Vocabulary is FUNdamental

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Abstract

The focus of this study was to improve students’ reading levels through direct instruction of high yield vocabulary strategies. I was interested in teaching techniques that would provide reading improvement students a support system enabling them to be successful when encountering difficult text in any class. This project allowed me to introduce strategies, develop lessons and choose texts that were fun, hands-on, interactive, and collaborative. In addition, the strategies promoted student engagement and genuine interest in the subject matter. This study involved administration of the Scholastic Reading Inventory to determine student reading level gains, surveying students to assess their reading habits and learning experiences, administration of a vocabulary pre- and posttest to determine retention of word meaning, and the analysis of data which suggested that my intervention had positive results on students’ vocabulary skills and reading levels.

Introduction

Vocabulary is the ability to understand and use a word effectively and appropriately to foster comprehension. The very definition of the word vocabulary suggests the close relationship of vocabulary acquisition and reading comprehension. It has been widely noted in research that there is a strong connection between vocabulary knowledge and reading comprehension (National Reading Panel, 2000). High school Language Arts and Reading teachers know the importance of vocabulary instruction as it relates to reading comprehension. According to Fleishman (2005), “Every school day in America 3,000 students drop out-the majority of them poor readers.” Despite the wealth of electronic and print media, literacy rates among adolescents are steadily declining. Reading problems affect students in almost all social, ethnic, and cultural groups. According to a report from the Carnegie Corporation of New York and Alliance for Excellent Education, “approximately 8 million young people between fourth and twelfth grade struggle to read at grade level. Some 70 percent of older readers require some form of remediation” (2004). Vocabulary
development leads to increased literacy which allows students to be successful readers, high school graduates, and ultimately productive citizens.

After extensive research, we now know that effectively teaching vocabulary entails direct instruction utilizing a variety of strategies, connecting unknown words to prior knowledge, focusing on higher level word knowledge and multiple exposures to the word and its meaning. It is only through meaningful experiences with the vocabulary words can students develop deep understandings which will increase comprehension of content area texts and result in academic achievement. Vocabulary knowledge is a basic part of the process of education, both as a means and as an end (Scott & Nagy, as cited in Baumann & Kameenui, 2004). Vocabulary development allows students to acquire knowledge and use of more words therefore equipping them with literacy skills that will give them equitable opportunities beyond high school. With the students’ literacy in mind, the purpose of this study is to answer the following research question: Does exposing students to high yield vocabulary techniques raise student reading scores? The techniques utilized will seek to identify student strengths and interests to create relevant, learning experiences, and help them achieve their personal reading goals. Best practice calls for the researcher to model fluent reading, encourage critical thinking, and cultivate creative expression through engaging hands-on lessons.

**Context**

The school at the focus of this study offers concentrated studies in the areas of medical sciences, engineering and computer media, and television production in addition to providing a comprehensive, traditional high school experience for more than 2647 students. This school is not a Title I school, and has 32% of the students receiving free/reduced lunch. The demographic makeup of the school is 57% African-American, 9% White, 22% Hispanic, 12% Asian or Pacific Islander.
The researcher works as the Reading Improvement Teacher at this campus. There are 18 students in this class. There are two females, one African American and one Puerto Rican. The remaining male student racial makeup is two Mexican males and fourteen African American males. Sixteen of the students receive free/reduced lunch. Eight of the eighteen students in the class have been retained at least one year, so the students’ ages range from fourteen to nineteen years old. The class is comprised of 9th through 12th grade students in General Education, and Special Education mainstreamed. The class also accommodates Dyslexia students who are in need of additional reading instruction. Reading I, II, & III classes are considered a year-long elective, so students receive one-half credit per semester. The students attend the class every day. The class utilizes the Scholastic Read 180 Intervention program which provides differentiated direct instruction to remediate students’ reading deficiencies. Many of the students in my class have difficulty with comprehension because of deficits in vocabulary. These students in most cases can read with prosody and fluency, but they can’t explain what they’ve read or have difficulty retelling what they read because of unknown words they encounter in context. When the deficits are coupled with a lack of background knowledge, experiences, and diversity in socioeconomic status, culture, or language, the students in my class face a literacy gap that widens daily as they encounter texts in high school level content area textbooks. In an effort to raise reading levels and assist students build academic vocabulary generally encountered in their content area classes, I introduced best practice, research based, high yield vocabulary strategies.

Review of Literature

Research on Vocabulary Instruction

A person’s literacy level is based on their oral vocabulary. The National Reading Panel (NRP) established that vocabulary is one of the five essential components of reading (2000).
Vocabulary development begins when children begin to talk and develops as the child gets older and starts to read. There is a relationship between oral language development and literacy. Students with low oral vocabulary development have poor comprehension when learning to read because of lack of vocabulary, limited background knowledge, and inability to form mental models (Scholastic, 2004). In an effort to increase student vocabulary, which is vital to reading comprehension of high school level texts, I reviewed the research on vocabulary development in the areas of (a) vocabulary size differences between students, (b) relationship between vocabulary knowledge and reading.

**Vocabulary Size Differences**

As vocabulary instruction has progressed and changed over the years, there are still disparities in students’ vocabulary. Middle class students from homes with college degreed parents have higher vocabularies than their disadvantaged peers. Unfortunately, the gap between students’ vocabularies starts early and widens broadly each year. Beck and McKeown (1991) noted that high achieving students may know four times as many words as their low achieving peers. Biemiller (1977-1978) and Juel (1988) reported that the differences in vocabulary can show up as early as first grade and continues throughout the students’ academic career. There is a correlation between socioeconomic status (SES) and vocabulary. White, Graves, & Slater (1990) researched vocabulary size in low SES schools and middle SES schools. Upon comparison, the findings revealed that vocabulary growth differs based on SES. These findings show that differences based on SES in the early grades continue to grow as the students progress and worsens as the students continue through school.

While it is estimated that students learn 3,000 words per year, students in higher SES will gain almost twice that many words in one year. Although interventions may reduce the vocabulary
When students begin to read, they must have a system that utilizes the five pillars of reading: Phonemic Awareness, Phonics, Fluency, Vocabulary, and Comprehension. If students receive a strong foundation in reading, they will have the ability to read a large amount of material and build their vocabulary (Anderson & Nagy, 1991). Stanovich (1986) also suggested that early reading instruction had a direct effect on reading ability and therefore vocabulary development. Research studies have found that multiple exposures to words in direct, incidentally, and isolated instructional contexts reinforce word meaning more than contextual exposure alone (Jenkins, Stein, and Wysocki as cited in Beck & McKeown, 1991). So although contextual exposure doesn’t guarantee vocabulary development, multiple exposures coupled with contextual exposure develops vocabulary.

These findings show that there is a relationship between reading and vocabulary (Baumann & Kameenui, 1991; Paul & O'Rourke, 1988; Stanovich, 1986). The National Reading Panel (2000) states that there is a strong correlation between students’ vocabulary development and reading ability. The suggestion of a correlation is all that reading research has proven, because there is no experimental evidence to prove the relationship between reading and vocabulary.
development (Stanovich, 1986). What these findings do suggest though is the need for strong reading programs in the primary grades and vocabulary interventions as early as 1st grade to reduce the vocabulary deficits between low SES students and their peers.

**Methods to improve vocabulary of diverse students**

Most of the vocabulary instruction research is based on incidental and intentional learning of single vocabulary words. There is no single proven method to teach vocabulary, but there are strategies that have positive results in vocabulary instruction. Intentional learning usually involves students learning the vocabulary words through a list or strategy while incidental learning involves the student acquiring words through day to day talking, reading, and listening. The high yield vocabulary strategies introduced in this study are based on Marzano’s (2001) high yield instructional strategies. Marzano and his coauthors identified nine strategies through meta-analysis of numerous studies. The high yield instructional strategies are: 1) Identifying similarities and differences, 2) Summarizing and note taking, 3) Reinforcing effort and providing recognition, 4) Homework and practice, 5) Nonlinguistic representation, 6) Cooperative learning, 7) Setting objectives and providing feedback, 8) Generating and testing hypotheses, 9) Cues, questions, and advance organizers have been proven to raise student achievement (Marzano, Pickering, & Pollock, 2001). The findings suggest incorporation of any one or a combination of these strategies in intentional vocabulary instruction improves student acquisition and retention of vocabulary.

Semantic mapping or feature analysis requires students to categorize and compare words on their vocabulary lists. Bos and Anders (1990) found that this method helped students learn content area words better than the traditional definition list method. Likewise, Marzano (2005) developed strategies to build academic vocabulary, such as linguistic and non-linguistic representations, multiple exposures, teaching word parts (roots, prefixes, and suffixes), and definition in the
student’s words, to foster vocabulary and found that students not only performed better, they were able to use the acquired vocabulary knowledge to identify unknown words. These findings show that individual word instruction doesn’t help students’ deficits or reading levels, but instructional strategies that teach students how to determine word meanings on their own are more effective (Anderson and Nagy 1991). In the case of struggling readers, direct, explicit instruction of vocabulary with continued support by the teacher is very important (Biemiller, 2003).

In many cases, struggling readers lack the background information to determine word meaning and associations (Armbuster, et al. 2001). From the literature we know that SES has an effect on vocabulary development that starts early and grows year by year, there is a strong correlation between vocabulary development and reading comprehension, and vocabulary instruction must include strategies that expose the students to vocabulary multiple times in various ways including direct, intentional, and incidental methods.

Using this information, this study was conducted for twelve weeks to teach vocabulary using high yield instructional strategies in daily vocabulary instruction. These strategies would equip students with the skills to determine word meaning and help them with comprehension.

**Methodology**

The true aims of education in a liberal democratic society serves to create individuals who are well-rounded, productive citizens. According to Noddings (2006), a good education will produce students that, “develop as persons, be thoughtful citizens, competent parents, faithful friends, capable workers, generous neighbors and lifelong learners” (p.339). The intent of this study is to determine if direct instruction of vocabulary using research based, high yield strategies raises student reading levels.
Participants

The students involved in this study are all enrolled in remedial reading classes in the ninth through twelfth grade and have failed the previous year’s Reading portion of the Texas Assessment of Knowledge and Skills (TAKS) Test. All of the students who fit these criteria will be invited to participate in this study. All of the participants are minority students with two students classified as ESL students who speak Spanish and one Jamaican student whose first language is Patois. There is a total of 18 students participating in the study. There are two females, one African American and one Puerto Rican. The remaining male student racial makeup is two Mexican males and fourteen African American males. Sixteen of the students receive free/reduced lunch. Eight of the eighteen students in the class have been retained at least one year, so the students’ ages range from fourteen to nineteen years old. There are nine freshmen, five tenth graders, two juniors, and two seniors. The students reading levels include one reading above grade level, one reading on grade level, one reading nine grades below level, one reading six grades below grade level, four reading three grade levels below level, four reading two grade levels below their present grade level, and six students reading one grade level below present grade level.

Procedures

For the purposes of the study, several best practice, research based, direct instruction vocabulary strategies were introduced daily for twelve weeks. The rationale for using the strategies is based on research findings that indicate robust vocabulary instruction is “quite effective not only for learning the meaning of words but also for affecting reading comprehension” (Beck, McKeown, & Kucan, 2002, p. 2). Robust instruction, according to Beck, et. al (2002), “offers rich information about words and their uses, provides frequent and varied opportunities for students to think about and use words, and enhances students’ language comprehension and production” (p. 2). With this
information in mind, direct instruction of vocabulary was facilitated through the following strategies: word ladders (word building game), multiple meaning squares (definitions and drawings) (Appendix G), word maps (visual organizer), categories/lists (oral and written), word storms (list topic words by syllable using timed brainstorming), concept maps (Appendix H), vocabulary word trees (Appendix F), semantic feature analysis (Appendix I), and Frayer models (an adaptation of the concept map), as well as explicit instruction of antonyms, synonyms, idioms, and homophones. The activities were used randomly, that is, there was no set strategy used on certain days at certain times, and students were given directions to each activity. (See Table 1). Students were allowed to use dictionary.com, dictionaries and thesauruses for all activities except the Word Storm and Word Ladders. The only criteria used for selection of instructional strategies was that, with the exception of word ladders, no strategy would be used more than once per week. Upon completion of the activity, student work is posted on the walls of the classroom and referred to by the teacher during review and new instruction.

**Data Collection**

In an effort to determine if high yield instructional strategies improve student reading levels, student data will be gathered by (a) Surveys (b) Scholastic Reading Inventory (c) Pre/Post Vocabulary Tests, and (d) Teacher Observations. To determine if the instructional strategies worked, data were triangulated among quantitative and qualitative sources. According to Schensul, LeCompte, Weeks & Singer (1999), “both quantitative and qualitative data provide the cross checks (triangulation) that ensure that the numerical data are a valid and effective representation of the phenomenon being measured” (p. 5). In an effort to ensure reliability and validity, the data obtained through surveys, interviews, focus groups, etc. must be analyzed. This analysis confirms or contradicts the researcher’s questions.
**Survey.** A Lickert survey (Appendix A) will be used to obtain demographic information about the students and their perception of their reading ability, early experiences of learning to read, time, amount and types of reading performed on a daily basis at home, school, and, if applicable, work. Surveys will be administered to all participants. The survey will be given to students during their class period and completed surveys will be returned to the teacher. Only survey questions that yield information pertaining to students’ reading habits and self-perception will be used for the purpose of this study.

**Scholastic Reading Inventory.** The Scholastic Reading Inventory (SRI) is “a reading comprehension test that assesses students' reading levels, tracks students' reading growth over time, and helps guide instruction according to students' needs,” using Lexile scores as a measure (Scholastic, 2009). This test will be administered twice, at the beginning and end of the study. Students will take this test on the computer during Reading class and the test is not timed. It consists of text excerpts with questions that assess vocabulary and comprehension. When the student is finished with the inventory, a report is generated with the student’s reading level and a ranking. The rankings are based on the students’ grade level. For example, a 700 Lexile for a ninth grader would be ranked below level, but for an eleventh grader would be ranked far below level.

**Pre/Post Vocabulary Test.** The pre and post vocabulary test (Appendix B) is a fifty multiple choice question teacher developed test comprised of words from readings in the Read 180 student workbook. Students took the vocabulary pre-test at the onset of the research study. Students were not timed, and they were not allowed to use dictionaries. The teacher only pronounced the word if a student couldn’t decode the word. The posttest was administered twelve weeks later using the same procedures as the pretest. The test was graded and an item analysis performed to determine any obstacles and strengths displayed through student results.
**Materials**

The students will use their student workbooks (Scholastic rBooks) and various worksheets, construction paper, colored paper, colored pencils, index cards, and markers as needed to complete the slated vocabulary activity. The selected vocabulary words and workshop texts were selected from the student workbook. (See Table 2).

Table 1

*Instructional Strategy Schedule*

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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</thead>
<tbody>
<tr>
<td><strong>Week 2</strong></td>
<td>Word Ladders Concept Map</td>
<td>Word Ladders Word Maps</td>
<td>Word Ladders Word Storm</td>
<td>Word Ladders Prefix/Suffix Web</td>
<td>Word Ladders Semantic Map</td>
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<tr>
<td><strong>Week 3</strong></td>
<td>Word Ladders Categories</td>
<td>Word Ladders Concept Map</td>
<td>Word Ladders Word Map</td>
<td>Word Ladders Antonyms/Synonyms</td>
<td>Word Ladders Oral Drill</td>
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<tr>
<td><strong>Week 7</strong></td>
<td>Word Ladders Word Map</td>
<td>Word Ladders Concept Map</td>
<td>Word Ladders Prefix/Suffix Web</td>
<td>Word Ladders Word Storm</td>
<td>Word Ladders Concept Map</td>
</tr>
<tr>
<td><strong>Week 9</strong></td>
<td>Word Ladders Homophones</td>
<td>Word Ladders Frayer Model</td>
<td>Word Ladders Word Maps</td>
<td>Word Ladders Concept Map</td>
<td>Word Ladders Concept Map</td>
</tr>
</tbody>
</table>
Table 2

Weekly Vocabulary Focus and Accompanying Text

<table>
<thead>
<tr>
<th>Week</th>
<th>Vocabulary Words</th>
<th>Accompanying Text</th>
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<tbody>
<tr>
<td>1</td>
<td>Pre-test Given</td>
<td>-</td>
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<tr>
<td>2</td>
<td>calculate, compensate, moderate, priority, strategy,</td>
<td>Caught in Gambling’s Grip Magazine</td>
</tr>
<tr>
<td></td>
<td>management, credible, compulsive, impulse, ignorance</td>
<td>Article</td>
</tr>
<tr>
<td>3</td>
<td>demolish, devastating, elimination, emerge, evade,</td>
<td>Amigo Brother by Piri Thomas</td>
</tr>
<tr>
<td></td>
<td>mingle, profession, disadvantage, clarity, approval</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>complex, conscious, data, specific, sensation,</td>
<td>Life with Half a Brain by Maria Chang</td>
</tr>
<tr>
<td></td>
<td>essential, diminish, vital, dominant</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>accuse, consequence, evaluate, judicial, potential,</td>
<td>Leaving Crime Behind by Anthony Carroway</td>
</tr>
<tr>
<td></td>
<td>crucial, encourage, counselor, transition, statistic</td>
<td></td>
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<tr>
<td>6</td>
<td>contagious, epidemic, impact, internal, resistance,</td>
<td>The Black Death Science Feature</td>
</tr>
<tr>
<td></td>
<td>feasible, expose, infect, estimate</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>ambush, complicated, hesitate, peril, ponder, site,</td>
<td>Ambush by Tim O’Brien</td>
</tr>
<tr>
<td></td>
<td>reality, certainly, inscribe, peer</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Pre-test Administered</td>
<td>-</td>
</tr>
</tbody>
</table>

Data analysis

Analysis of qualitative data is a process by which data that has been collected is organized so the researcher can make sense of what they have observed, heard, or read. The data analysis process involves the researcher sorting through the data to find similarities, relationships, and trends. Glesne (1999) states analysis involves creating “code clumps . . . [by] putting like-minded pieces together into data clumps, you create an organizational framework” (p. 36). Once the researcher has the organizational framework, they are able to then translate or communicate what the data reveals.

Survey results were tallied and percentages were calculated using a Microsoft Excel spreadsheet. An item analysis was then performed on survey responses by gender and race.
(Appendix C). Responses were used to make decisions regarding vocabulary strategies used and the interventions chosen.

Vocabulary pre-test (Appendix B) was administered at the very beginning of the research period. The fifty item multiple choice tests were scored and data recorded. The tests were hand scored by the teacher with each item being worth two points each. The wrong items were subtracted from the total possible score of 100 and student’s raw test scores were recorded in a spreadsheet.

The Scholastic Reading Inventory (SRI) was administered in the first week of the research and then again after the vocabulary posttest and instructional strategies were completed. Student initial and final SRI raw scores were recorded and compared. (See Table 4). The SRI test “is high interest, low readability level tests developed exclusively for at-risk students in middle and high school” (Scholastic, 2009). The test is taken on the computer and scores are delivered electronically to the teacher in a report that gives the student’s “Lexile, grade-level measure, and norm-referenced data” (Scholastic, 2009).

**Findings**

An analysis of the pre-test, post-test scores, SRI tests, and survey revealed that exposure to high yield vocabulary strategies raised reading levels in 72% of the students that participated in the research study.

**Vocabulary Pre- and Posttest**

Results of the first administration revealed that only 50% of the students participating in the study passed the vocabulary pretest. During weeks 2-12 of the study, participants were taught the target words through direct instruction and various high yield vocabulary strategies. Upon completing all of the target vocabulary and texts, the posttest was administered to all participants.
Results of the posttest revealed that 88% of the students tested scored a passing score of 70% or above. (See Figure 1). The participants showed progress through demonstrated gains made from pretest to posttest. The mean average percent for all participants increased from 63% on the pretest to 79% on the posttest.

![Vocabulary Pre-Posttest](image)

**Figure 1.** Mean averages of vocabulary pre and post test.

**Scholastic Reading Inventory**

Students made gains in reading levels as well. Students scores for the initial and final SRI administration are reported in lexiles. (See Appendix E). These lexiles represent performance standards for each grade level. (See Appendix D). Of the eighteen participants in the study, 72% made increases in their reading lexile. 77% of 9th grade participants (7 students) made gains in reading lexiles and 22% (2 students) made decreases. 80% of tenth grade participants (4 students) made gains and 20% (1 student) decreased. The eleventh and twelfth grade students each had 50% to make gains and 50% to lose lexiles. (See Figure 2). Since the study took place over a twelve week period, the student gains of twenty plus lexiles are better than average.
Average student growth typically measures between 75 and 100 lexiles per year. In terms of initial and final grade means, each grade level showed growth from initial to final administration.

The ninth and tenth grade students showed the most growth on their initial and final SRI grade means. (See Figure 3). The tenth grade students gained 69 points overall, while the ninth graders
gained 39 points overall on the SRI administrations. The eleventh grade gain was three points and twelfth grade gain was 8.5 points overall. So while individuals within the grade level group decreased in their Lexile, the grade mean revealed that students made gains between initial and final SRI administration.

**Likert Survey**

Survey data is only as effective as the questions themselves (Berg, 2007). Surveys generate information for the researcher, but only if the students answer honestly. The researcher assured students that they would not be identified in the study by name to encourage honesty in the student responses. Even with the anonymity disclaimer, only sixteen participants returned completed surveys by the specified deadline. The completed surveys were numbered and answers were compiled and an item analysis performed. Questions one through ten on the survey assessed the students’ perception of their reading ability. The data showed that 66% of students overall feel they don’t read well. When broken down by minority, 67% of Hispanic students feel they don’t read well while 86% of the African American students feel their reading ability isn’t adequate. This may be due in part to students’ past TAKS test failure. In addition to these results, the first set of questions revealed that students don’t check books out of the library and they skip words they don’t know when reading. Questions eleven through fourteen assessed the students’ perception of their teachers and teacher encouragement/assistance. 75% of students responded that teachers help them when they don’t know words and 68% responded that teachers give them vocabulary lists of words to know. Questions sixteen through twenty assessed student perceptions of their ability to read school material. The student responses that dealt with volunteering to read revealed 100% of student participants stated they don’t volunteer to read. In addition, this portion of the survey revealed that 81% of them must reread material more than once to answer questions about material
read. Questions twenty-one through twenty-seven assessed students’ reading habits at home. 100% of students responded that most of what they read at home is contained on video games and/or the computer. They also revealed that they read more gaming or celebrity magazines than books. Students don’t read at home for pleasure and most of what they read on computers during social networking doesn’t contain vocabulary that is challenging or useful in core content areas.

**Teacher Observation**

All of the participants would make note of their vocabulary words when encountered in other core classes, television, movies, and radio. There are numerous examples of students telling the class about a word that they heard and they knew the meaning because of a strategy we used. One perfect example is the vocabulary word, dominant. A student told the class about knowing what a dominant autosomal gene was in Biology because we had done several high yield strategies with that word. He went on to say, “I knew that gene would be the strongest and take over the pedigree chart because dominate means very strong and powerful.” (Classroom discussion). There were other examples like this from various students during the course of our study.

In terms of participation and effort, the ninth and tenth grade students were more willing to discuss vocabulary and real life examples of the word use. In addition, they were more open to strategies that incorporating cutting, pasting, coloring, etc. than the eleventh and twelfth grade students. The older students took longer to acquiesce to the daily instructional strategy than their younger classmates did and this reluctance was reflected in the low final grade means on the SRI. Even though the teacher utilized Marzano’s strategy, recognition of effort and praise, as motivation for students, the older students still were reluctant to fully participate in activities.
Discussion

The specific research question of this project asked if exposing students to high yield vocabulary techniques raises their reading levels. Analysis of the results on the SRI indicates that many students were positively affected by the high yield vocabulary strategies. The SRI results demonstrated that the majority (72%) of the students did make gains in their reading levels.

The results of the vocabulary posttest demonstrated that students were better equipped to identify word meanings as a result of instruction involving word roots, prefixes, suffixes, syllables, categories, etc. The high yield vocabulary strategies used high utility words that the students encountered in reading and this also allowed them to retain more words than usual. Vocabulary retention is vital to reading comprehension because students with low oral vocabulary development have poor comprehension due to limited background knowledge, and inability to form mental models. As students complete the concept maps and Frayer models, they make connection to the text, the word’s meaning, and real life examples. This allows students to actually interact with the words through mental images and multiple exposures to the word’s meaning, antonyms, real life examples, and contextual usage. These interactive vocabulary experiences have implications on vocabulary instruction. Teachers must present a variety of strategies to ensure word meaning before, during, and after reading text to promote comprehension and word retention.

The results of the surveys revealed students don’t read outside of school even if reading material is readily available in the home, and parents model good reading behaviors. The majority of students’ reading material includes gaming or celebrity magazines and computer social networking sites, both of which fail to use vocabulary that students should be exposed to increase oral, reading, and writing vocabulary. According to Beck, et. al. (2002), students should know Tier two words. Tier two words, “are likely to appear frequently in a wide variety of texts and in the
written and oral language of mature language users” (p. 16). The only way students will acquire more tier two words is by reading. The survey results indicate that adolescent reading is not a priority for students with reading difficulties. Student reading is vital if students are to increase their vocabulary and improve comprehension.

Limitations

Limitations of this study included no control group, text choices, class sizes, randomization of strategies, short term of interventions, no post survey, and classroom dynamics. Since the number of students in the class is small, the researcher chose to implement strategies with all students and not risk results that couldn’t be replicated because of a small number of participants.

The randomization of strategies was to provide variety and discourage student boredom with the interventions. In hindsight, the strategies should have been scheduled in such a way that they progressed from word parts to the entire word and meaning. The amount of time strategies were implemented is considered a limitation because an entire semester would provide more time to implement specific interventions based on student need and possibly provide greater gains.

The text choices were limited to the high interest, low readability stories included in student workbooks. These stories are short in length and are read over a span of two class periods. These texts were chosen because of the time factor involved with the research deadlines. Although the text choices represented a variety of writing types and content, the students were accustomed to the text length due to use of the workbook on a daily basis.

There was no survey administered after implementation of the interventions. A post survey may have indicated a change in student perceptions of their reading ability and/or attitudes toward reading. Having the strategies at their disposal may have given the students a new sense of confidence concerning reading and a post survey would have revealed this information.
The class dynamic is considered a limitation because students are placed in small groups of six students that rotate to three different stations within the classroom. In one station the group sits in a circle with the teacher seated in close proximity. This allows the teacher to readily assist the students when reading and writing as well as redirect students when they are off task. Students participate in all class activities in this area, but they may not be as focused in other areas in independent work areas and not put forth their best effort.

**Implications for Future Research**

Future research could increase the sample size to include students without reading deficiencies, concentrate on English Language Learners to determine if direct instruction of vocabulary and exposure to high yield vocabulary strategies enable these students to retain vocabulary meaning and increase reading levels. In addition, it would be interesting to see if the selection of strategies was more succinct, and exposure for a longer period of time would yield greater increases in reading levels. Additionally, it would be interesting to conduct this study to investigate the differences between gender and age groups to determine which group would out-perform the other.

**Conclusion**

It is important to remember that each student comes with his/her own learning experiences and abilities. Vocabulary is FUNdamental was an attempt to build on these experiences and abilities by offering strategies that can be applied in any classroom with any text as support for comprehension of text with unknown or difficult vocabulary. The participants in this study came from a variety of backgrounds, but they all had one thing in common-deficiencies in their reading skills. These students struggle in the core content area classroom because of their reading deficiencies. The findings of this study indicate that vocabulary skills were developed
through direct instruction of high yield strategies. These skills later translated into reading comprehension through increased reading levels on the SRI. Data demonstrated that the instructional strategies had an impact on student achievement and reading levels.

Survey results indicate a need for teachers to help students develop an interest in reading. This can be facilitated by providing guided free reading in class and allowing students to find one or two unfamiliar words to use with a high yield vocabulary strategy. It would also be beneficial to schedule browsing days in the library or provide the librarian with student interests and allow her to come to their room with books that students would like to read. In addition, there are many books on mini-mp3 players that students are allowed to check out and listen to with their own headphones. This will generate student interest in reading which will provide students with greater exposure to new vocabulary and improved reading comprehension.

It is essential that students are equipped with the ability to discern word meaning through a variety of methods. Students with reading deficiencies must learn methods to discern unknown words if they are to be successful in core content classes. Vocabulary unlocks the code and allows students to not only understand what they read, but also retain the material they read.

In conclusion, students were able to show increased reading levels as a result of being exposed to high yield vocabulary strategies. All of the strategies were delivered through direct instruction and tailored to meet the needs of the individual student. This action research study resulted in findings that established a framework for vocabulary instruction with reading improvement students. This study has demonstrated that direct instruction of vocabulary strategies in differentiated instructional environments has positive implications for retention of vocabulary word meanings and increasing reading levels.
References


## Student Self Assessment

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<th>Statement</th>
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<th>Disagree</th>
<th>N/A</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>I feel I don’t read well.</td>
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<tr>
<td>My parents read books, magazines, or newspapers.</td>
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<tr>
<td>I feel embarrassed when I read out loud.</td>
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<tr>
<td>I like to read when I can choose my own books or magazines.</td>
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<tr>
<td>I skip words I don’t know when I read.</td>
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## Self Assessment (continued)

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<tr>
<td>I check books out of the library (school or ).</td>
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<tr>
<td>When I read to myself, I understand what I read.</td>
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<tr>
<td>I think my friends read better than me.</td>
<td></td>
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<tr>
<td>I don’t have any magazines or books at home (not textbooks).</td>
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<tr>
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## My Teachers:

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<tr>
<td>call on me to read out loud.</td>
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<tr>
<td>tell me words I don’t know when I’m reading or completing assignments.</td>
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<tr>
<td>know I don’t read well.</td>
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<tr>
<td>give me vocabulary lists and tests.</td>
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## When I read material in school:
<table>
<thead>
<tr>
<th>At home, I read:</th>
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<tbody>
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<td><strong>Often.</strong></td>
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<tr>
<td>Strongly Disagree</td>
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<tr>
<td>Seldom.</td>
</tr>
<tr>
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</tr>
<tr>
<td>Never.</td>
</tr>
<tr>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>more magazines than books.</td>
</tr>
<tr>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>on the computer or video games.</td>
</tr>
<tr>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>closed captions on television.</td>
</tr>
<tr>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>music lyrics to songs on the radio.</td>
</tr>
<tr>
<td>Strongly Disagree</td>
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<table>
<thead>
<tr>
<th>Main Idea</th>
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<td>Strongly</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Disagree</td>
<td>Disagree</td>
</tr>
<tr>
<td>Agree</td>
<td>Agree</td>
</tr>
</tbody>
</table>
Appendix B Vocabulary Pre- & Posttest

1. Abdicate
   a. help   b. release power
   c. resign  d. love

2. Peril
   a. needle  b. poison
   c. danger  d. medicine

3. Witness
   a. tell lies  b. see something happen
   c. make a report  d. drive carelessly

4. Torrent
   a. a fight  b. a long movie
   c. strong  d. flow of violent and swift actions

5. Evade
   a. to clean carpet  b. to run laps
   c. to fly  d. to avoid

6. Function
   a. purpose or rule  b. restroom facility
   c. part of speech  d. poetry stanza

7. Strategy
   a. a team  b. bully
   c. plan  d. cooperation

8. Judicial
   a. insurance  b. relating to the law
   c. person who drinks  d. referee

9. Mingle
   a. unmarried  b. song on tv
   b. sound of bells  d. to mix or combine

10. Inscribe
    a. tattoo  b. describe something
    c. to cut or write letters  d. mute onto something

11. Anguish
    a. drain cleaner  b. large wave

12. Contaminate
    a. to run away  b. to infect
    c. to pass out  d. to hold liquid

13. Oppose
    a. to disagree strongly  b. rude behavior
    c. to break  d. to take a picture

14. Urgent
    a. a military ball  b. very important
    c. forceful  d. accident

15. Ballad
    a. formal dance  b. a song or poem
    c. a mixture  d. a boton or stick

16. Disrupt
    a. to break up  b. to decide
    c. break a bone  d. use a phone

17. Gape
    a. a fruit  b. to grip tightly
    c. to open mouth wide  d. a donkey

18. Peer
    a. boat dock  b. to stalk someone
    c. party  d. look hard at something

19. Intent
    a. to blame someone  b. to skip class
    c. mean or rude  d. determined to do something

20. Wage
    a. wood  b. low bush
    c. battle  d. amount of money earned

21. Site
    a. to joke  b. a place
    c. a race  d. window

22. Promote
    a. boxer  b. dance
c. felling of misery or grief d. sweat something
c. free trial d. make public aware of

23. critic
a. a movie b. bad cold
c. container d. person who judges something

24. horrify
a. clothing b. a storm
c. game d. shock or upset

25. massive
a. German dog b. big
c. a trip d. short story

26. alter
a. to change b. coins
c. ladies top d. friendly

27. debt
a. die suddenly b. money owed
c. medicine d. pain

28. feasible
a. farm bird b. a hope or desire
c. possible d. foot swelling

29. paralyze
a. two lines b. a scorpion
c. a nurse d. unable to move one’s body less

30. pensively
a. jabbing pain b. thoughtfully
c. ridiculous d. fast

31. sensation
a. lots of action b. bad act
c. cheers d. a feeling or awareness

32. ponder
a. place for fish b. facial cleanser
c. to think about carefully d. cowboy’s rope

33. emerge
a. to blend in b. to come out

34. barrage
a. metal rail b. wrestling move
c. series of actions d. shed

35. crucial
a. cross b. very important
c. leather d. a sea animal

36. structure
a. height b. hiccups
c. cheek bone d. the way something is put together

37. agitate
a. to become ill b. to bother or upset
c. score d. nose bleed

38. hesitate
a. animal’s home b. directions
c. pause d. flu

39. moderate
a. political party b. not extreme
c. speeding d. political party

40. diminish
a. acne b. to complete
c. chemical mixture d. to become smaller or less

41. unfurled
a. lace b. a flag
c. unrolled and open d. not important

42. sacred
a. religious or holy b. perfume
c. to be afraid d. important

43. potential
a. impulse b. repeating
c. ladder d. something will happen

44. behold
a. wicked person b. bee’s home
45. clarity
a. clearness   b. poor people
c. hospital   d. receptionist

d. type of paper   c. to see

d. furniture

46. commence
a. communion   b. a date
c. to begin   d. banking account

47. amid
a. old person   b. large piece of land
c. in the middle of   d. a priest

48. consequence
a. a large spring   b. result of doing something wrong
b. to be in a rush   d. alcoholic beverage

49. repellent
a. umbrella   b. sticker
c. chemical to get rid of pests   d. wax

50. scapegoat
a. a farm animal   b. medical procedure
c. type of tree   d. something made to bear the blame
Appendix C Survey Item Analysis

### Reading Ability

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</table>

1. Female, H
2. Female, B
3. Male, H
4. Male, H
5. Male, B
6. Male, B
7. Male, B
8. Male, B
9. Male, B
10. Male, B
11. Male, B
12. Male, B
13. Male, B
14. Male, B
15. Male, B
16. Male, B

#### Key:
1. Strongly Disagree with statement
2. Disagree with statement
3. Statement does not apply to me
4. Agree with statement
5. Strongly agree with statement

1. I feel I don’t read well.

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<tbody>
<tr>
<td>(1) 1,2,3</td>
<td>(2) ---</td>
<td>(3) 7</td>
<td>(4) 4,5,8,10,12,13,14,15</td>
<td>(5) 6,9,11,16</td>
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</tbody>
</table>

2. My parents read books, magazines, or newspapers.

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</tr>
</thead>
<tbody>
<tr>
<td>(1) 1,2,3,5,8,9,10,12</td>
<td>(2) 6,7,11,15,16</td>
<td>(3) ---</td>
<td>(4) 14</td>
<td>(5) 4,13</td>
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3. I feel embarrassed when I read out loud.

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</thead>
<tbody>
<tr>
<td>(1) 2,3,4,5,6,8</td>
<td>(2) 1,10,14</td>
<td>(3) ---</td>
<td>(4) 9,11,12,15,16</td>
<td>(5) 7</td>
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4. I like to read when I can choose my own books or magazines.

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<tbody>
<tr>
<td>(1) ---</td>
<td>(2) ---</td>
<td>(3) ---</td>
<td>(4) 2,3,5,6,16</td>
<td>(5) 1,4,7,8,9,10,11,12,13,14,15</td>
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</table>

5. I skip words I don’t know when I read.

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<tr>
<td>(1) ---</td>
<td>(2) 1,2,6,7</td>
<td>(3) ---</td>
<td>(4) 3,4,5,10,11,13,14,16</td>
<td>(5) 8,9,12,15</td>
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</table>

6. I check books out of the library (school or public).

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<td>(2) 5,6,8,9,10,11,13,15</td>
<td>(3) ---</td>
<td>(4) ---</td>
<td>(5) 1,2</td>
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7. When I read to myself, I understand what I read.

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<tr>
<td>(1) 1,2,10,14,16</td>
<td>(2) 4,7,11,15</td>
<td>(3) 5,13</td>
<td>(4) 3,8,12</td>
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8. I think my friends read better than me.

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<td>(1) 3</td>
<td>(2) 1,2,15,16</td>
<td>(3) 6,11</td>
<td>(4) 4,5,7,8,10,12,13</td>
<td>(5) 9,14</td>
<td></td>
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</table>
9. I don’t have any magazines or books at home (not textbooks).
   (1) --- | (2) 1,2, | (3) 3 | (4) 5,6,8,9,10,12,13,16 | (5) 4,7,11,14,15

10. I feel reading is boring.
   (1) 11,13 | (2) 4,5,6,8,9,14,15,16 | (3) --- | (4) 1,2,3,7,10 | (5) ---

**My teachers:**

11. call on me to read out loud.
   (1) --- | (2) --- | (3) --- | (4) 1,2,4,5,6,7,8,9,11,12,13,14,15,16 | (5) 9,10

12. tell me words I don’t know when I’m reading or completing assignments.
   (1) 1 | (2) 2,13 | (3) --- | (4) 3,4,6,8,11,12,15,16 | (5) 5,9,10,14

13. know I don’t read well.
   (1) --- | (2) 4,7,10,15 | (3) 9 | (4) 5,6,12,13 | (5) 3,11,14,16

14. give me vocabulary lists and tests.
   (1) --- | (2) 4,7,10,15 | (3) 9 | (4) 1,2,5,6,8,12,13 | (5) 3,11,14,16

**When I read material in school:**

15. I always know the main idea.
   (1) 6,9,13 | (2) 4,5,8,11,12,16 | (3) --- | (4) 1,2,3,10,15 | (5) 7,14

16. I always volunteer to read in class.
   (1) --- | (2) --- | (3) --- | (4) 2,3,4,5,6,7,8,10,11,13,14,15,16 | (5) 1,9,11

17. I use reading strategies or organizers to help me understand what I read.
   (1) 9,16 | (2) 2,8,15 | (3) --- | (4) 1,3,4,5,10,12 | (5) 6,11,13,14

18. have to reread the material more than once to find the answer or understand it.
   (1) 1,3,10 | (2) 2,4,6,7,16 | (3) --- | (4) 5,8,9,12,14 | (5) 11,13,15

19. I never participate in group discussions about what is read.
   (1) --- | (2) 14 | (3) --- | (4) 1,2,4,5,6,7,9,10,13 | (5) 3,8,11,12,16

20. I can answer questions about what I read without looking at the text again to reread.
   (1) 1,13,14,16 | (2) 5,6,7,8,9,10,11,12,15 | (3) 3 | (4) 2,4 | (5) ---

**At home, I read:**

   (1) --- | (2) --- | (3) --- | (4) 1-12,14 | (5) 13,15,16

22. Seldom.
23. Never.

| (1) 9 | (2) --- | (3) 11,15 | (4) 5,12,13,16 | (5) 1,2,3,4,6,7,8,10,14 |

24. more magazines than books.

| (1) --- | (2) --- | (3) 11,15 | (4) 5,12,13,16 | (5) 1,2,3,4,6,7,8,10,14 |

25. on the computer or video games.

| (1) --- | (2) --- | (3) --- | (4) 1,2,4,5,7,8,9,10,11,13,14,15,16 | (5) 3,6,12 |

26. closed captions on television.

| (1) 9,10,12,13,14,16 | (2) 1-7 | (3) 8,11,15 | (4) --- | (5) --- |

27. music lyrics to songs on the radio.

| (1) 7,15 | (2) 1,2,8,11,14,16 | (3) 3,5,9 | (4) --- | (5) 4 |
Appendix D  Performance Standards for SRI by Grade (in Lexiles)*

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<th>Proficient</th>
<th>Advanced</th>
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<td>401 and above</td>
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<td>100-229</td>
<td>300-600</td>
<td>601 and above</td>
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<td>450-699</td>
<td>700-1000</td>
<td>1001 and above</td>
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<td>500-799</td>
<td>800-1050</td>
<td>1051 and above</td>
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<td>550-849</td>
<td>850-1100</td>
<td>1101 and above</td>
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<td>8</td>
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<td>600-899</td>
<td>900-1150</td>
<td>1151 and above</td>
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<td>650-999</td>
<td>1000-1200</td>
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<td>799 and below</td>
<td>800-1049</td>
<td>1050-1300</td>
<td>1301 and above</td>
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*(Scholastic.com, 2009)
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<th>Final SRI</th>
<th>Performance Standard</th>
<th>Growth in Lexiles</th>
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<td>957</td>
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<tr>
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<td>812</td>
<td>Basic</td>
<td>65</td>
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<tr>
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<td>791</td>
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<td>650</td>
<td>Basic</td>
<td>8</td>
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<tr>
<td>Male, 9&lt;sup&gt;th&lt;/sup&gt;</td>
<td>810</td>
<td>859</td>
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<tr>
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<td>812</td>
<td>877</td>
<td>Basic</td>
<td>65</td>
</tr>
<tr>
<td>Male, 9&lt;sup&gt;th&lt;/sup&gt;</td>
<td>710</td>
<td>820</td>
<td>Basic</td>
<td>110</td>
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<tr>
<td>Male, 9&lt;sup&gt;th&lt;/sup&gt;</td>
<td>837</td>
<td>818</td>
<td>Basic</td>
<td>(-19)</td>
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<tr>
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<td>207</td>
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<td>729</td>
<td>Basic</td>
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<tr>
<td>Male, 10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>705</td>
<td>688</td>
<td>Below Basic</td>
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<td>639</td>
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</table>

* BR= Beginning Reader
Appendix F Vocabulary Tree

same
root

seen

heard

picture:

example:
epidemic (n.) an outbreak of a contagious disease affecting many people at the same time.

root:
dem, demo: "people"
Appendix G Multiple Meaning Square

- Making lots of noise
- Cheer
- Racket
- An object that you use for tennis
Appendix I Semantic Feature Analysis

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<td>box in</td>
<td>trap</td>
<td>surprise</td>
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<tr>
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<td>blend</td>
<td>tangle</td>
<td>socialize</td>
</tr>
<tr>
<td>Clarity</td>
<td>baffled (ant.)</td>
<td>transparent</td>
<td>sheer</td>
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