and .8. However, they also point out that this correlation does not show the casual relation between vocabulary instruction and comprehension. Experimentally documented effects of vocabulary instruction on standardized reading measures of general reading comprehension are weak (Pearson et al., 2007). However vocabulary is still a core part of reading curriculum, commercial reading programs, and in other curricular areas. Pearson et al. (2007) explain this weak empirical link as the result of inadequate measures of vocabulary for documenting the relationship to comprehension.

According to Pearson et al. (2007) current vocabulary assessments are inadequate. These assessments are unable to distinguish between receptive and expressive vocabulary. This distinction refers to the difference between words that a student is able to understand when read or heard and words a student is able to produce and use on their own. Students need to know the word’s pronunciation, meaning, spelling, part of speech, frequency, grammar, collocations, connotations, and derivations (Dutro & Kinsella, 2012). Feldman and Kinsella (2008) outline an
explicit routine for teaching vocabulary, 1) read and pronounce the word, 2) explain, 3) deepen understanding and 4) coach use. This routine should be expanded and enhanced depending on the importance of the word and the learners’ background.

The current assessments also do not take into consideration the multiple and nuanced meanings, uses and connotations of a word. Nagy and Scott (2000) identified 5 aspects of word knowledge used in reading: incrementality, multidimensionality, polysemy, interrelatedness, and heterogeneity. This makes knowing a word a very complex process. To know a word goes beyond knowing the definition, or even how to use it in a sentence.

Despite these limitations in assessments, vocabulary is still a predictor of success. Vocabulary instruction can influence a child’s reading ability across various subjects and throughout their school careers (Biemiller, 2006). Jalongo and Sobolak (2010) reviewed evidence-based strategies for teaching vocabulary and identified that high-quality vocabulary instruction is essential for all students because it supports growth in reading, writing, and oral language skills. The benefits of a rich vocabulary for young children accrue rapidly as they become readers (Apthorp et al., 2012).

Unfortunately, there is often little emphasis on vocabulary development in the school curricula (Jalongo & Sobolak, 2010). Traditional approaches to increase vocabulary include wide reading, learning words in context, and focusing on words from text the student is reading. There is a need to develop high quality research-based vocabulary development programs (Biemiller 2006) that can reach all students. Unfortunately, teachers have limited amounts of time to instruct, and must often chose between depth and breadth.

**Implications for Students with a High Risk for Low Vocabulary**

Beck & McKeown (2007) studied kindergarten and first-grade children from low socio-
economic status (SES) backgrounds and found that they knew fewer words than their higher-SES peers and that this gap remains throughout schooling. Children who come from a low-SES might have limited access to a language or print rich environment. There has been a great deal of attention in the news and media about this achievement gap especially as high-stakes tests have further emphasized the differences as well as the need to improve instruction. Biemiller and Slonin (2001) estimated that by second grade, children with large vocabularies know an average of 4,000 more root word meanings than children with delays in vocabulary development.

Another at risk-group is English Language Learners (ELLs) or students who first learn a language other than English in their home country or community and learn English as a new language. Students might have a first language (L1) and second language (L2) and a third language (L3). According to a compilation of reports from 41 state education agencies (Kindler, 2002), only 18.7 percent of students classified as ELL met state norms for reading in English. These students have a higher dropout rate and are more frequently put in lower ability groups.

Across the nation, the number of students who speak a language other than English as their primary language has grown. They represent the fastest growing segment of the student population by a wide margin (Genesee, Lindholm-Leary, Saunders, & Christian, 2005). This increasing number of students is particularly significant in light of educational policy that calls for high standards and strong accountability for schools and parents through high stakes testing (Genesee et al., 2005). No Child Left Behind calls for annual tests of reading and math for all students at a certain grade level (in schools receiving Title I and Title III funds) and deliberately include ELLs in state accountability systems. Since research results can inform improvements needed, Genesee et al. did a meta-analysis of current research on ELLs in U.S. schools.

They found that the research is limited to low-income native Spanish speakers, and most
studies involve elementary age students. There is a need for more research. They found that classrooms that combine direct instruction with interactive learning environments ensure meaningful, contextualized, and individualized instruction (Genesee et al., 2005). Research suggests that there are important similarities between L1-English and English L2 development (Genesee et al., 2005).

**Word Acquisition**

What does it mean to know a word? Nagy and Scott (2000) suggested that vocabulary learning is incremental. According to this theoretical model, a student’s knowledge of a word’s meaning develops incrementally from no knowledge through varying levels of partial knowledge, to more full, complex and complete knowledge.

The Lexical Quality Hypothesis (Perfetti, 2007) provides insight on vocabulary development by specifying the features of a reader’s mental dictionary, or lexicon. According to Perfetti, it is the interconnectedness of semantics, phonology, orthography, morphology, and syntax that allows readers to rapidly, and precisely determine meaning in a particular context. Teachers who support vocabulary development nurture word awareness (Beck, McKeown, & Kuncan, 2002) and curiosity about words and the effort it takes to discover what a word means and how words work.

Kucan (2012) writes about the components of word learning: phonology, orthography, morphology, and syntax. Phonology is the study of sound and it is important because it is difficult to use a word that one cannot say. Children need to learn how to manipulate sounds to transform one word into another. Rhymes, songs, and wordsmiths like Dr. Suess, help students develop phonological representations of words. Orthography connects these sounds to the way they are written. Morphology looks at units of meaning in words like prefixes and suffixes.
Syntax refers to word usage and word form.

All the work that students do related to phonology, orthography, morphology, and syntax contribute to their knowledge of a word, but, “the foundation of high-quality lexical representations is built by engaging students in carefully designed instructional sequences that focus directly on word meaning” (Kuncan, 2010). Extended and embedded vocabulary instruction has different goals of depth versus breadth.

**Incidental versus Explicit Vocabulary Learning**

Studies have evaluated the effects of either embedded or extended vocabulary instructional approaches on young school-age children’s vocabulary learning (e.g. Beck, McKeowan, 2007; Biemiller & Boote, 2006; Coyne et al., 2004). Coyne et al. (2007) conducted a study in which both types of instruction were evaluated. Results indicated that extended instruction resulted in greater word learning than embedded instruction in five of six comparisons and these differences were maintained on delayed post-tests. Embedded instruction included providing simple definitions of target words within the context of the story. The goal is to promote breadth of vocabulary knowledge in story readings in a time-efficient manner. Extended instruction included the simple definitions as well as extended activities after the story reading. The goal here is to provide depth of vocabulary meaning and give more time to each word with multiple opportunities to interact with words outside the context of the story.

According to Kuncan, Beck and McKeown (2010, 2008), students need vocabulary instruction that allows them to build rich representations of words. Such instruction needs to be planned to develop enduring lexical representations that will be available for reading and writing.

Successful vocabulary instruction includes both explicit definitions and opportunities for children to construct word meaning in context while reading or listening to text (Apthorp et al.,
Vocabulary interventions need to begin early and continue for a sustained amount of time in order to make a substantial impact (Apthorp et al., 2012). In the study by Apthorp et al. (2012) an intervention was used in elementary school that included multiple exposures to and use of new words, and structured activities to engage children’s deep and active processing. The study selected Tier Two words for their frequency in written language. They determined that words taught should be ones that will be important to success in children’s future. Words should be selected from sophisticated, high-utility words characteristic of written language (Beck & McKeown, 2007).

Oral conversation is the primary source from which young children learn the words they know. But by the time they enter school, oral contexts are not enough because they rarely contain words outside the ordinary (Beck & McKeown 2007). So what words should be taught? Beck and McKeown (1985) devised a system for identifying words for rich vocabulary instruction. The system sorts words into three tiers. Tier 1 words are easily explained or understood. Tier 3 words are domain or content specific. Tier 2 words are those that students will likely encounter in texts, but not everyday contexts. These words should be precise, interesting, and sophisticated. But there is no Tier 2 list to consult. Instead there are guidelines for evaluating candidates for Tier 2 words (Kucan 2012).

Research suggests trade books beyond the children’s independent reading level are good resources for vocabulary development (Beck & McKeown 2007) because young children’s listening and speaking competence is greater than their reading and writing competence.

Educators and researchers interested in accelerating academic achievement face challenges about how best to use scarce instructional time. There is often a trade-off between teaching for breadth or depth. Coyne, McCoach et al. (2009) studied two approaches for supporting
vocabulary learning with kindergarten students in the context of storybook read-alouds. They compared methods for directly teaching work meanings that varied in instructional time and depth of instruction. They also looked at methods that provided students with incidental exposure to target words. They found that there were statistically significant differences at post-test favoring words taught with extended and embedded instruction over words receiving only incidental exposure during reading. These findings were “consistent with a growing body of research documenting the efficacy of directly teaching word meanings to young students within oral language activities such as storybook readings (Coyne et al., 2009)”.

**SIOP**

The field of study of second language acquisition has recently been in the spotlight. Existing research is limited. There is strong supporting evidence that English Language Development instruction needs to be interactive and carefully planned and carried out (Saunders & Goldenberg, 2012). August and Shanahan (2010) did a literature review of carefully selected studies relating to what is known about teaching literacy to second-language learners. One important finding from three studies is that second-language learners and native speakers generally follow similar literacy developmental paths. Studies examining the development of word reading and spelling among language minority students have demonstrated that the development of these skills is similar to that of native speakers (August & Shanahan, 2010). This is important as classes are becoming increasingly more linguistically diverse.

August and Shanahan (2010) put together guidelines for improving instruction for language learners. One important guideline is that the components of literacy that should be focused on for explicit instruction are the same for ELLs as for native English speakers. Though they are careful to point out those instructional routines and programs are not necessarily the
same for everyone. However, they analyzed research that suggests that many of the instructional approaches are successful with both ELLs and native speakers. This includes high-quality vocabulary instruction that teaches individual words and word-learning strategies, provides rich and varied language experiences, and promotes word consciousness.

Sheltered instruction as a teaching method for ELLs has been around for many years. It has gone through a few fundamental shifts in its’ pedagogy from an emphasis on language learning only, to an emphasis on content learning only, to the current approach; an emphasis on language and content learning together (Echavaria & Short, 2010). A particular method known as SIOP (Sheltered Instruction Observation Protocol) (Echevarria, Vogt, & Short, 2006), originally a way of observing teachers, is a systematic way to teach lessons in all subjects, to all grades, and all language proficiency level. Currently, SIOP is the only scientifically validated model of sheltered instruction for English learners (Short & Echavarria, 2007).

SIOP instruction consists of 30 features and 8 components. Essential for making content comprehensible for English learners-Lesson Preparation, Building Background, Comprehensible Input, Strategies, Interaction, Practice & Application, Lesson Delivery, Review & Assessment. An important component of Lesson Planning is the development of standards-based content and language objectives for every lesson.

**Direct Instruction**

Direct Instruction methods originated in the Carl Bereiter-Seigfried Englemann Preschool at the University of Illinois in the 1960s (Bereiter, & Engelmann, 1966). The idea being that instruction needed to happen at a faster-than-average rate to help below-average students catch up with their average or above average peers (Bereiter & Engelmann, 1966). According to Stahl and Fairbanks, (1998), Direct Instruction can be broken down into three basic principles: (a)
language is broken down into components that are taught in isolation, not in meaningful context; (b) learning is highly teacher directed; and (c) students have little input into what is being learned.

According to Ryder and Burton, (2006) there is often confusion with the general approach to classroom instruction referred to as direct or teacher-directed instruction and the stylized Direct Instruction presented by Engelmann et al. There have been mixed results in the research of the effectiveness of Direct Instruction.

The Preschool developed Project Follow Through for disadvantaged children. In 2001, Becker reported that these approaches greatly lowered the incidence of behavior problems. Their methods are highly teacher controlled and process oriented. In the Journal of Educational Research (2006), Direct Instruction is defined as voluntary behavior learned by the environment controlled by the teacher and focused on one system or way of learning. This method consists of small-group instruction, oral responding in unison, correcting errors systematically, and certain motivational strategies.

The most widely used reading curriculum that advances the DI approach is Reading Mastery, which is produced commercially by SRA/McGraw Hill. Due to a renewed interest in DI for enhancing reading achievement, Ryder and Burton (2006) studied the effectiveness of DI compared with non-DI in urban and suburban students in grades 1-3. Their findings suggested that the impact of the program used relied heavily on the teacher’s demeanor, behavior, and fidelity to the program. The researchers also relied on feedback they received from teachers. The majority of teachers said that DI was a good corrective tool and was useful in building phonemic awareness skills and increasing fluency, but many augmented DI curriculum with additional materials that they felt was absent from DI curricula.
Vocabulary and reading comprehension are directly related. Students with a high risk for low vocabulary are at a disadvantage. There are research-based strategies for vocabulary development, including the SIOP model and Direct Instruction. There are differences between incidental and explicit vocabulary learning.

Methods

The purpose of this study is to determine the effectiveness of different vocabulary instruction strategies in a second grade classroom. The following chapter discusses the methodology used to conduct the present study on the use of various vocabulary instruction strategies. Specifically, this chapter will provide details about the research question, hypothesis, limitations, delimitations, participants, context, materials, instruments, and procedures of the study.

The study took place in a second grade classroom at Immaculate Conception School (I.C.S.) in Fairbanks, Alaska. Immaculate Conception School is a private, Catholic elementary school on a pre-Kindergarten through 12th grade campus known collectively as the Catholic Schools of Fairbanks. The Catholic Schools of Fairbanks were started in 1946 when Immaculate Conception School opened in the basement of the original parish church. The Sisters of Providence of Charity, who operated a hospital adjacent to the church, provided teachers.

In 1951 the school expanded from a few grades to a full 1-8 organization housed in military surplus buildings. In 1955 a high school building was constructed, and in 1967 a gymnasium was added. A new elementary school was completed in 1979, and in 2001 a new chapel, school office, library, computer room and commons area were built. Jesuit priests and Sisters of Providence comprised the majority of the instructors until the 1970’s. The school is currently in the process of reconnecting with its’ Jesuit roots and trying to become a Jesuit
endorsed school.

Current K-12 enrollment is about 492 students. The schools operate with a staff of 41 teachers and ten administrative and support staff. They are a mixture of Catholic and non-Catholic professionals. The schools have kept tuition significantly below the actual cost of operations, and because of this constantly engage in fund-raising activities. Most of these activities are handled by the Monroe Foundation, Inc., a nonprofit organization which coordinates fund raising with volunteer and parent help. The largest fund-raiser each year since 1970 has been HIPOW (Happiness is Paying Our Way), which currently brings in almost $600,000 annually during a three-day auction of donated goods and services. Local merchants and community members who have no other connection with the Catholic Church or the schools, but see the schools as a valuable community asset significantly support HIPOW. Tuition will increase in the 2013-2014 school year, which impacts many families. The school has a similar racial diversity to the town of Fairbanks: 82 percent Caucasian, 9 percent Native Alaskan, 4 percent Asian, 4 percent African American, and 1 percent Native Hawaiian/Pacific Islander. The town is 53 percent male.

Fairbanks has a racially mixed population, including Alaska Natives, American Indians, African Americans, Latinos, Asians and Asian Americans, and Europeans. Public schools, funded by a combination of local property taxes and state and federal appropriations, serve about 14,000 students. CSF uses the public school bus system and all special education services are offered through the public schools.

Participants

The participants in this study were my second grade class at Immaculate Conception School. Within this class, there were 18 students; 8 boys and 10 girls. The demographics of this
group were Caucasian (83.3%), Hispanic (5.5%) and Native American (11.2%). There were three students that perform below grade level in reading. One was on an I.E.P. through the public school system, and one received private tutoring. There were no English Learners in the class. There were no programs or staff development for how to teach English language learners at I.C.S.

For this sample, I chose to include all 18 students. My reason for including all students was to see how various learners responded to the strategies, and whether or not they were helpful to students at all levels of reading fluency and comprehension.

This study specifically looked at the vocabulary from Scott Foresman Reading Program (Afflerbach, Beers, Blachowicz, & Boyd et al. 2002). The study looked only at vocabulary word lists learned over the course of one week at a time.

The Institutional Review Board granted permission to conduct this research on August 1, 2012. Immaculate Conception School faculty and administration were presented with a detailed research proposal and permission was granted for the study to be conducted in my second grade class during the spring semester of 2013. Because the study did not extend beyond customary teacher and student responsibilities, the IRB did not require parental or legal guardian consent. However, parents were informed of the study with the beginning of the year welcome letter.

**Instructional procedures**

Scott Foresman Reading curriculum breaks up the school year into 6 Units of study and each unit into 4-5 weeks of instruction. Within each week, there is a reading, writing, phonics, and grammar focus that correspond to two literary selections in an anthology of stories. Each week, there is a list of 15 vocabulary words taken from the stories. Each of the four weeks of the study, we read the literary selections.
The curriculum outlines a daily lesson plan for instructing students in each focus area. The program instructs the teacher to introduce the vocabulary words by reading a list of sentences that use the words. The students come upon these words through incidental reading of the weekly stories and when they complete workbook pages that ask them to use these words to complete other sentences and answer clues using the words. In the first week of the study, I followed the curriculum guide. I briefly introduced each word using the sentences provided. The students read the stories independently, and completed workbook pages. I worked with individual students that needed help decoding.

In the second week of the study, I introduced vocabulary picture dictionaries to reinforce weekly vocabulary words. I used these instead of the workbook pages. I gave the students paper divided into 16 empty boxes. In each box, students were expected to write the vocabulary word, draw a picture of the word’s meaning, and use the word in an original sentence. The students still read each selection independently.

In the third week I used a Kagan Cooperative Learning structure called Quiz, Quiz, Trade to teach vocabulary. The students each wrote a word on an index card and then met with partners to read the words. This focused on the decoding of words more than the meaning. The students read each selection independently.

In the fourth week of the study, we read the stories together and I had the students identify the words as used in the stories. We paused as we read to discuss word meaning and usage.

I gave the students a pre and post vocabulary assessment each week. A pre and post-assessment from the Scott Foresman curriculum were given each week to assess if the students learned the vocabulary words.

*Weekly pre/post assessment.* Prior to each week’s lesson, students completed a multiple
choice vocabulary test to assess what they already knew about the words. This assessment was composed of five multiple-choice questions. Each question asks the student to complete a sentence using one of the vocabulary words from that week. Each question gives the reader 4 options, and the reader is expected to select the best option from the list by filling in a bubble and then writing the word in the blank. At the end of the week, students took a similar test to determine growth. The posttest tests the same words, but with different sentences. The assessments came from the Scott Foresman reading curriculum. Learning gains were computed as the difference between pre and post assessments. Gain scores were compared using an ANOVA.

Results

To determine the effect of different strategies for teaching vocabulary, this study implemented a quantitative approach to test which of four different strategies would have the greatest impact on student learning gains. To accomplish this, the researcher collected quantitative data comprised of weekly pre and post vocabulary assessments. The researcher determined statistical significance using the statistical analysis software EZ Analyze ANOVA. Ultimately, the data lead to a deeper understanding of the effectiveness of four instructional strategies.

General Data Analysis The purpose of this study is to determine the effectiveness of different vocabulary instruction strategies in a second grade classroom. No statistically significant differences appeared among learning gain scores for any of the instructional activities (Table 1).

Table 1

<table>
<thead>
<tr>
<th>Test(group)</th>
<th>N</th>
<th>Group Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
</table>

Vocabulary Intervention Results
Practice Pages  18  .18  .07  
Picture Dictionary  18  .22  .15  
Quiz, Quiz, Trade  18  .21  .15  
Group Read Aloud  18  .18  .14  

**Implications for Teaching and Learning**

The purpose of this study was to determine the effectiveness of four different strategies for teaching vocabulary to a second grade class. Specifically, the study, which took place in a second grade class at Immaculate Conception School in Fairbanks, Alaska, sought to determine if one strategy was more effective than the others resulting in higher learning gains.

It was predicted that the highest learning gains would be seen in the week that used a picture dictionary. This strategy offered the more authentic interaction with the words. The data show that, contrary to the hypothesis, there were no statistically significant differences in percentage learning gains from week to week.

The following chapter will include a detailed discussion of the results, the implications of the study, ideas and recommendations for replication of the study, as well as ideas and recommendations for continued research related to effectively and efficiently increasing vocabulary development.

This study was limited by the sample size and length of study. In the future, I would like to look at a longitudinal study of vocabulary and the extent to which students acquire vocabulary over time. The assessments did not assess whether students could use the words in novel ways, or if the students could correctly give definitions of words in a variety of context, or with no context at all. The pre and post-test scores were high for most students suggesting that many of
the words were already familiar to the students, or that the students already had skills to
determine meaning in context.

**Implications for the Field of Education**

Despite its many limitations, the findings of this study do provide valuable insight into
increasing vocabulary. The study did give me a better understanding of the various strategies
available to me. I am more willing to augment and supplement curriculum programs with
materials and strategies. I understand better the complexity of words and the process of word
acquisition for students. Through observation, I was able to see and hear students using the
vocabulary, writing with it, and pointing it out in our reading. I know that some students still
struggle with decoding, and for them, the results are different than students who are comfortable
and fluent with their reading.

**Future Research**

To improve the original design of this study for future research, there are several key
changes I would recommend. Ideally, there would be more participants in the study. Perhaps
several grades, or both second grade classes (40 students total) and the distribution of gender,
age, and other demographics would have been more even. I would also recommend using
surveys and observations to provide more insight into each strategy and the effectiveness for
both student and teacher. This study used a sample of convenience, so some limitations were
inevitable.

As a follow up to the post-test, there might also have been a follow up questionnaire for
students asking them which strategy they preferred. It might have made students more aware of
the strategies and how they as learners can best achieve success.
It might also have been helpful to give another test after a length of time had passed to see if the students maintained the vocabulary knowledge over time. I would also have chosen different words, as the pre and post-test scores were all very high for most students, suggesting that the vocabulary words were not challenging enough. For example, I would have chosen more Tier 2 and Tier 3 words. I would also have introduced fewer each week and focused more on depth rather than breadth. Though that is still an area for further research to determine which is better. More research is needed to find and develop strategies for developing increased vocabulary in at-risk learners. There is a need to study breadth versus depth as well as what (and how many) words should be taught.

This study examined the effectiveness of four different strategies for developing vocabulary for second grade students. The results of the study show that while no one strategy had a significantly greater impact on student learning, all strategies did have a positive impact, and students seemed to respond better to the picture dictionaries as a means of learning new vocabulary.
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