What Strategies and Activities Help Sixth-Grade Students Acquire Vocabulary?

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WHAT STRATEGIES AND ACTIVITIES HELP SIXTH-GRADE STUDENTS ACQUIRE VOCABULARY?

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August 2008

An Action Research Project Submitted to the Graduate Faculty of the College at Brockport, State University of New York in Fulfillment of the Requirements for the Degree of Master of Arts as a Curriculum Specialist

Department of Education and Human Development
WHAT STRATEGIES AND ACTIVITIES HELP SIXTH-GRADE STUDENTS ACQUIRE VOCABULARY?

by

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Chapter 1: Introduction

Statement of Problem

Bromley (2007) believes that there is a definite connection between vocabulary and reading comprehension. Most students who are fluent readers and writers are very articulate and confident speakers and are usually proficient in reading strategies especially contextual ones (Bromley, 2007). Students who struggle with vocabulary are students whose reading performances lag behind because they have limited lexicons and low vocabulary acquisition skills.

My own students’ struggles with reading fit this profile. At the time of this action research I was in my third year of teaching in the Rochester City School District. Last year, I looped with my students from fifth grade to sixth grade. This year, I was working with a new group of sixth grade students whose current reading levels, as measured by the Developmental Reading Assessment (DRA), averaged in the 30’s to 50’s. Since each decade of scores on the DRA scores is linked to a grade level (e.g., 10’s for first grade-70’s for seventh grade), this data indicated that the majority of my sixth grade students were not performing at a sixth grade level.

Technically, my twenty-one sixth graders should have been at a DRA level of 60W since they were in the first quarter of sixth grade. In September 2007, there were no students on grade level; seven students were one year behind; seven students were two years behind; two students were three years behind; two students were four years behind; and, three students were five or more years behind (see Appendix A). At the end of fifth
grade, sixty-four percent of my students did not achieve the minimum passing score Level 3 on the New York State English Language Arts (ELA) test (see Appendix B).

During my one-to-one conferences and guided reading sessions, I have observed that my students do not use word attack strategies, which, in my opinion, attributed to their lack of successful reading. During one session, I tried to teach a student how to identify and decode a compound word when it became clear that he hadn’t yet mastered letter sounds and could not tell the difference between short and long vowel sounds.

My students’ struggles with vocabulary relate to their limited use of skills and strategies such as not knowing how to re-read or read ahead, or to identify a base word within a word to determine its meaning while reading. My students also lack understanding of word knowledge, such as prefixes and suffixes, root words and word origins. In order to help my students develop contextual reading strategies, I needed to help them become better equipped with the skills and techniques that would help them uncover the meaning of words through identifying parts and origins of a word and using strategies such as context clues.

I realized that I faced a significant challenge. In order to help my students gain the skills and strategies to become competent and proficient readers and writers, I needed to understand what direct-instruction mini-lessons I needed to teach, what reading strategies my students needed to practice, and what types of learning activities I could have used to promote learning through my students’ learning modalities. I wanted to empower my students by giving them experiences that would help them figure out what kind of learner they were, while at the same time help them develop and strengthen literacy strategies that they could internalize and use in a variety of learning contexts. As a teacher, I needed
to understand what types of vocabulary strategies and activities would promote the acquisition of vocabulary thereby making this process easier and more manageable for my students.

**Significance of the Problem**

The ongoing analysis of reading comprehension mandated by No Child Left Behind (NCLB) Legislation has generated a significant amount of evidence demonstrating that students’ lack of vocabulary development reduces their comprehension of text (U.S. Department of Education, 2001). Students from inner-city schools consistently scored lower on test items requiring grade level vocabulary and word knowledge scores were lower than those for inference and application of content (The Nation’s Reading Report Card, 2007).

In an effort to address these areas of limited performance, the Academic Intervention Services (AIS) Department of the Rochester City School District conducted a gap analysis of student test scores and identified a body of vocabulary items consistently missed by sixth grade students since the inception of the New York English Language Arts Tests (ELA) in 2005. The analysis indicated that students were routinely unable to determine the meaning of adjectives, adverbs, and verbs both when comprehending text for written answers and when answering comprehension questions. The Office of Development and Academic at the Rochester City School District developed an AIS Summer School Curriculum (Gandy, 2007) to address vocabulary acquisition and provided teachers with detailed lesson plans including words list in the three target areas adjectives, adverbs, and verbs. The lessons were designed to increase vocabulary through use of the Cloze procedure and direct instruction. However, after
using these plans, teachers felt that additional instructional techniques would also be required. Teachers noted that the lesson plans were not effective in that they asked students to memorize the vocabulary words when, in fact, they needed to develop the vocabulary as part of their own language systems. Lindholm-Leary (2000) described vocabulary acquisition as a process distinct from basic language acquisition. She detailed that language acquisition (including gestures and other body language) is necessary for communication, but that vocabulary acquisition is an expanded, higher-level activity that gave students the ability to understand and describe ideas and emotions that are beyond their own direct experience. In principle, reading requires such ability.

**Purpose**

I believe that it is imperative that students go beyond memorization of individual vocabulary words. I wanted my students to be able to understand the multiple meanings of words, the multiple lexical expressions of a single concept, and the grammar tags that assign grammatical usage. This whole-to-part and part-to-whole examination of words provided students with tools and rules to use when encountering new vocabulary. It also provided students with a context for remembering newly acquired words and offered them a framework to discern meaning of newly encountered words.

The purpose of this study, then, was to develop and employ instructional practices that would provide students with the contextual reading strategies they needed to successfully uncover the meaning of words and acquire vocabulary. Ancillary to this goal was the need to have assessed the students' initial level of vocabulary and what reading/word attack strategies they already knew and used. I then used this information to develop instruction and activities that helped students gain additional word attack
strategies and skills, which lead to increased comprehension, increased vocabulary use in articulation, and consistent use of effective reading strategies.

Through the three-week study I explored a variety of strategies and activities to help my sixth grade students become more competent and skilled at acquiring vocabulary. Research suggests that when teachers provide students with lessons tailored to learning style, they are more successful (Willingham, 2006). Throughout the study, I utilized a broad range of strategies centered on the multiple intelligences and a rich collection of print materials to address the intelligences of my students. Research also records the cognitive benefits of second language learning in solving complex problems (Bamford & Mizokawa, 1991). A multisensory approach provides students with rich opportunities to experiencing learning through their five senses.

**Rationale**

I often wondered what a student did when he comes to a word he didn’t understand while he was reading. Did he know and use the context-clue strategy? Could he break the word into parts? Did he jump back one step and forward two to read around the word? Did he pick up a dictionary or use a sticky note to jot down a guess, or use the glossary or a thesaurus? If a student cannot draw on any of these strategies, I am afraid he will continue through the text with limited understanding, fail to assimilate new words into his vocabulary, and continue to be strategically weak in reading. This was a very obvious dilemma for students in my sixth grade dual language class who had a limited number of items in their speaking, listening, reading, and writing vocabularies. As a teacher researcher, I wanted to help them increase their vocabulary base and their skills.
My rationale for using a multisensory approach to learning vocabulary was to support students who had limited experiences, skills, abilities and schemas to hold new vocabulary. Working through a multisensory approach, and drawing on students’ multiple intelligences, supported their abilities to identify the ways in which they learn best and assist them in the acquisition of new vocabulary. Further, my rationale is grounded in the belief that if students are equipped with the word skills and strategies that help them understand vocabulary, they will be more confident in their abilities and more successful in comprehending texts, which will ultimately help them take ownership of their learning.

**Terms and Definitions**

**Cloze Reading:** A Cloze Reading activity can be used to help students construct meaning from primary source documents and evaluate their comprehension of text content. After an initial reading of the primary source (either handwritten facsimile or transcription), words are deleted from a portion of the primary source text and replaced with blanks. During a second reading, students fill in the blanks with the word they think fits the meaning of the sentence. This strategy can be used with or without a word bank.

**Comprehension:** Understanding: listening comprehension refers to spoken language, reading comprehension refers to written language.

**Comprehension Strategies:** The use of metacognitive strategies that help students “think about their thinking” before, during, and after they read.

**Multiple Intelligences:** The theory of multiple intelligences, developed by Howard Gardner, describes an array of different “intelligences” exhibited by human beings.
Gardner defines the multiple intelligences as verbal/linguistic, visual/spatial, logical/mathematical, body/kinesthetic, musical/rhythmic, and suggests that each individual manifests varying levels of these different intelligences, and thus each person has a unique “cognitive profile.”

**Reading Strategies:** A set of steps that good readers use to make sense of the text. Comprehension instruction helps students become purposeful active readers who are in control of their own reading comprehension.

**The No Child Left Behind Act** of 2001 (NCLB) reauthorized the Elementary and Secondary Education Act (ESEA)—the main federal law affecting education from kindergarten through high school. NCLB was signed into law on January 8th, 2002. NCLB is built on four principles: accountability for results, more choices for parents, greater local control and flexibility, and an emphasis on doing what works based on scientific research. (www.ED.gov).

**Word Attack:** An aspect of reading instruction that includes intentional strategies for learning to decode, sight read, and recognize written words.
Summary

My focus in this three-week action research project was three fold: 1.) help my sixth grade students gain an understanding of their multiple intelligences; 2.) help them develop and use grade-level vocabulary presented in the Houghton Mifflin Reading program; and 3.) assist them in acquiring the skills and abilities necessary to uncover the meaning of words through strategies such as identifying word parts and the origins of a word.
Chapter 2: Literature Review

Through my review of the literature I learned there are many ways to help students learn and successfully use strategies to identify a word, learn a word, and use the word so that it becomes a permanent part of their lexicons, but perhaps the most important conclusion I have come to recognize is that instruction of vocabulary has to be a constant ritual in all content areas that are being taught so that there is consistent opportunities to practice strategies. Vocabulary development is important to attaining comprehension and sustaining fluency while reading (Bromley 2007). Walczyk and Griffith-Ross (2007) state that word fluency and comprehension go hand-in-hand. When children can read words fluently and accurately they are providing for themselves a wider vocabulary, which leads to accurate comprehension. Conversely, students with poor word fluency struggle with comprehension because it slows their reading rate and they are less focused on comprehension.

In this chapter, I present concepts related to types of vocabulary, the role of the teacher, assessment, instruction, the multisensory approach, and learning styles and multiple intelligences.

Types of Vocabulary

Graves (2006) classifies words students can understand when people use them as receptive, and words they can use themselves as productive. He also states that acquired vocabulary can be further defined as oral or written. Thus, according to Graves, each of us have four vocabularies, receptive-oral, words we understand when we hear them; receptive-written, words we can read; productive-oral, words we use in our speech; and productive-written, words we use in our writing. Any one of these vocabulary types can
be more developed than the other, depending on our experiences. For example, children entering school often have a larger oral vocabulary than reading vocabulary because of their limited experiences with reading (Graves, 2006). As Neumann (2006) highlights, children younger than two years of age have a comparatively larger oral vocabulary since they pick up words by listening to conversations in their environment rather than by using visual cues. Also, many parents at this age take opportunities to point to objects and teach their child the word orally.

The Role of the Teacher

Blair, Rupley and Nichols (2007, p.432) cite Duffy-Hester’s (1999) words, “I am convinced that the teacher is more important and has greater impact than any single, fixed reading program, method or approach.” to convey how important teacher preparation and knowledge of instruction is when trying to answer their question: What teaching strategies must teachers of reading perform and how are these strategies effectively applied on teaching children to read?

To begin, the researchers listed the teacher qualities defined by The International Reading Association (IRA), which explains all of what a reading teacher should know to teach students and how it should be done. For example, a teacher should thoroughly know how to assess weaknesses and strengths, understand the development of the reading process, have different strategies, approaches, and methods to teach reading, assesses continually and change instruction as needed, and use flexible grouping to meet individual needs (Blair, Rupley, & Nichols, 2007). The researchers state that frequent assessments do not increase a child’s ability to read, but that when the information gained through the assessment is taken into consideration for instruction does. Interactive
relationships between the teacher and student will allow for direct instruction and continual assessing. Blair, Rupley and Nichols (2007) refer to the opportunity to learn as the idea that skills need to be taught in order to be assessed. They state, “Teachers who specify reading behaviors to be achieved prior to teaching and who teach content relevant to these outcomes often have students who achieve at a higher reading level than teachers who do not.” (p. 435).

Blair, Rupley and Nichols define Attention to Learning Task as what teachers should consider in every assignment they give a student. Attention to Learning Task involves determining whether each student will be engaged in all activities assigned. The answer is no, because there will be times when some of the activities will not suit all students. To help students get the most out of instruction, teachers need to plan for what appeals to the students. According to Blair, Rupley and Nichols, “Simply requiring that all students complete similar tasks does not ensure maximum attention, because students approach assorted learning tasks with varying interest, capabilities, and understanding” (p. 436).

**Assessing Students’ Understanding**

Before the strategies and lessons are developed, there needs to be an assessment to identify where students are in their understanding of words. Graves (2006, p. 10), drawing on Beck, McKeon, and Kucan (2002), lists five levels teachers need to consider when assessing a student’s understanding:

- No knowledge
- General sense, such as knowing mendacious has negative connotation
- Narrow, context-bound knowledge, such as knowing that a radiant bride is a beautifully smiling happy one, but unable to describe an individual in a different context as radiant
Having knowledge of a word but not being to recall it readily enough to apply it in appropriate situations

Rich, decontextualized knowledge of a word's meaning, its relationship to other words, and its extension to metaphorical uses, such as understanding what someone is doing when they are devouring a book

Knowing a student’s level of understanding is helpful information for teachers as they can tailor instruction to help move the student to the next level without it.

**Vocabulary Instruction**

Bromley (2007), drawing on Basurto (2004), posits that traditionally vocabulary was taught through the use of word lists, memorization, discussions, along with tools like dictionaries, books, and quizzes, techniques that pay no heed to what researchers say about vocabulary acquisition. Bromley states that most teachers continue to teach vocabulary through traditional methods. To her, learning vocabulary can encompass these methods but the process should come after a discussion of the word or words. A discussion can be centered on a word’s meaning or many meanings, their origin, and their usage. Students need to understand word parts as they provide clues into the meaning of the words (Bromley, 2007).

Graves (2006) offers an arrangement of instructional ideas to teach vocabulary through reading strategies that all students should know and be able to execute. He provides multiple tools that students can use to unlock the meaning of words. His *Four Step Vocabulary Program* can be used with students entering school, to English Language Learners, to the more advanced students who are ready to be challenged. The first part of the program is to *Provide Rich and Varied Language Experiences* includes immersing students in opportunities to learn new words, for example, reading, writing, speaking, and listening. The second part of the program, *Teaching Individual Words*
includes teaching students definitions and making sure students see the words repeatedly in context. The third part of the program, *Teaching Word-Learning Strategies*, includes teaching students strategies to learn words. The most recommended strategy is the use of context-clues. Graves cited numerous researchers (e.g., Baumann, Edwards, Boland, Olejnik & Kame’enui, 2003; Baumann et al., 2002; Blachowicz & Zabroske, 1990; Buikema & Graves, 1993) who identify ways to accomplish this strategy and state that teaching students word parts is a way for them to unlock the meaning of a word they may not know. The teaching of prefixes, suffixes, and roots of words is also seen as beneficial. The fourth part, *Fostering Word Consciousness*, includes teaching students to be aware of words and instilling in students the desire to keep learning about them.

**Vocabulary Techniques**

Bromley (2007) suggests one strategy to help students learn new vocabulary is to give them a passage containing common words such as good, nice, said, and happy and then invite them to work with a partner to find substitutes using a thesauruses and dictionary. The students can then rewrite the passage using the synonyms they have found, replacing “the boring ordinary text with a more interesting and exciting appeal” (Bromley, 2007 p. 529).

Bromley also mentions teaching students the skill of prefixes and suffixes because learning one suffix can unlock the meaning to many words. For example, “Knowing that the root *aud* means *to hear* can help students understand the meaning of *audience, auditorium, and audible*” (p. 529). Bromley gives a list of non-traditional instructional ways to teach vocabulary, such as through a read-aloud, where the teacher can stop to discuss the meaning of a word that may be new to students, even calling upon a student to
employ a pre-taught strategy to figure out the word. Even after words have been taught teachers need to allow students to see the same words in different contexts (Harmon & Hedrick, 2005).

Oral games are a way to experiment with sound in decoding a word; using a picture or a phrase to define a word is another way to mentally capture a word’s meaning (Bromley, 2007). To effectively teach vocabulary skills and strategies, teachers need to employ a variety of methods as well as design meaningful instruction based on how a student learns best.

**Multisensory Approach**

D’Alesio, Scalia and Zabel (2007) conducted an action research study to improve students’ vocabulary through the use of multisensory instruction and activities and exercises such as Brain Gym®. Brain Gym® is a program of physical movements that enhance learning and performance in all areas. Brain Gym® includes twenty-six easy and enjoyable targeted activities that integrate body and mind to bring about rapid and often dramatic improvements in; concentration, memory, reading, writing, organizing, listening, physical coordination and more (www.braingym.org). The study involved seventy-three students ranging from the second through seventh grade. In the study, teachers used three interventions: color, music, and movement. The teachers noted that the use of visual aides such as colored clip art images and graphic organizers could help students’ access emotional memory pathways in the brain and enabled them to remember information. Music can help students retain information long term through the limbic brain pathway. The teachers cited Hardy (1994) to highlight that classical music was the best music to play during instruction. Movement was another element researched and the
teachers found that music with movement increased circulation. Students were continually taught and assessed using Brain Gym® and were required to reflect on how they used or didn’t use certain strategies from Brian Gym®. The teachers concluded that students increased their vocabulary acquisition using Brain Gym®. In the end the teachers found that using a multisensory approach in conjunction with direct instruction improved vocabulary acquisition.

Learning Styles and Multiple Intelligences

Researchers believe that the ways in which students learn process and retain knowledge is connected to their own individual style of learning and to their multiple intelligences (Gardner, 2000). Not all students learn the same, and so various styles and intelligences should be considered as teachers design curriculum and pedagogical choices (Manner, 2001).

Learning styles are defined as auditory, visual and tactile and the many multiple intelligences are defined as verbal-linguistic, which is a student who enjoys reading, writing, and speaking publicly. This student can be seen speaking in a debate, writing essays and poems. A visual-spatial student is a student who uses manipulative and is helped by visuals through the use of graphic organizers and illustrations. This student can be seen creating posters and making models. A logical-mathematical student learns through the use of computers, rulers and graphic organizers. This student can be seen demonstrating a thought process throughout lines and patterns. A bodily-kinesthetic student learns through the use physical movement and they may have a difficult time sitting still so participating in plays, dancing, and designing props would be the optimal way of learning for them. A musical-rhythmic student learns through the use of musical
instruments and audiocassettes. They can be seen creating a musical and writing songs. They will hum while working and can remember lyrics to a song. An intrapersonal student learns best when alone and in a quiet space with opportunities to write for self reflection or journaling. They will thrive when allowed to write autobiographies and investigate their curiosities. Interpersonal students learn by having opportunities to think-pair share, complete questionnaires, and compete on teams. They can be seen working on a team often making lists for a group project. The naturalistic student learns best when using natural items such as rocks and leaves, and other outside objects. They can be seen creating dioramas and observing and recording environmental situations (Multiple Approaches to Assessment, 1999).

In his book, *The Disciplined Mind*, Gardner (2000) states, "I contend that educators can reach many more students, and affect them much more deeply, by activating the multiple intelligences of their students" (p. 21). In her article, Manner (2001) provided a checklist for teachers to consider when preparing learning activities that foster using the multiple intelligences. She mentions providing experiences that are cultural, scientific, creative, and field-based. She also says that within those experiences students should be analyzing, exploring, and problem solving. Each student embodies variations of learning styles and intelligences, it is up to the teacher, then, to assess her students styles and intelligences and create opportunities for students to draw upon them (Gardner, 2000; Manner, 2001).
Chapter Three: Methods

In this chapter, I present a description of how the study was conducted relative to the goals and objectives. This chapter also includes information regarding the participants, the procedures of the study, the pre and post assessments and a detailed schedule outlining the mini-lessons taught and activities students completed during the course of the three weeks.

Goals and Objectives

I designed the methods described below to meet the study’s goal of teaching my sixth grade students word knowledge by accessing their strongest learning modalities. The study’s main objective was to teach high-sixth-grade level vocabulary to students who are reading well below grade level. Because students are regularly asked to access grade-level text in their core subject textbooks, they need to have, and use, skills and practices that they know are successful for them. In addition, I designed the study to have students identify their own strengths as they used their preferences in learning while finding, using, and remembering the meanings of a target vocabulary set.

Participants and Context

The study took place in my sixth grade dual language classroom. There were three African American and nineteen Latino students, who ranged in age from eleven to twelve at the beginning of the 2007 school year. The nineteen-month range in ages included students turning eleven years old in September to students already twelve years, eight months old in September, with the majority of the students clustering at eleven years, nine months old.
Of the twenty-one students participating, seven are reading at a fifth grade level, seven are reading at a fourth grade level, three are reading at a third grade level, and four Spanish dominate students are reading at between a first and second grade level. Most of the students have been in the Dual Language program since Pre-K and have traveled together in a cohort through the grades with the exception of two students who are from another school or are newly arrived from Puerto Rico. Two students have been in the program since Pre-K; nine students have been in program since first grade; one student has been in program since second grade; two students have been in program since fourth grade; two students have been in program since fifth grade; two students entered the program in sixth grade, two are from Puerto Rico and one from Connecticut.

I taught the class along with another certified teacher. I taught in English and my teaching partner, who is a certified as a teacher of English to Speakers of Other Languages (ESOL), taught in Spanish in order to provide support services to the English Language Learners (ELL). Our school utilizes a “balanced program” or "50/50" for the Two-Way Dual Language Program (TWB). A TWB program is defined as a program in which the amount of instructional time is equal in the two languages at all grade levels across all core subject areas of language arts, mathematics, science and social studies, which are taught in both target languages. At the outset of the study, our classroom included equal numbers of English speakers and Limited English Proficient (LEP) students. Our school’s programming meets the criteria necessary for all successful TWB programs, including four to six years of bilingual instruction, provision that all students receive the same core academic curriculum, quality instruction in both languages,
positive interactions among students facilitated by cooperative learning, and qualified personnel and home-school collaboration (Lindholm, 1990).

Six of the students in the study were receiving English for Speakers of Other Languages (ESOL) services. Three of the students were at the beginning level, two were considered intermediate, and one of the students was considered advanced. Three students had been phased-out of the ESOL program. Only two of twenty-one students did not have an academic intervention plan in either math or English Language Arts (ELA). An academic intervention plan is a plan of instruction designed by the teacher to meet the academic goals of a student lacking in a particular area. The remaining seventeen students had an academic intervention plan in both math and ELA. Four of the twenty-one students were retained prior to sixth grade. With the exception of two students, all students received a free or reduced lunch. Sixteen of the twenty-one students spoke Spanish at home the remaining five students spoke English at home. Five students lived with both of their biological parents; seven lived with two adults (which may consist of a biological and step-parent); nine lived in a single-parent home consisting of only the mother; one lived with his grandmother (see Table 1).

<table>
<thead>
<tr>
<th>Total students</th>
<th>ESOL</th>
<th>AIS</th>
<th>Spanish speaking</th>
<th>Living with biological parents</th>
<th>With single parent</th>
<th>Other two adult family</th>
<th>Retained prior year</th>
<th>Receive free lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>6</td>
<td>19</td>
<td>16</td>
<td>5</td>
<td>9</td>
<td>7</td>
<td>4</td>
<td>19</td>
</tr>
</tbody>
</table>
Data Collection and Data Analysis

Pre Assessments

On the first day of the study, I asked students to complete a Multiple Intelligence Survey (see Appendix E) consisting of true and false questions related to how they preferred to perform certain activities. Each question had assigned points and when added together the results indicated which multiple intelligence students were strongest in.

Students were then given a copy of all the multiple intelligences and a class discussion took place explaining the intelligences and what it meant for them. This discussion made it easier for students to understand why I might ask them to perform certain activities.

Students were also given a word list of thirty words from the first unit in the Houghton Mifflin reading program. (see Appendix F) These vocabulary items chosen were all words which would occur in the reading selections which all students would encounter in full group instruction and that they would need to know to complete the unit assessments.

Fifteen of the words were full or partial cognates of Spanish words. These cognates were included in the assessments to see if Spanish speaking students had the language transfer skills to recognize the English vocabulary item. Also in the list of items were words with affixes, some with prefixes, some with suffixes, and some with both.

I asked the students to label each word with a letter. (see Appendix F) The letters were K for “I know this word and therefore I can define it and use it in a sentence”, H for “I have heard or seen this word before but I am not sure of its meaning”, and N for “I have never seen or heard this word before and so I cannot define it or use it in a sentence.”
Based on these categorizations, students each had their own individualized pre-tests to take. The first page consisted of “fill in the blank” items, matching the word with the definition. These words were the words students marked K, meaning they knew the definitions. The second page consisted of words students marked H, meaning they had heard or seen the word before but weren’t sure of the meaning. I then asked students to sort words into categories such as words referring to people, things, places; words describing the way a person can feel or be; words that tell what someone does or did; and words describing sounds or actions. The third page of the pre-tests contained words that were new to them (see Appendix G). For each word, students had to circle the idea they thought applied to the word. Each part of the test meant something different in revealing to me what students knew about word knowledge. For example, the results of the fill in the blank test told me if students could accurately tell if they know the words. The results from the second and third pages told me if students had enough knowledge regarding nouns, adjectives, and verbs, suffixes and prefixes to be able to make an educated guess about the meaning of the words. The results of the pre-tests gave me an idea of what words students needed help with, and it helped me decide which mini lessons were critical and what center activities would foster learning and practice with using the different multiple intelligences.

Post Assessments

At the end of the study, I assessed students to see if they had mastered any of the words that proved difficult and to see evidence of the use of word-solving skills they used to decode them. The post assessment was very similar to the pre assessment. It consisted of two documents. The first was a repeat of categorizing the words by labeling each word
with a **K** meaning "I know the word", **H** meaning "I have heard and seen this word but I am not sure what it means", and **N** meaning "I have never seen or heard this word before". The second document consisted of matching the word to the definition (see Appendix H).

I also asked students to complete a final reflection where they responded to specific questions:

- What words do you think you really learned?
- What words do you still struggle with?
- What did you learn about getting to know a word that you weren’t aware of before?
- What center activities were most helpful, most fun, and what were the ones you didn’t care for?
- What vocabulary technique do you think you will continue to use as a way of learning and studying new vocabulary?

**Data Analysis**

Throughout the study, data analysis was ongoing and recursive, and varied by assessment. For example, after each center activity, students wrote a fifteen minute reflection on their work in the center—listing what they learned and detailing how the activity may or may not have helped their learning. Additionally, I used behavior logs to record anecdotal notes on choices students made, conversations, and behaviors. Analysis for this portion of the data involved a process of reading and reading reflections and behavior logs, looking for emerging patterns and themes across student responses and my anecdotal notes.
All student work was collected and evaluated, checked for accuracy in vocabulary use and for other information that could alter instruction and center activities. I tabulated the results for each pre and post test as they were completed. This portion of the analysis involved finding the mean, mode and median for each test as well as observations for patterns across student responses. Looking closely at five individual students allowed me the opportunity to triangulate the various assessment pieces to reveal a more complete picture of the students’ abilities related to the multiple intelligences and vocabulary acquisition skills.

Procedures of Study

Through this research, I came to realize that encouraging and supporting students to develop their way of learning a concept will serve them better than me presenting it my way. To integrate the multiple intelligences into my study, I used the Project Media Ideas Chart (see Appendix C) presented by Lazear (2001), which explains what each learning center should offer per the multiple intelligence as well as what types of project ideas would accommodate that particular intelligence. I will also use the Student Behavior Log (see Appendix D) to record my observations of student behaviors through the study.

The skill block lessons I used were those created by the Rochester City School District’s Office of School Development and Academics based on the 2005 ELA test results showing students’ weakness and areas of needed improvement. The lessons were first used in the summer 2006 Academic Intervention Service (AIS) summer school program. Although, the District’s materials provided a complete summer school curriculum plan, I used only parts of the curriculum related to instructional techniques, words and assessments for this study. I supplemented the District’s materials with the
word lists and word games from the Houghton Mifflin Reading Series (2007), instructional materials. And I designed the pre and post tests.

The study took place over three weeks for ninety minutes a day. Following the recommendations of the Office of School Development and Academics (2006), I used direct and explicit instruction word skill mini lessons during Reader’s Workshop. They were short, engaging activities, which were paired with whole group and individual center activities focused on the multiple intelligences where students had an opportunity to apply the skill learned. The word solving skills as noted in the curriculum developed by the Rochester City School District Office of School Development and Academics consisted of:

- Building a sight vocabulary
- Using context to figure out new words and their meaning
- Using letter sound relationship (individual letters, letter clusters, onset/rime, syllables)
- Recognizing and using prefixes
- Recognizing and using suffixes
- Recognizing and using inflection endings
- Finding known word parts
- Recognizing contractions
- Recognizing compound words
- Recognizing plurals
- Identifying and using Greek and Latin roots as clues to word meanings
- Using what you know about a word to figure out a new word
• Using letter-sound relationships to analyze a word
• Using syllables to take apart a word

After each fifteen minute mini-lesson I gave students instructions to complete a center activity using one of the three categories of words (Words I Know, Words I’ve Heard, Words I’ve Never Seen or Heard). At times, I asked them to complete activities of their choice using a category of words of their choice. Depending on the activity, students had about forty-five minutes to complete the center activity. Students worked in pairs, triads, or small groups during center activities and the teachers circulated through the centers asking students to demonstrate their progress in completing the center activities. At the end of center work times students reinforced their learning using a variety of recording devices (see Appendix J).

During each center activity, I used a behavior log (see Appendix D) to record anecdotal notes on choices students made, conversations, and behaviors. After each center activity, students wrote a fifteen minute reflection on what center they worked on, what they learned, how it may or may not have helped their learning. (see Appendix I) I collected all student work and evaluated student progress, checking for accuracy and any other information that I could use to alter instruction and center activities.

After students had completed the daily center and their reflection sheets, the class reconvened for closure activities that included review of the concepts in the mini-lesson and opportunities for the students to demonstrate learning. At times, some of the activities required a group sharing that modeled Author’s Chair. At other times, students modeled for their classmates the kinesthetic learning devices they had learned. For example, they demonstrated the steps they danced to help them remember a word or the
way they sang or rapped the word. As each presentation was made students shared the observations they had made on their reflection sheets. Table 4 details the mini-lessons and activities used in the study.

Table 4: Implementation Calendar

<table>
<thead>
<tr>
<th>Day</th>
<th>Mini-lesson</th>
<th>Activity</th>
<th>Writing/Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>Categorizing Word List Explain Quiz</td>
<td>Multiple Intelligence Survey Inter</td>
<td>No Reflection</td>
</tr>
<tr>
<td>Day 2</td>
<td>Explain and take tests Individualized Pre-tests (3 pages)</td>
<td>Make Project Folder WG VS</td>
<td>No Reflection</td>
</tr>
<tr>
<td>Day 3</td>
<td>Context Clues mini lesson What is it? How do we use it? Benefits?</td>
<td>Listen to Hatchet, follow along in book, locating with a sticky note vocabulary words WG VL MR</td>
<td>Class discussion on what are the benefits of listening to a story while you follow along in the text</td>
</tr>
<tr>
<td>Day 4</td>
<td>Review Context Clue lesson Explain and model use Context Clues graphic organizer</td>
<td>Go back to story locate study word, copy part of the sentence that serves as a context clue, write a definition I VL Intra</td>
<td>Written Reflection Words worked on? Center Activity? How the activity helped you master the words?</td>
</tr>
<tr>
<td>Day 5</td>
<td>Syllables and Cognates</td>
<td>Echo and Find MR Use a study sheet to divide words into syllables WG VL</td>
<td>Written Reflection Words worked on? Center Activity? How the activity helped you master the words?</td>
</tr>
<tr>
<td>Day 6</td>
<td>Prefixes, Suffixes, Base words Meanings of re, dis, ly, ing, ed Locating base words and identifying their meaning</td>
<td>Echo and Find Use study sheet to locate the suffix, prefix and identify base words PT Inter VL</td>
<td>Written Reflection Words worked on? Center Activity? How the activity helped you master the words?</td>
</tr>
<tr>
<td>Day 7</td>
<td>Parts of Speech Nouns, verbs, adjectives, adverbs</td>
<td>Sort words into parts of speech categories PT Inter VL</td>
<td>Written Reflection Words worked on? Center Activity? How the activity helped you master the words?</td>
</tr>
<tr>
<td>Day</td>
<td>Mini-lesson</td>
<td>Activity</td>
<td>Writing/Discussion</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Day 8</td>
<td>Showing Adjectives&lt;br&gt;Also took place every Wednesday at the end of the day&lt;br&gt;for those interested as an extra 1/2 Gym session</td>
<td>Dance Class, students&lt;br&gt;choreograph movement&lt;br&gt;using vocabulary words.</td>
<td>Written Reflection&lt;br&gt;Words worked on?&lt;br&gt;Center Activity?&lt;br&gt;How the activity helped you master the words?</td>
</tr>
<tr>
<td>Day 9</td>
<td>Charades&lt;br&gt;Discussed how we can remember meaning by remembering behaviors and sounds associated with the words.</td>
<td>Students were given a list of the words with blanks next to each. One at a time each student acted/sounded out a preferred vocabulary word while the class jotted the actor's name next to the word they thought was acted out.</td>
<td>A class sharing of answers and Written Reflection&lt;br&gt;Words worked on?&lt;br&gt;Center Activity?&lt;br&gt;How the activity helped you master the words?</td>
</tr>
<tr>
<td>Day 10</td>
<td>Word Art Part I&lt;br&gt;Discussed how we can retain connections as we read, interact in our environment, or while watching movies.</td>
<td>Students created a 4 square page with a number in each square. They illustrated a word in each square.</td>
<td>Author's Chair discussion on how easy or difficult it was to complete and where certain ideas for their drawings came from.</td>
</tr>
<tr>
<td>Day 11</td>
<td>Word Art Part II&lt;br&gt;Gave meaning and directions for a Gallery Walk.</td>
<td>Students recorded the word they thought a certain pictured represented. wg vs Students used a reading-level trade book from the HM series. In a picture a walk, they write/predict what vocabulary would appear in the story, read, copy sentences with word, wrote a synonym.</td>
<td>Author's Chair&lt;br&gt;Written Reflection&lt;br&gt;Words worked on?&lt;br&gt;Center Activity?&lt;br&gt;How the activity helped you master the words?</td>
</tr>
<tr>
<td>Day 12</td>
<td>Trade Book Independent Reading&lt;br&gt;Trade books contained a certain number of the vocabulary words. and Worksheet created by me. Word predictions and synonyms.</td>
<td>Students recorded the vocabulary along with the scene from their book that gave them a mental image to help retain the word.</td>
<td>Written Reflection&lt;br&gt;Words worked on?&lt;br&gt;Center Activity?&lt;br&gt;How the activity helped you master the words?</td>
</tr>
<tr>
<td>Day 15</td>
<td>20 Ways to Learn Word&lt;br&gt;Explain how to use and model one activity.</td>
<td>Complete #14. Students wrote a short story using their choice of category of words (K, H, N)</td>
<td>Author's Chair, sharing stories written and the final reflection.</td>
</tr>
</tbody>
</table>
Limitations of the Study

There are a number of limitations impacting the study. Perhaps the most significant was the fact that the study took place at the end of the school year. Due to end-of-the-year activities and second language end-of-the-year testing, students had limited amounts of uninterrupted time in which to work. Because the focus of the study is so vital to students’ success in reading comprehension such a study would ideally occur at the beginning of the year so students could continue to use the strategies and center activities throughout the school year and in all subject areas.

The study focused on one vocabulary unit and lasted three weeks, the expected period of time for completing a theme unit in the Houghton Mifflin Reading Series (2007). Because each additional unit would be presented through a theme, students would essentially uncover different vocabulary in different genres and therefore a more extended study might show different results.

The small sample size—twenty-one participants— and the fact that the study was conducted in urban setting prohibits me from generalizing to other populations, even those with similar demographics. In addition, only one grade level—sixth grade—participated and specific curriculum and resources was provided by the district to be included in the study, limiting generalizations about the usefulness of the instructional strategies across grade levels.
Chapter 4: Results

This chapter details the results of the Multiple Intelligence Survey, the pre and post word list and classification assessments, and an analysis of the reflections written by students.

The purpose of this study was to develop and employ instructional practices that would provide students with the contextual reading strategies needed to successfully discover the meaning of words and acquire vocabulary. The study’s research question was: What strategies and activities help sixth grade acquire vocabulary? I conducted the study in my dual language sixth grade classroom in the inner city of a large urban city in western New York. As the researcher and English component teacher, I developed the study materials, delivered the targeted instruction, and conducted the assessments. The other teacher in the classroom was ESOL certified and taught the Spanish component of the lessons.

Multiple Intelligence Survey

In order to help students determine their learning strengths, I asked them to complete a Multiple Intelligence Survey (see Appendix E). Students described themselves in terms of their strengths and preferences for activities. The survey (Lazear, 1999) labels students as having certain types of intelligences based on their answers to the various survey questions. Below in Table 2 are the results of the Multiple Intelligence Survey.
An analysis of the pre-instructional Multiple Intelligence Survey showed that eight out of twenty-one students felt they were strong kinesthetic and rhythmic musical intelligence and seven felt they were strong in mathematical/logical intelligence. Only three students felt they were strong in verbal intelligence. These findings suggest that the students did not see themselves as students who would do well in language arts activities; indeed, the results mirrored their previous lack of achievement in language testing.
Appendices A and B). Having the information was helpful in planning instruction because it told me that prior to and during instruction I would have to spend some time showing students the correlation between the strengths they believed they had and their potential verbal intelligence. Therefore, during the three week study I made conscious and consistent efforts to show students the various patterns in vocabulary (affixes and syllabification) and related them to the patterns that are found in mathematics, dance, and music.

Analysis of the students' pre-instructional self analysis of their strengths also indicated that many students reported mixed dominance of strengths. Only six students had a single strength, unambiguous labeled (Students 4, 8, 10, 16, and 17). This information informed my instruction because it impelled me to develop mini lessons and learning activities that included more than one target skill. For example, in activities designed to teach vocabulary through dance movements, I also asked the students to follow and send verbal cues in addition to the visual cues and directions. This information also helped in planning because I was able to demonstrate to students that since they had several kinds of intelligences and since the activities were designed for them to access many different strengths, they should try new activities and keep working on activities they initially found to be difficult since one of their latent strength might be just the thing they needed to complete a task.

I shared the results of the Multiple Intelligence Survey with the individual students. This was helpful because they then were able to match the information about their strengths with their preferred learning styles. At the onset of each activity session, I
encouraged students to consider their strength as well as about their preferred learning styles when selecting activities.

During the debriefing and reflection of each activity, I encouraged students to state which strengths made the task easier and to state how they could adapt the activity to better fit their strengths. The self-analysis done by the students after the activities indicated that they discovered that they had demonstrated skills different than those they had originally identified as being their strengths.

My analysis of the post Multiple Intelligences Survey revealed that all the students, except one (Student 21), had their designations changed by adding or honing the descriptions of their strengths. This indicates that students discovered additional strengths during the activities. This finding was also confirmed through the information collected in the students’ daily reflection. For example, Student 4, who labeled his strength as bodily/kinesthetic, learned that he had other strengths and that his verbal linguistic strength balanced his bodily/kinesthetic strengths when he noted,

\[ \text{This activity (Charades) helped me master these words by making hand jesters (sic.), doing an action and or a sound for it and now whenever I think about these words I think about the movements we made and I would like to do this again because it was very fun and maybe I will learn more words this way.} \]

At the end of the study, I had a discussion with the class regarding their results on the post multiple intelligence survey and an author’s chair session for those who wanted to share their final reflections. Many students recognized that their multiple intelligences had changed. Many did come to see verbal/linguistic wasn’t an area of strength as they
had previously recognized. I have come to realize that a possible reason for this came
directly from students. Students felt that their learning opportunities were so different
during this study that they felt “turned on” or awakened and purposely focused on the
new opportunities for learning because, as one student put it, “it wasn’t what we normally
do.” Peers who agreed said through most of their schooling it was always about reading,
listening and speaking either from peer to peer, student to teacher, or peer to paper. What
was different during the study was the means in which they were encouraged to be
verbal. Many students reported that the charades activity and the gallery walk were the
most enjoyable. Students even asked, “Why couldn’t we do stuff like this earlier?” When
I thought about it, it made sense because I don’t recall my teaching involving these
multiple opportunities to learn and show learning. This reasoning also applies to the
bilingual students are who fluent in both languages. Those that were Spanish dominate
really focused on learning the vocabulary through cognates. They were able to recognize
the Spanish word within the English word as the two languages sometimes contain the
same spelling. But again, they wouldn’t see themselves as verbal /linguistic if they are
not given the opportunity to learn and work in ways that teaching through the multiple
intelligences offers.

Vocabulary Assessment Activities and Results

The results of the pre and post Vocabulary Assessments are found in Table 3
below. The table shows accuracy scores for the pre and post tests, based on 30 items and
the change from pre to post assessment. The table also indicates the distribution of the
classification as a Known, Hear, or New word that students assigned during their self
assessments.
Table 3: Assessment Results

<table>
<thead>
<tr>
<th>Student</th>
<th>Pre Score</th>
<th>Post Score</th>
<th>Change</th>
<th>Distribution Pre</th>
<th>Distribution Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Known</td>
<td>Heard</td>
</tr>
<tr>
<td>1</td>
<td>4/30</td>
<td>21/30</td>
<td>+17</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>4/30</td>
<td>30/30</td>
<td>+26</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>8/30</td>
<td>30/30</td>
<td>+22</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>8/30</td>
<td>30/30</td>
<td>+22</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>5/30</td>
<td>25/30</td>
<td>+20</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>6</td>
<td>5/30</td>
<td>27/30</td>
<td>+22</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>5/30</td>
<td>17/30</td>
<td>+12</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
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<td>+23</td>
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<td>12</td>
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<td>9</td>
<td>10/30</td>
<td>30/30</td>
<td>+20</td>
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<td>10</td>
<td>7/30</td>
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<td>+22</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>10/30</td>
<td>30/30</td>
<td>+20</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td>0/30</td>
<td>2/30</td>
<td>+2</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>14</td>
<td>5/30</td>
<td>24/30</td>
<td>+19</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>15</td>
<td>7/30</td>
<td>30/30</td>
<td>+23</td>
<td>13</td>
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<td>30/30</td>
<td>+21</td>
<td>16</td>
<td>7</td>
</tr>
</tbody>
</table>

Prior to beginning vocabulary instruction, I gave students a list of thirty target words that would be used in the instructional activities. Students classified these as: words which they knew and could define and use in a sentence; words which they had heard but were not ones they could define or use; and, words they had never heard. They labeled each word with a letter. (see Appendix F) The letters were K for “I know this word and therefore I can define it and use it in a sentence”, H for “I have heard or seen this word before but I am not sure of its meaning”, and N for “I have never seen or heard this word before and so I cannot define it or use it in a sentence.”

Based on these categorizations, I created individualized, three-part student pre tests. A sample pre test, individually developed for Student 4 is shown in Appendix G.
The first page consisted of a word bank and a set of “fill-in-the-blank” definitions, asking students to match their words with the definitions. The words in the word bank were the only the words the students had marked K, meaning they knew the definitions. The second page consisted of words students marked H, meaning they had heard or seen the word before but weren’t sure of the meaning. This task asked students to sort words into categories such as words referring to people, things, places; words describing the way a person can feel or be; words that tell what someone does or did; and words describing sounds or actions. The third page of the pre test contained words that were new to student. For each word, students had to circle the idea they thought applied to the word.

The results of pre testing revealed the different kinds of information students knew about word knowledge. This data was used to plan lessons and activities and help target instruction that would use the words that students already knew as context clues in activities designed to teach familiar or new words. For example, the results of the fill-in-the-blank test told me which words students could accurately describe. The results from the second and third pages told me students did not have enough knowledge regarding nouns, adjectives, and verbs, suffixes and prefixes to be able to make an educated guess about the meaning of a word. The results of the pre tests gave me an idea of what words students needed help with, and it helped me decide which mini lessons were critical and what center activities would foster learning and practice with using the students’ different multiple intelligences.

At the beginning of the study, the students’ vocabulary skills were limited: many of the students said they knew more words than they could use or define in the pretest,
which told me that they did not have the vocabulary skills (i.e., word knowledge) to decode the words. The highest accuracy score was 33 percent (10 of 30 correct).

Assessment results at the end of the study indicated that all students, regardless of their language dominance, learned some of the target words using the activities and strategies employed during the study; 33 percent of the students, again, regardless of their language dominance, learned all 30 words. Of the remaining eleven students, 45 percent of the students knew 80 percent of the words; 36 percent of the students knew between 50 and 80 percent of the words; and 19 percent of the students knew less than 50 percent of the words. The range of vocabulary acquisition was from two newly-acquired words to thirty newly-acquired words. The mean growth was 60 percent and, significantly, the median growth was 60 percent and the mode growth was 73 percent.

**Word Classification**

As indicated above, each pre assessment gave me valuable information, which then informed my decision making and my instruction. At the onset, it was important for me to know what words and kinds of words students knew. An analysis of their classifications of the thirty words helped me when choosing reading selections as well as assigning specific activities to individual students. I used the classification that each student gave to each word of the thirty target words for direct instruction, introduction or practice. The students' word classifications are listed in Table 4.
Table 4: Classifications of Words by Students Prior to the Pre-test

C indicates a cognate or partial cognate in Spanish

<table>
<thead>
<tr>
<th>Vocabulary Item</th>
<th>Students classifying word as Known</th>
<th>Students classifying word as Heard</th>
<th>Students classifying word as New</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avert</td>
<td>0</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>conduct</td>
<td>C</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>consuming</td>
<td>C</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Cordoned</td>
<td>0</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Curmudgeonly</td>
<td>0</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Current</td>
<td>14</td>
<td>7</td>
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</tr>
<tr>
<td>Devoured</td>
<td>5</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>disoriented</td>
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<td>9</td>
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<tr>
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Classifying the words into such categories gave students an idea of what words they really needed to work on. The categories students created turned into groups of words targeted during certain teaching and learning activities. Students at times were able to pick the category of words they wanted to work on. A review of the Know and New columns of the chart indicates some of the higher level words such as avert, cordoned,
curmudgeonly, gingerly, glancing, marina, rasping, and vigorously were words all students agreed they had not known and were new to them. More than half of the students felt they knew some of the easier vocabulary words, such as; seventeen students knew frustration, eighteen knew panic, nineteen knew shelter, and nineteen knew terrified, which wasn’t a surprise to me as they may have been common words they learned in the past. Also, all of these words known by many students except the word shelter were Spanish cognates. The words that none of the students knew except for avert all had some kind of prefix and suffix. This indicated that I need to give specific instruction to show students how to remove affixes and look at the root words in order to find meaning. Two of the words, which were Spanish cognates—cordoned and vigorously—should have been picked up by Spanish speaking students but in both cases the English suffix masked the Spanish words which were the root of the English word.

**Student Reflections**

Student reflections also demonstrated that word knowledge mini-lessons and activities conducted throughout the study were effective. For example, student 6’s wrote after the Echo and Find mini-lesson and activity, “It feels good to know a word you did not know before.” –Final Reflection. Student 6 had moved from knowing five words to demonstrating the meanings of twenty-seven words. Student 9, who moved from knowing ten of the words to all of the words, stated, “This activity helped me master these words by showing me how to break up words into syllables, find cognates and seeing if it was a compound word.”- Echo and Find.

In their reflections, students noted they learned best when the activity fit their learning strength as well as their learning style. For Example, Student 12, a student who
demonstrated logical/mathematical, body/kinesthetic, and intrapersonal/interpersonal strengths throughout the study grew from knowing ten to knowing all thirty words. This student stated, "This activity was a great benefit because I was sitting at my seat I had to glance at my list of words and guess what the person was acting. I learned a new thing today if I make a mini movie in my head that will benefit at learning new words such as menacing, curmudgeonly, and vigorously those are words I need to learn! I also enjoyed that I did not get frustrated when I didn't get the word right!" – Charades.

In the end, students were able to reflect and articulate what they learned, what worked best to help them learn, what lessons were new to them, and what strengths they developed to help their learning. This is important for students to recognize because in the future they will recall and use what they learned about vocabulary and essentially use the strategy that worked for them making them responsible and independent learners.

Case Studies

Student 1

Student 1, a Spanish dominate student, was reading at a third grade level and struggled with reading especially with vocabulary, and writing responses with detailed answers showing comprehension and attention to specifics in a story. He could however explain himself in small group. By the end of the school year, he had reached a fourth grade reading level and had shown significant progress in writing better, more detailed responses. Overall, he was a good student who wanted to do well in school as he already repeated fifth grade when I was his fifth grade teacher. His family was very supportive of him and me and we worked together as a team. Student 1 was receiving speech services. His testing results demonstrate there is speech and language interference in his use of
vocabulary. After noticing that he missed many words on the pre-test, I took great effort
and attention to have him do a lot of the work orally. For example, he would be asked to
identify a word from a definition given orally instead of in writing. Even in this situation,
I noticed language interference when many times he would substitute a word with the
same initial consonants, for example, using current and cordoned, gingerly and glancing,
and rasping and rapids interchangeably. He was also able to learn words better if all
affixes were removed, for example, he could use words like vigor, terror, grateful,
exasperate more easily than vigorously, terrified, gratified, exasperation. He did
tremendously well in the study moving from only knowing four words to twenty-one
words. In the behavior log, I noted that he would volunteer to be the speaker rather than
the recorder when working with a partner. I also noticed that he took longer to respond
when it required him to work alone and write out answers than when working with others
where he was required to talk the whole time to complete the activity. This came through
in his reflection when he wrote, "The gallery walk was one of his favorites because I
could see the words in the pictures and we shared our answers. I also liked writing a
short story when working on #14 of 20 Ways to Learn a Word because I could share my
story." So although he ended having verbal/linguistic as his multiple intelligence strength
partially because of his speech interruption he was able to recognize that there is a
window of opportunity to use what he considers a disability to improve in other new
areas of learning such as interacting with others in the gallery walk.

**Student 2**

Student 2 was a student who steadily improved in her reading abilities in the areas
of fluency and comprehension compared to the other dominate Spanish speaking
students. She started the year at a second grade read level and by the end of the year she was at a fourth grade reading level. Her progress, determination and dedication to reading were amazing. What made her different was that she was willing to read aloud; she wasn’t shy about her ability to speak, read, and write in English. In her classification pretest she stated she knew six of the thirty words, but actually knew only four of the thirty words. Throughout the study, I recorded the following behaviors in the log relative to student 2: demonstrating to others how something should look or sound, reasoning and explaining herself to others. She always made sure she was understood by others by asking if further clarification was need or if she could she would demonstrate her idea in another way. For example, she was explaining to a partner who was Spanish dominate what a hatchet was and he couldn’t understand so she drew a picture of a hammer next to a hatchet and related the tools to how they were used in Puerto Rico. In her post word list test she learned all 30 words scoring 100 percent. I think her success came with being a student who could and wanted to explain her reasoning and thought process because that is when true learning takes place. She also enjoyed dance class. She stated in her final reflection, “I liked creating moves in dance and charades because I recorded movement in my head to remember a word. Sometimes I could even use sounds. I think this is something I will practice next year at home.” Although she didn’t show as being bodily/kinesthetic she found that she was interested in this way of learning. She participated in dance class and earlier in the year performed a traditional Puerto Rican dance piece for the whole school. So in my mind there is potential if the opportunity is given to expand the bodily/kinesthetic side of learning. She showed as being
logical/mathematical and interpersonal which makes sense given what was recorded in the behavior log.

**Student 3**

I considered student 3 a higher level reader, reading at a level 50, a fifth grade reading level even though he was not a sixth grade reading level. He was very quiet, shy, and did not like to participate in activities that required him to speak aloud or be the center of attention. I often saw him working alone or with a single partner. He was a student who cared about improving and he did so through the year reaching the beginning of level 70 which was a pre-seventh grade reading level. On his pre test containing the words he said he knew he scored 26 percent (8 of the 30 words). In his final reflection he wrote, “What I learned about getting to know a word that I wasn’t aware of before was that I could use context clues. I like this activity because it made me look for clues around the word, like before and after the word. It was almost like a game or a puzzle I had to figure out.” My notes about him on the student behavior log include: he was finding and understand patterns such as words that contained suffixes and prefixes or Greek or Latin origins, he was very quiet but willing to explain his reasoning to a partner, and self-confident. This shows that his multiple intelligence strengths lie in logical/mathematical and interpersonal and not bodily/kinesthetic as he originally thought because he associated it being strength because he was very involved in sports. In the end, he scored 100 percent on his post test on the targeted word list, which I would attribute to his ability to use context clues.
**Student 18**

Student 18 was a very studious student who knew his own strengths and weaknesses. For example, he was quiet and very reflective and liked to share any connections he had made while working at school or at home. However, at the beginning of the school year he did not like to participate in dance activities and was nervous about being the center of attention.

Originally, he stated he knew two of the thirty words, but on the pre test he knew one of the thirty words scoring 3.3 percent. Throughout the study I recorded his behavior on the student behavior log. On one day, I wrote: likes to demonstrate and explain to others how to do something, finding patterns and sorting into categories, very reflective and a team player.

It was obvious to me that he was one of the few students who could truly identify what words he knew and didn’t know. For example, I felt that many of the strengths listed in his behavioral log led to his success. On the post test he scored 100 percent knowing all thirty words. In his reflection, he stated, “I enjoyed learning about the prefixes, suffixes, base words, and cognates because I had to look for patterns and pull words apart.” Throughout the study he was willing to try bodily/kinesthetic activities because it was a less developed area for him. He stated in his final reflection, “The echo and find and charades activities were fun for me and I plan to continue to use them when I am in the seventh grade.” He also stated, “I liked explaining why people moved a certain way to show a word.” This indicates that he is still a logical/mathematical learner but he has developed awareness for how his bodily/kinesthetic intelligence can support his learning.
Student 20

Student 20 was a Spanish dominant English Language Learner, who had been in the country less than a year at the time of the study. He was an excellent reader in Spanish, reading at the seventh grade level as measured by the Spanish DRA. He was very concerned about the disparity between his Spanish and English performance levels and was a diligent worker. He was rather quite even with his Spanish speaking peers but enjoyed jokes and was very interested in music and singing, although he did not choose to join music or dance performances in either language. He enjoyed working in small groups and would perform in Spanish Readers Theater as he was confident of his skills in reading. He suffers from Tintanitus, and this affects his hearing acuity and hinders his ability to distinguish between some sounds. He was a strong math student, scoring a 4 on the state math assessment, given in Spanish. His multiple intelligence area of strength was unambiguously logical mathematical.

Before the pre-testing, he classified words only into two categories, word as Known and words that were New to him. This is significant because he did not classify any words as words that he had heard but did not know their meanings. This made sense because the words he did not know would have fallen in the vacuum of unintelligible speech and he would not in particular remember hearing a word. He was right on target with his classification. He felt he knew seven words and got six of the seven correct on the pre-test. All seven words he chose as Known were Spanish cognates and the only word he missed, conduct, is a homophone in English and not in Spanish so he missed the meaning. In his reflections on the testing he noted:

Al ver las palabras en la lista me parece que algunas son palabras en español. Estas palabras si las conozco y si el sentido en inglés es igual
conozco las palabras pero no que no se dicen igual. Para mi era más fácil reconocer las palabras para leerlos en vez de para oírlos o entenderlos o decirlos.

Translation: On seeing the words on the list it seems to me that some of the words are words in Spanish. These words I do know and if the meaning in English is the same, I know these words but I do not know if they are said the same. For me it is easier to recognize on reading them rather than hearing them or understanding them or saying them.

During the study, he worked very hard on learning the words. First, he translated all of them into Spanish using a dictionary and he referred to this glossary often at the beginning of the study. He gradually gave up using his glossary and engaged more in just using the words and recording their meaning through little numerical pneumonic devices. In post testing, he was able to identify 50 percent of the words, including reading the definitions in English. When given the same test with the definition read to him, but not translated, he got 93 percent correct (all but two words) and when the definitions were translated, he identified all the words correctly.

In his learning behaviors, I observed that he liked looking for patterns in words and would write out new words as if they were numerical sentences. He would learn prefixes and suffixes as separate words and add them to root words as one might form a compound word. I also noted that as he became more confident in using the words, he would speak more often, sometimes using the English target words in Spanish sentences so that his English speaking classmates would be able to follow his language more easily.

Summary

All of the students greatly improved in their vocabulary acquisition. Students 1,2, 18 and 20 were students who were reading at or below a fourth grade level and made just as great of strides as student 3 who was reading at a fifth grade level. This is important to
look at because the assumption could be made that students with a range of different reading levels would not be successful with a grade six vocabulary unit. Student 20 had all texts sources in English and Spanish and when needed he would, on his own, use dictionaries and thesauruses. The use of the multiple intelligences, coupled with the various learning activities and the reflections created learning opportunities that enabled each student to be successful and move forward in their abilities to acquire vocabulary skills. In addition, the study’s findings confirm that having high expectations for all students regardless of academic levels is necessary and beneficial.
Chapter 5: Summary, Conclusions and Recommendations

Summary and Conclusions

At the beginning of the study, my sixth grade students' vocabulary skills with the target words were at or below 33 percent accuracy rate. Assessment results at the end of the three week study indicated that all students, regardless of their language dominance, learned some of the target words using the activities and strategies employed by the study, indicating that the activities and strategies employed during the study had a positive impact. In their reflections, students demonstrated that the word knowledge mini-lessons and activities of the study were informative and helpful. The students noted that they learned best when the activity fit their multiple intelligences.

I have concluded that a multi-sensory approach combined with specific word knowledge instruction benefited my students and is an effective way to increase vocabulary acquisition. I have found that I have to treat vocabulary as its own entity separate from content, that is to say that vocabulary in any subject should be explored first in order to enable students to successfully comprehend the content.

I have also concluded that guided reading groups can be enhanced by having whole group word study first so students have experiences in word knowledge that can be further developed and discussed in small group settings. Reflecting on my own teaching practices with guided reading reveals that my focus was always to get to the story and ensure comprehension and text connections. Now, as a result of this research, I have come to realize that the feedback from my students would be a lot deeper if I took the time to address vocabulary first. I believe that after working with vocabulary I would be able to hear my students speaking and writing with high leveled vocabulary. In the end,
this study has helped me re-think my literacy practices and consider ways that I can change and become more in tune and effective in teaching to students strengths.

My students’ results mirrored research others have done on this topic. D’Alesio, Scalia and Zabel (2007) suggest improving students’ vocabulary through the use of multi-sensory instruction and activities. They concluded that students increased their vocabulary acquisition using physical activity. I discovered that students, who previously could not focus on reading tasks, participated successfully in vocabulary activities that incorporated music and dance. My results, along with D’Alesio et al., found that using a multi-sensory approach in conjunction with direct instruction improved vocabulary acquisition.

Bromley (2007) suggested that one strategy to help students learn new vocabulary was to give them a passage containing common words and then invite them to work with a partner to find substitutes using a thesauruses and dictionary. I found that students liked to do this especially when given the opportunity to draw pictures as synonyms. The students were then able to rewrite the passage using the synonyms they have found. Bromley (2007) also suggested that oral games are a way to experiment with sound in decoding a word. My use of the echo and find technique supported this as well as when I asked students to say the word aloud and notice syllables, prefixes, suffixes, Latin or Greek sounds, and base words. My work tested Bromley’s premise that to effectively teach vocabulary, word knowledge is key and that teachers need to employ a variety of methods as well as design meaningful instruction based on how a student learns best.

My work also supports the concepts I discovered in Graves’ (2006) Four Step Vocabulary Program. He offers an arrangement of instructional ideas to teach
vocabulary through reading strategies that all students should know and be able to execute as they unlock the meaning of words. My study supports his concept that immersing students in opportunities to learn new words is effective with students entering school, English Language Learners, and more advanced students who are ready to be challenged. The demographics of my students had students in all of these categories and my study bears out the idea that all students can benefit from these practices.

Graves suggests intentionally teaching students definitions and making sure students see the words repeatedly in context. My students had multiple opportunities to read the words more than once in the trade books that accompanied the unit. Graves concluded that the most recommended strategy is the use of context-clues. I found that context-clues is one of the most important strategies to learn, understand, and use often because it is the first means of attack on an unknown word for students when reading independently. As noted above, however, students benefited greatest from the practice of using context clues because the Houghton Mifflin program (2007) not only provided a featured story but also different trade book stories and vocabulary readers to support the theme and the development of vocabulary.

Recommendations for Future Research

Based on the results of conducting this three week study, I can make several recommendations for future research. I conducted this study at the end of the school year when testing and other activities made it challenging to engage students in uninterrupted periods of instruction. One recommendation, then, is to conduct a similar vocabulary acquisition study close to the beginning of the school, which might give students more
and extended opportunities to engage in lessons and apply new skills and concepts throughout the remaining school year.

A related recommendation would be to integrate more than one unit of study, i.e., more than one word list into the study. Doing so, offers the potential for ongoing use of skills and concepts related to vocabulary acquisition. In my own future research, I could give students a selection of words unrelated to the study to see what if any strategies they employ to uncover the meaning and understand a particular reading selection.

Because only one grade level was included in this study generalizations about the usefulness to students of other ages were not possible. Additional research could be conducted to validate how effective the lessons, strategies, and center activities are with different student populations.

A final recommendation would be to develop a battery of assessments that can be given orally to ELL students. The assessments I used required students to be able to read the definitions as well as the target words. For the purposes of this study, I reported their post test scores but was able to extract from their activity sheets and behavior logs that all of the ELL students performed much better when the definitions were given orally.

To conclude, this study was worth conducting because it was a learning experience for my students and a professional development opportunity for me. I believe the study served multiple purposes: it helped students become more aware of their multiple intelligences, gave students opportunities to improve their vocabulary acquisition in a safe-risk environment, and it improved my knowledge of the essentials of vocabulary acquisition enabling me to become a more effective teacher.
# Appendix A

## Developmental Reading Assessment Achievement Grade-Equivalent Discrepancy

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## Appendix B

### Fifth Grade English Language Arts Exam test Results, January 2005

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<td>H</td>
<td>18</td>
<td>638</td>
<td>2</td>
</tr>
<tr>
<td>Student 18</td>
<td>M</td>
<td>H</td>
<td>20</td>
<td>645</td>
<td>2</td>
</tr>
<tr>
<td>Student 19</td>
<td>M</td>
<td>H</td>
<td>10</td>
<td>492</td>
<td>1</td>
</tr>
<tr>
<td>Student 20</td>
<td>F</td>
<td>H</td>
<td>10</td>
<td>496</td>
<td>1</td>
</tr>
<tr>
<td>Student 21</td>
<td>F</td>
<td>H</td>
<td>10</td>
<td>490</td>
<td>1</td>
</tr>
</tbody>
</table>
INVENTING

Project Media and Ideas (continued)

**Verbal-Linguistic**
The station should include paper, pencils, pens, dictionary, thesaurus, tape recorder, typewriter or word processor, poetry books, joke books, magazines, and other written materials.

**PROJECT IDEAS**
- Writing essays or reports
- Writing poetry and limericks
- Defining key vocabulary words
- Formal speaking (persuasive or explanatory)
- Debate

**Visual-Spatial**
The station should include pens, colored markers, clay, video, colored construction paper, building blocks, Legos™, maps, posters, books and magazines with a list of pictures, scissors, and paste.

**PROJECT IDEAS**
- Creating graphic illustrations (pictures and morals)
- Making sculptures (clay and dirt)
- Creating montages and collages
- Making flowcharts
- Designing posters and brochures

**Logical-Mathematical**
The station should include calculators, computers, rulers, and books containing graphic organizers.

**PROJECT IDEAS**
- Creating annotated outlines
- Reporting statistics
- Demonstrating thinking patterns such as comparison/contrast
- Explaining the steps involved in a process

**Bodily-Kinesthetic**
The station should include costumes, makeup, sports equipment, and material for building or inventing something.

**PROJECT IDEAS**
- Creating a drama, role-play, or mime
- Dancing (both traditional and creative or original)
- Creating human tableaux
- Creating physical routines (body language, gestures, exercise)
- Building something

**Musical-Rhythmic**
The station should include musical instruments, percussion instruments, audioscapes players, a variety of music and sound tapes, and various kinds of noisemakers.

**PROJECT IDEAS**
- Creating a musical TV ad or jingle
- Creating a sound accompaniment on tape
- Writing songs (original or known tunes)
- Exploring rhythmic and beat factors (cultures, seasons, body processes)

**Intrapersonal**
This station should include lists of suggestions for working and self-reflective questions to consider.

**PROJECT IDEAS**
- Writing autobiographies
- Writing or drawing in personal, reflective journals
- Doing thinking logs
- Keeping self-understanding diaries

**Interpersonal**
This station should include lists of things to do with a partner, group projects, things to talk about, and suggestions for working together.

**PROJECT IDEAS**
- Doing think-pair-share (see Seven Pathways of Learning)
- Putting together a jigsaw project with a team
- Doing each one teach one (see Seven Pathways of Learning)
- Competing on teams
- Taking questionnaires and surveys

**Naturalist**
This station should include many objects from the natural world as possible: rocks, leaves, trees, animals, flowers, plants, even bier, students go outside and gather their own objects.

**PROJECT IDEAS**
- Creating a diorama using all natural elements
- Recording environmental sounds on an audiocassette
- Creating a phonograph display
- Making collages, diys, paper, and so on, from natural elements
- Videotaping scenes, animals, weather conditions, and so on

INTELLIGENCE AND ABILITY TESTING REVISITED
Student Name: ____________________

Age: __________ Date of Observation: _________________

Indicate the degree to which you observe the stated behavior or characteristic in each student using the following scale: 0 = uncertain, 1 = does not fit at all, 2 = fits slightly, 3 = fits moderately, 4 = fits strongly.

**Verbal-Linguistic Behaviors**
- Likes talking, writing, and reading almost anything
- Can express herself/himself both in writing and talking
- Is sensitive to the impact of words and language on others
- Understands and enjoys play on words and word games

**Logical-Mathematical Behaviors**
- Is good at finding and understanding patterns
- Is quick at solving a variety of problems
- Can remember thinking formulas and strategies
- Likes to identify, separate, and sort things into categories

**Visual-Spatial Behaviors**
- Is helped by visuals and manipulatives
- Has good sense of direction and understanding of maps
- Creates mental images easily; likes pretending
- Is able to follow complex lines of reasoning and thought processes

**Bodily-Kinesthetic Behaviors**
- Has difficulty sitting still or staying on task
- Uses body gestures and physical movement to express himself/herself
- Is good in sports, well-coordinated physically
- Likes to invent things, put things together and take them apart
- Likes to demonstrate to others how to do something

**Musical-Rhythmic Behaviors**
- Has difficulty listening to or staying at a task
- Uses body gestures and physical movement to express himself/herself
- Is good in sports, well-coordinated physically
- Likes to invent things, put things together and take them apart
- Likes to demonstrate to others how to do something

**Interpersonal Behavior**
- Shows an irresistible urge to discuss almost everything with others
- Is good at listening and communicating
- Sees the moods and feelings of others
- Is a good, effective team player
- Is able to figure out the motives and intentions of others

**Intrapersonal Behavior**
- Is highly intuitive and/or "flies by the seat of pants"
- The person is often very self-reflective and aware
- Asks questions reluctantly; has little curiosity
- Is able to express inner feelings in a variety of ways
- Is independent and is not concerned about others' opinions

**Naturalist Behaviors**
- Is drawn to the external, natural environment
- Has a strong curiosity about and attraction to animals and insects
- Wants to know things, loves plants and flowers
- Responds to things that happen in the natural world
- Recognizes and is fascinated by patterns in nature

**Student Behavior Log Scoring**
(adapted from the work of Frank Russell)

1. Begin by transferring the numbers from each intelligence behavior observation to column A on the table below.

<table>
<thead>
<tr>
<th>VERBAL-LINGUISTIC</th>
<th>MUSICAL-RHYTHMIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOGICAL-MATHMATICAL</th>
<th>INTERPERSONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VISUAL-SPATIAL</th>
<th>INTRAPERSONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BODILY-KINESTHETIC</th>
<th>NATURALIST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Multiply each response value in column A as follows and record the result in column B:
   - If response = 0, multiply by 0.
   - If response = 1, multiply by 0.
   - If response = 2, multiply by 2.
   - If response = 3, multiply by 4.
   - If response = 4, multiply by 6.

3. Average column B for each intelligence and record the average in column C (rounded to the nearest whole number).

4. Turn to the "Multiple Intelligences Profile Indicator" on page 68 and graph the average score by darkening the appropriate segment(s) for each intelligence area.

Note: Any average score that is greater than 4 should be plotted as +3 on the wheel.
Appendix E. Multiple Intelligence Survey Student # 18

Identifying Your Multiple Intelligences

This quiz will help you identify your areas of strongest intelligence. Read each statement. If it expresses some characteristic of yours and sounds true for the most part, circle the "T". If it doesn't, circle the "F". If the statement is sometimes true and sometimes false, leave it blank.

<table>
<thead>
<tr>
<th>T or F</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I'd rather draw a map than give someone verbal directions.</td>
</tr>
<tr>
<td>2.</td>
<td>If I am angry or happy, I usually know why.</td>
</tr>
<tr>
<td>3.</td>
<td>I can easily learn to play a musical instrument.</td>
</tr>
<tr>
<td>4.</td>
<td>I can compose tunes, songs or raps of my own.</td>
</tr>
<tr>
<td>5.</td>
<td>I like to work with numbers and figures on paper or in my head.</td>
</tr>
<tr>
<td>6.</td>
<td>When I am walking outside I notice the different types of plants and animals around me.</td>
</tr>
<tr>
<td>7.</td>
<td>I think about myself and why I am the way I am.</td>
</tr>
<tr>
<td>8.</td>
<td>Sometimes when I do math I get the right answers, but I do not do it the way the teacher does.</td>
</tr>
<tr>
<td>9.</td>
<td>I can learn dances easily.</td>
</tr>
<tr>
<td>10.</td>
<td>It's easy for me to say what I think in an argument or debate.</td>
</tr>
<tr>
<td>11.</td>
<td>I know the names and characteristics of many different animals.</td>
</tr>
<tr>
<td>12.</td>
<td>I can write sentences that are correct without much effort.</td>
</tr>
<tr>
<td>13.</td>
<td>If I was hiking in a park and got off the trail, I would be able to find my way back to the trail.</td>
</tr>
<tr>
<td>14.</td>
<td>I like to gather together groups of people for parties or special events.</td>
</tr>
<tr>
<td>15.</td>
<td>After I've heard a rhythm once I can easily repeat it.</td>
</tr>
<tr>
<td>16.</td>
<td>I easily understand the drawings that come with toys and models.</td>
</tr>
<tr>
<td>17.</td>
<td>I like to work logic puzzles and play strategy games.</td>
</tr>
<tr>
<td>18.</td>
<td>I can master new sports easily.</td>
</tr>
<tr>
<td>19.</td>
<td>Animals have a very important place in my life.</td>
</tr>
<tr>
<td>20.</td>
<td>I can communicate my ideas and feelings well in writing.</td>
</tr>
<tr>
<td>21.</td>
<td>I can convince other people to follow my plans.</td>
</tr>
<tr>
<td>22.</td>
<td>My sense of balance and coordination is good.</td>
</tr>
<tr>
<td>23.</td>
<td>I often see patterns and relationships between numbers faster than others.</td>
</tr>
<tr>
<td>24.</td>
<td>I enjoy using my hands to make things out of wood, clay or other materials.</td>
</tr>
<tr>
<td>25.</td>
<td>I like word games and/or puns.</td>
</tr>
<tr>
<td>26.</td>
<td>I can look at an object one way and easily imagine what it would look like from a different angle.</td>
</tr>
<tr>
<td>27.</td>
<td>After I hear a tune once I can repeat it easily.</td>
</tr>
<tr>
<td>28.</td>
<td>I am better at solving problems than at explaining how I solved them.</td>
</tr>
<tr>
<td>29.</td>
<td>I greatly appreciate the beauty of a natural setting like Niagara Falls or the Adirondack Mountains in the summer.</td>
</tr>
<tr>
<td>30.</td>
<td>I like to sit quietly and reflect on my feelings.</td>
</tr>
<tr>
<td>31.</td>
<td>I enjoy looking at shapes of buildings and structures.</td>
</tr>
<tr>
<td>32.</td>
<td>I can identify when there is a key change in a song.</td>
</tr>
<tr>
<td>33.</td>
<td>I seem to be naturally good at most sports.</td>
</tr>
<tr>
<td>34.</td>
<td>I collect or have collected specimens from nature like leaves, nuts, pine cones, rocks, shells or bugs.</td>
</tr>
<tr>
<td>35.</td>
<td>I regularly write in a journal or diary.</td>
</tr>
<tr>
<td>36.</td>
<td>I'm usually aware of the expression on my face.</td>
</tr>
<tr>
<td>37.</td>
<td>I'm sensitive to the expressions on other people's faces.</td>
</tr>
<tr>
<td>38.</td>
<td>I have a pretty good idea where I fit in my world (family, school, etc.)</td>
</tr>
<tr>
<td>39.</td>
<td>I am sensitive to the moods of others.</td>
</tr>
<tr>
<td>40.</td>
<td>I notice relationships between people.</td>
</tr>
</tbody>
</table>
Appendix F. Student Pretest Survey K, H, N

Name: _______________________
Date: __________________

Read the words below. If you **know** the word, write **K** in the box; if you have **heard** the word before, write **H**; if it is a **new** word to you, write **N**. Thanks!

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>□</td>
<td>avert</td>
<td>14.</td>
<td>□</td>
<td>gratified</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>□</td>
<td>conduct</td>
<td>15.</td>
<td>□</td>
<td>ignite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>□</td>
<td>consuming</td>
<td>16.</td>
<td>□</td>
<td>initial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>□</td>
<td>cordoned</td>
<td>17.</td>
<td>□</td>
<td>marina</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>□</td>
<td>curmudgeonly</td>
<td>18.</td>
<td>□</td>
<td>menacing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>□</td>
<td>current</td>
<td>19.</td>
<td>□</td>
<td>mounted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>□</td>
<td>devoured</td>
<td>20.</td>
<td>□</td>
<td>obstacle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>□</td>
<td>disoriented</td>
<td>21.</td>
<td>□</td>
<td>overboard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>□</td>
<td>evacuate</td>
<td>22.</td>
<td>□</td>
<td>painstaking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>□</td>
<td>exasperation</td>
<td>23.</td>
<td>□</td>
<td>panic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>□</td>
<td>frustration</td>
<td>24.</td>
<td>□</td>
<td>rapids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>□</td>
<td>gingerly</td>
<td>25.</td>
<td>□</td>
<td>rasping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>□</td>
<td>glancing</td>
<td>26.</td>
<td>□</td>
<td>recounted</td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>□</td>
<td>shelter</td>
<td>28.</td>
<td>□</td>
<td>slithering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>□</td>
<td>terrified</td>
<td>30.</td>
<td>□</td>
<td>vigorously</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Appendix G. Sample of Individualized Pre-test Student # 4, p.1

Name: ________________________________________________________

These are words you have heard or seen somewhere but you are not sure what they mean. Complete the following questions.

conduct            consuming            cordoned
current            disoriented           exasperation
glancing           menacing              painstaking
rapids

Do you think any of the words refer to people, things or places? Write them.
________________________________________________________________________
________________________________________________________________________
_______________________________________________________________________

Do any of the words describe the way a person can feel or be? Write them.
________________________________________________________________________
________________________________________________________________________
_______________________________________________________________________

Are any of the words are things that someone does or did? Write them.
________________________________________________________________________
________________________________________________________________________
_______________________________________________________________________

Do any of the words describe sounds you can hear or actions you can see?
________________________________________________________________________
________________________________________________________________________
_______________________________________________________________________
Name: ____________________________________________________________

These are the words that are *new* to you! Circle the idea that best matches each word.

avert (a thing / something you do)

curmudgeon (a place / a person)

gingerly (carefully / carelessly)

gratified (a good thing / a bad thing)

marina (a place / a person)

rasping (a good thing / a bad thing)

recounted (before / after)

vigorously (a way to do a thing, a place)
Appendix G: Sample of Individualized Pre-test Student # 4, p.3

Name: _______________________________________________________

You know these words. Use them to fill in the blanks in the phrases below.

devoured
ignite
obstacle
shelter

- a safe place
- words that mean that something is scary
- words that have to do with being afraid
- a feeling of not knowing what is happening
- someone mean or in a bad mood acts this way
- the movement of electricity or of water
- something that happens first
- a place to keep you boat
- a feeling that means you have lost hope and patience
- to make something burn
- a place where the water of a river moves very fast
- to turn away or avoid
- a way of doing something very carefully
- doing something with a lot of energy
- a rough, scratchy sound
- moving by sliding along, moving from side to side
- told about something that was remembered
- made into a separate area by ropes
- all eaten up or all used up
- using something all up
- to guide someone; to show a group how to act.
- to move completely out of an area
- on horseback or riding on another thing
- something that is in the way
- looking at something quickly
- pleased by something
- fallen off a boat or doing something way too much

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Appendix H: Post-test

Use these words to fill in the blanks in the phrases below.

avert  conduct  consuming  cordoned  curmudgeonly
current  devoured  disoriented  evacuate  exasperation
frustration  gingerly  glancing  gratified  ignite
initial  marina  menacing  mounted  obstacle
overboard  painstaking  panic  rapids  rasping
recounted  shelter  slithering  terrified  vigorously

- a safe place
- words that mean that something is scary
- words that have to do with being afraid
- a feeling of not knowing what is happening
- someone mean or in a bad mood acts this way
- the movement of electricity or of water
- something that happens first
- a place to keep your boat
- a feeling that means you have lost hope and patience
- to make something burn
- a place where the water of a river moves very fast
- to turn away or avoid
- a way of doing something very carefully
- doing something with a lot of energy
- a rough, scratchy sound
- moving by sliding along, moving from side to side
- told something that was remembered
- made into a separate area by ropes
- all eaten up or all used up
- using something all up
- to guide someone; to show a group how to act
- to move completely out of an area
- on horseback or riding on another thing
- something that is in the way
- looking at something quickly
- pleased by something
- fallen off a boat or doing way too much
Appendix I: Daily Student Reflection Sheet, Student # 3

My Reflection

Date: ________

Words I worked on

Center Activity Echo & Read

Write about how this activity may have helped you master these words.

In this lesson we used echo words for the words, found the words and copied them. Also, we used 3 inputs, seeing, hearing and writing. Yes this lesson helped me by spreading the words.
20 Ways to Learn a Word

Name: ____________________

You have your list of words that you categorized by K-H-N. For one of the categories please complete #14. For the other 2 category of words please pick any number but you can’t use the number twice.

One day my dad asked me to go boat on a Sunday morning. I said “Sure, why not”. So when we got out to Red Sea it was so calm and relaxing. We had a medium sized raft, so we went out to sea. After a while the current started to get kind of rough and I started to panic. Then a menacing dark cloud starts to take over the sky. It started to rain and then a huge wave rapidly hit our raft and my dad fell out. I was terrified, I inflated my life jacket and went overboard for my dad. I found him I was grateful but he wasn’t breathing. I placed my hands over his heart and put hard force. Suddenly he awoke with a rasping cough and he was disoriented but I was happy that my dad was ok.

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### Appendix J. Student #11 Sample Context Clues Sheet from *Hatchet*

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. consuming</td>
<td>to use ceaselessly or vigorously</td>
</tr>
<tr>
<td>2. contemplation</td>
<td>act of thinking deeply about something</td>
</tr>
<tr>
<td>3. frugally</td>
<td>sparingly, economizing</td>
</tr>
<tr>
<td>4. fluster</td>
<td>to confuse or upset someone</td>
</tr>
<tr>
<td>5. gratified</td>
<td>satisfied, pleased</td>
</tr>
<tr>
<td>6. longer</td>
<td>extended in time or space</td>
</tr>
<tr>
<td>7. gentle</td>
<td>mild, not harsh</td>
</tr>
<tr>
<td>8. gratification</td>
<td>satisfaction, pleasure</td>
</tr>
<tr>
<td>9. natural</td>
<td>occurring or existing naturally</td>
</tr>
<tr>
<td>10. shivering</td>
<td>to shake or tremble</td>
</tr>
<tr>
<td>11. verified</td>
<td>confirmed, established</td>
</tr>
<tr>
<td>12. shivering</td>
<td>to shake or tremble</td>
</tr>
<tr>
<td>13. verified</td>
<td>confirmed, established</td>
</tr>
</tbody>
</table>

- Consuming: to use ceaselessly or vigorously
- Contemplation: act of thinking deeply about something
- Frugally: sparingly, economizing
- Fluster: to confuse or upset someone
- Gratified: satisfied, pleased
- Longer: extended in time or space
- Gentle: mild, not harsh
- Gratification: satisfaction, pleasure
- Natural: occurring or existing naturally
- Shivering: to shake or tremble
- Verified: confirmed, established
- Shivering: to shake or tremble
- Verified: confirmed, established
Appendix J. Student # 21 Sample Prediction & Synonym paired with trade book

Book: *Weathering the Storm*

Predict what words will be in this story. If your prediction is right put a star next to it.

1. *Chroma*  
2. *menacing*  
3. *shelter*  
4. *overboard*  
5. *mounted*  
6. *obstacle*  

When you find a word that we have been studying, copy the sentence, underline the vocabulary and above it write a synonym for it.

1. After taking sailing classes at the marina dock

2. Clouds that had seemed harmless earlier were now dark and menacing horrific

3. She finally crawled into her temporary shelter house

4. ___________________________

5. As the waves mounted, she couldn't predict where they would come from.
Appendix J. Student # 19 Sample Mental Memory Sheet paired with trade book

Please write the name of the book you read in the box and any vocabulary words that really stuck in your head because it was paired with an action or description that made you have a mental memory of the meaning of the word. Explain or draw the description.

- Weathering the Storms
- Mounted
- Shelter
- Marina
- Day 2
- Devoured
- Half
Appendix J. Student #4 Sample of 4 Square Drawing used in Gallery Walk

Vigorously

Disoriented

Devour

Curmudgeon
Appendix J. Student #4 Sample of Actions for Charades

**Name:** (Student's Name)

**Actions:**
- Turn your head around
- Make several faces
- Slowly spin all the way around
- Speak in a low voice
- Speak very loud
- Shout using your hands
- Jump in place
- Pretend to set a bag down
- Jump up and down
- Act like your dying, fall, and climb up a step
- Make a scary noise
- Get on top of something
- Stand up and spin around
- Walk very quickly
- Start, slow, then go fast
- Open door to Hello Nurse
- Hold on as needed
- Walk strongly

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**Actions:**
- Cloned
- O'donovan
- Condoned
- Curmudgeonly
- Current
- Devoured
- Disoriented
- Excess
- Evacuate
- Exaggeration
- Frustration
- Gigantically
- Gigolos
- Gratefully
- Grasp
- Initial
- Insanity
- Intrepid
- Consoned
- Obstacle
- Overboard
- Paintstaking
- Panic
- Rapid
- Snap
- Recounted
- Shelter
- Slithering
- Unified
- Vigorously

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I picked this word because I knew it was going to be fun.
References


