

**THE EFFECTS OF THREE METHODS OF INTRODUCING VOCABULARY TO  
ELEMENTARY STUDENTS: TRADITIONAL, FRIENDLY DEFINITIONS, AND  
PARSING**

by

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STUDENTS VOCABULARY: TRADITIONAL, FRIENDLY DEFINITIONS AND  
PARSING

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This study investigated the effects of three different approaches to vocabulary instruction on students' ability to learn initial meanings of new words: traditional definitions, friendly definitions, and parsing. Fourth and fifth grade students enrolled in a rural elementary school were introduced to new vocabulary terms in traditional, friendly definitions, and parsing conditions. Tasks to assess students understanding of the new terms included sentence generation, and responses to open ended questions about each term.

Results indicated that across all three conditions no significant differences were found for sentence generation tasks. For open ended question tasks differences were found indicating students performed significantly better with traditional and friendly definitions than parsing. Qualitative analysis indicated that parsing was not only inadequate, but detrimental to learning new words from definitions.

It was hypothesized that the design of the study may have influenced results. Implications for instruction and further research were discussed.

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## **PREFACE**

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## 1.0 INTRODUCTION

This study investigates three different approaches to vocabulary instruction on students' ability to learn initial meanings of new words: traditional definitions, friendly definitions, and parsing. Each of these approaches represents a different method for introducing new words to elementary students.

The first approach, traditional definitions, represents a common practice in elementary classrooms in which students are presented with terms and a dictionary definition. The second approach, friendly definitions, is based on an experimental study by McKeown (1993) in which dictionary definitions were revised to overcome features of definitions that were shown to cause problems for young word learners. In McKeown's (1993) study, dictionary definitions were revised to make the meaning of a word more accessible to the reader. The third approach, parsing, is an instructional approach that was developed for this study to investigate if posing questions during the reading of a dictionary definition could serve as a means of encouraging active engagement on the part of the reader, thus mitigating some of the difficulty inherent in learning words from dictionary definitions.

This introductory chapter will present the rationale for the study and its significance, briefly review some of the important studies upon which the theoretical framework of this study is based, and state the problem to be addressed.

## **1.1 RATIONALE**

Understanding word meaning allows for the comprehension of both oral and written language. Furthermore, the ability to correctly use words allows for the fluent expression of thoughts. Growth in vocabulary is considered a regular part of development, and the precise use of vocabulary is considered by society to be one of the hallmarks of an educated individual.

Numerous studies have shown a strong correlation between vocabulary and comprehension (Davis, 1944; 1972; Farr, 1969; Harrison, 1980; Stahl & Fairbanks, 1986). The correlation seems well reasoned: understanding the words in a text makes it easier to understand the text as a whole. Work by Carver has uncovered that the percentage of unknown words in a text is a function of the text difficulty (1994). Other researchers such as Sternberg (1987) assert that one can predict a readers' ability to comprehend text based on their vocabulary knowledge. Sternberg states that the level of vocabulary knowledge of a reader may indeed determine their level of comprehension.

Given the importance of vocabulary in daily communication and its role in reading comprehension, instruction in vocabulary is an area of critical importance.

Vocabulary instruction warrants further exploration given its important role in reading development.

## **1.2 THEORETICAL BACKGROUND**

This study is based on three main areas of previous research related to vocabulary learning, and a fourth area related to reading comprehension: (1) classroom practices related to teaching vocabulary through dictionary definitions; (2) difficulties related to learning word meanings from definitions; (3) efforts to revise definitions to overcome problematic issues; and (4) the role of active engagement in reading comprehension.

### **1.2.1 Research Related to Vocabulary Learning**

Studies show the practice of asking students to read dictionary definitions when learning vocabulary is the most common classroom activity for conveying the meaning of new words (Watts, 1995). Despite the prevalence of using dictionary definitions, a number of studies have called into question the effectiveness of definitions as a tool for learning new words (McKeown, 1991, 1993; Miller & Gildea, 1987; Nist & Olejnik, 1995; Scott & Nagy, 1997).

The instructional methods employed while students work with definitions may also prove problematic. It is the consensus of several researchers that a key feature of vocabulary learning is active engagement on the part of the reader (Beck, Perfetti, &



McKeown, 1982; Jenkins, Pany & Schreck, 1978; Kameenui, Carnine & Freschi, 1982; McKeown, Beck, Omanson & Perfetti, 1983; McKeown, Beck, Omanson & Pople, 1985). That is, students need to think deeply about the meanings of new vocabulary. Yet, studies of vocabulary instruction reveal that little is done to encourage deep processing when using dictionary definitions. For example, Harmon, Hedrick and Fox (2000) analyzed the content and teaching suggestions offered in the teacher's manuals. The teaching suggestions focused on having students passively use the glossary to learn new terms. Such activity involves only low-level processing skills.

Additionally, studies indicate that school-age children make errors when dealing with new words and dictionary definitions (McKeown, 1991, 1993; Mezynski, 1983; Miller & Gildea, 1987). For example, students typically target only a fragment of the dictionary definition when studying a new word (McKeown, 1993; Mezynski, 1983). This lack of full attention to the total definition hinders a student's ability to learn new vocabulary through dictionary definitions.

Numerous studies have examined features of definitions which may cause problems for readers to comprehend the meaning of new terms. Such studies have cautioned the usefulness of dictionary definitions as a vehicle for students to learn new words (McKeown, 1991, 1993; Miller & Gildea, 1987; Nist & Olejnik, 1995; Scott & Nagy, 1997).

Based on findings from such research, attempts have been made to revise dictionary definitions to overcome some of these issues. When dictionary definitions are written in a straightforward manner using clear language and describing a word's meaning and typical usage, those definitions have been shown to be effective in helping

readers learn the meanings of new vocabulary (McKeown, 1993; Nagy and Herman, 1985). A major study by McKeown (1993) involved the use of revised dictionary definitions with fifth-grade students. The dictionary definitions were revised to make them more “friendly” to young readers. Students showed improved performance on sentence generation tasks using the new vocabulary. The term “friendly definitions” has since been used to characterize the revised definition described by McKeown.

The use of “friendly definitions” addresses issues surrounding standard written definitions. As such, it is an instructional technique primarily focused on the content of the definition as a means of enhancing understanding.

As noted earlier school-age students tend to have difficulty attending to the entire dictionary definition, targeting only a fragment of information about the new word (McKeown, 1991, 1993; Mezynski, 1983). There is a lack of studies which address the issue of encouraging readers to more fully attend to the total meaning of the definition.

### **1.2.2 Active Engagement in Text Comprehension**

Despite the lack of research related to encouraging readers to attend to the entirety of a definition, many studies in of reading comprehension have considered how to encourage students to fully attend to the meaning of a text (Beck, McKeown, Sandora, Kucan & Worthy, 1996; Taylor, Pearson, Peterson, & Rodriguez, 2003). Notably, one area of research has explored is the concept of active engagement. The concept of active engagement can be described as attempts to encourage readers to deeply consider the

ideas of a text and actively construct the meaning of those ideas while engaged in reading.

There appear to be very few, if any, studies that have specifically studied the effects of active engagement while reading dictionary definitions. Yet a study by Goers, Beck and McKeown (1999) demonstrated that questions posed by a teacher during reading assisted students in using a text's context to construct the meaning of new vocabulary words contained within a passage. Towards this end the technique developed for this study utilizes questions as a means of encouraging students to consider the meaning of a definition and attend to the total content of the definition. The technique has been termed "parsing". When using the parsing technique the definition would be read aloud then followed with one or two questions inviting students to consider the meaning of the definition. It should be noted that parsing is not an attempt to interrogate the definition, but merely a method for inviting students to engage with the text of the definition. An example of parsing as developed for this study follows in Table 1.

**Table 1. Parsing Example**

TEACHER: Benevolent. Characterized by an inclination or tendency to do kind or charitable acts. What do you suppose that definition really means?

STUDENT: I think, um, the tendency or habit of just being nice.

TEACHER: Can anyone else say what they think the definition means?

STUDENT: Like when you have a kindness to help a charity or something like that.

### **1.3 QUESTIONS ADDRESSED BY THIS STUDY**

The purpose of this study was to investigate the effects of three techniques for introducing vocabulary to fourth and fifth grade elementary students: dictionary definitions, friendly definitions, and parsing. The following question will be addressed:

Will fourth and fifth grade students show differences in learning of word meanings when assigned to conditions of traditional unaltered definitions, or Friendly Definitions that seek to address the accessibility and clarity of the text, or a Parsing approach which seeks to engage students with a word's dictionary definition?

## **2.0 REVIEW OF LITERATURE**

This chapter provides an overview of research concerning vocabulary learning and instruction. The review begins by considering the relationship between vocabulary and comprehension and debates about how best to teach vocabulary. The review then goes on to explore the procedures classroom teachers typically employ when teaching vocabulary to elementary students. Based on analysis of these practices, the effectiveness of dictionary definitions as a means of teaching vocabulary is discussed. Finally, the review highlights research which relates to helping students gain more information from definitions when presented with new words.

The first section of this review, the relationship between vocabulary and comprehension, will discuss both theoretical and empirical basis for the connection between understanding the meaning of individual words and understanding text. Then the procedures for vocabulary instruction aimed at improving comprehension will be discussed. The debate between procedures for vocabulary instruction that advocate contextual approaches versus direct instruction methods will be highlighted.

The second section of this review focuses on vocabulary instruction and includes recommendations for vocabulary instruction aimed at positively influencing comprehension. The research discussing typical classroom practices for introducing new

vocabulary will also be shared and focus on the use of definitions as a vehicle for introducing new words. The research in this area suggests that dictionary definitions have problematic features which impact their utility for teaching vocabulary. In exploring why definitions may be problematic for gaining word knowledge characteristics of definitions and reader characteristics when reading definitions will be discussed.

Finally, the review will conclude with research exploring ways to overcome problematic features of definitions and/or characteristics of readers. The role of active engagement, encouraging students to directly interact with the material they are learning, will also be discussed leading to the present goals of this study including determining if fostering active engagement while students encounter a dictionary definition may have a positive effect on fourth and fifth graders ability to learn new vocabulary in comparison to approaches in which students are presented with revised definitions or traditional dictionary definitions.

## **2.1 THE RELATIONSHIP BETWEEN COMPREHENSION AND VOCABULARY**

The relationship between vocabulary knowledge and comprehension has a long tradition of study in the field of reading research (e.g. Davis, 1944, 1968; Thorndike, 1973).

Reading research has established a strong link between vocabulary knowledge and comprehension ability (Davis, 1944; 1972; Farr, 1969; Harrison, 1980; Stahl & Fairbanks, 1986). Although the relationship appears to be simplistic in nature—the more

words known the easier it is to understand a passage, the interaction is actually complex. Factors such as the relative nature of “knowing” a word, different difficulty levels of vocabulary terms, the role of context in determining unknown words, and the interaction of background knowledge all reveal a complex relationship between comprehension and vocabulary. There is little doubt that the relationship exists, the question for researchers has been to determine the nature of the relationship, exploring the extent to which vocabulary knowledge and reading comprehension impact skill in the other. Questions regarding the nature of the relationship have been explored through research offering empirical evidence for the relationship and theoretical suggestions describing the interaction between vocabulary and comprehension.

### **2.1.1 Empirical Evidence**

As stated, a relationship exists between vocabulary and comprehension (Stahl & Fairbanks, 1986; National Reading Panel, 2000). Empirical evidence exists indicating that vocabulary knowledge may impact comprehension.

Carver (1994) found that the percentage of unknown vocabulary words in a text is a function of the relative difficulty of the text. Following this reasoning, teaching unknown words prior to reading would directly assist the reader in reducing the relative difficulty of a text passage, thus enhancing comprehension. Other researchers, such as Sternberg (1987) assert that one can predict ability to comprehend text based on vocabulary knowledge. The greater the store of vocabulary and understanding of words and concepts the more likely one is to comprehend. Therefore, increasing an individual’s

vocabulary knowledge should directly increase their ability to comprehend. Sternberg states the relationship through his assertion that the level of vocabulary knowledge of a reader may determine their level of comprehension.

Studies have shown that instruction in vocabulary may effect comprehension of text passages that include the vocabulary terms (Mezynski, 1983; Graves, 1986; Stahl & Fairbanks, 1986). In a review of several studies exploring the relationship between vocabulary learning and comprehension Graves (1986) cited three studies as particularly convincing in establishing evidence between teaching new vocabulary and comprehension. These studies by Beck, Perfetti, & McKeown (1982); McKeown, Beck, Omanson, & Perfetti (1983); and McKeown, Beck, Omanson, & Pople (1985) were cited due to their replication of effects multiple times, and the use of several dependent measures.

### **2.1.2 Theoretical Perspectives**

In examining the relationship between comprehension and vocabulary knowledge much has been hypothesized as to why such a strong correlation exists between the two areas. A review of the literature reveals four basic assertions regarding this relationship. One, that vocabulary knowledge is the result of comprehension. Two, that comprehension is the result of vocabulary knowledge. A third view that vocabulary learning and comprehension learning serve as motivation to read and explore word meanings more. Finally, a view has been put forth that some other factor, such as background knowledge is the causal link between vocabulary knowledge and comprehension ability.



Support for the first hypothesis, vocabulary is the result of comprehension, can be found in work in Anderson and Freebody (1981) and Sternberg (1987). The assertion of this theory is that students with strong comprehension are able to learn from the text, not just content knowledge but also word meanings. So, vocabulary in this view is not a vehicle by which to comprehend better, it is the result of better comprehension.

In contrast, the second theory holds that comprehension is the result of vocabulary knowledge. Vocabulary knowledge is the means by which comprehension may occur. Anderson and Freebody (1981) call this the instrumental hypothesis. The instrumental hypothesis holds that word knowledge directly impacts comprehension. That is, to say that knowledge of individual words encountered while reading a text is the necessary and prerequisite skill needed in order to bring about understanding the text as a whole. A natural consequence then of learning new vocabulary would be increases in comprehension.

A third view is that vocabulary learning and comprehension learning serve as motivation to read and explore word meanings. Stahl and Fairbanks (1986) assert that motivation and awareness of new words are important to vocabulary and comprehension growth. In this view of vocabulary and comprehension a reciprocal relationship is explored. They propose that related gains in vocabulary and comprehension may just be a function of students becoming more interested in words in general, thus resulting in greater motivation to learn more words incidentally through reading. As students learn new words their background knowledge grows, thus allowing them to read more difficult passages.

Finally, a fourth hypothesis, also put forth by Anderson and Freebody (1981) and known as the knowledge hypothesis, explores another factor between vocabulary and comprehension. The knowledge hypothesis emphasizes the role of vocabulary knowledge within the framework of a schema theoretical view of reading comprehension. This theory explores the nature of vocabulary learning as a contributing factor in developing background knowledge about concepts and ideas. This view emphasizes that reading comprehension is enabled through concepts and connections in schema. Schema can be described as organized systems of concepts and ideas brought about by personal experience and interactions with the world. The more developed one's background knowledge, the easier it is to integrate new concepts (i.e. words) into existing schema. Thus schema, or background knowledge, of a particular concept enhances vocabulary knowledge.

Nagy and Herman (1987) offer support for the knowledge hypothesis by asserting that the correlation between vocabulary and comprehension is just really a result of individual background knowledge. This hypothesis holds that the more background knowledge one has about a topic the greater their comprehension of the text, and therefore also the greater their ability to learn new vocabulary related to the text. The knowledge hypothesis emphasizes that one's background knowledge is the key link between vocabulary and comprehension. The greater the background knowledge, the more likely vocabulary can impact comprehension.

## 2.2 VOCABULARY INSTRUCTION

### 2.2.1 Context vs. direct instruction approaches

Because of the strong correlation between vocabulary and comprehension and the importance of vocabulary in language development research has considered instruction. Many methods for introducing and teaching vocabulary have been explored, and some studies have focused on vocabulary interventions aimed specifically at improving comprehension. In this area researchers have explored approaches to vocabulary instruction and the resulting effects on reading comprehension ability (Beck, Perfetti, & McKeown, 1982; Graves, 1986; McKeown, 1991; Mezynski, 1983; Stahl and Fairbanks, 1986). Debate in vocabulary instruction which impacts comprehension has tended to explore learning words in context through wide reading and the direct teaching of vocabulary.

Researchers in favor of a context approach to vocabulary instruction favor instructional interventions aimed at having readers learn new vocabulary through inferring word meaning from texts. In support of this reasoning Nagy, Herman, and Anderson (1985) have asserted that the scope of words learned yearly on the part of school children is far too large to account for direct instruction as the vehicle by which most new words can be learned. These researchers estimate that students learn approximately 3,000 words per year. Considering this high growth in vocabulary knowledge these researchers assert that most words are learned from context.

Despite this view other researchers favoring direct teaching methods have advocated teaching word meanings through definitional approaches. Support for definitional approaches have come from research that has pointed out the difficulty students have in unlocking the meaning of unknown words from context clues alone. In a study investigating students' ability to learn new vocabulary using context clues Schatz and Baldwin (1986) found no effects for instructional methods using context and advocated a dictionary and glossary strategy for learning new words. Nist and Olejnik (1995) found that students who were exposed to definitions written in a clear manner tended to perform better than students who were in a group with enhanced context. That is to say, that even when texts containing new vocabulary were altered to create a context by which new terms could be learned through reading, students who were given clear definitions of words performed better.

### **2.2.2 Recommended Instructional Approaches**

Rather than advocating a strictly contextual approach or direct instruction methods, reviews of literature concerning effective vocabulary instruction point to a variety of methods which seem to work in concert to encourage acquisition of new vocabulary (National Reading Panel, 2000). Research and reviews of literature in this area indicate that the best instructional approaches in vocabulary instruction involve both direct teaching and contextual information about words. In exploring vocabulary instruction and effects on comprehension, Stahl and Fairbanks (1986) completed a meta-analysis of over fifty-two studies of vocabulary acquisition. They concluded that three factors

seemed to produce the greatest impact on the effectiveness of vocabulary instruction. These included definitional and context information; multiple exposures to words; and deep processing.

Beck and McKeown's (1991) review of the vocabulary instruction literature indicated that all instructional methods produced better word learning than no instruction, no one method was shown to be consistently superior to others, an advantage was shown for methods that use a variety of techniques to learning new words, and finally an advantage was shown for methods which offered repeated exposure to new words.

An example of how these principles can be implemented was demonstrated by Beck, Perfetti, and McKeown (1982), and by McKeown, Beck, Omanson, and Pople (1985). In these studies, vocabulary instructions were highly interactive and "rich". Students were given repeated exposure to new words, were highly motivated to learn new words, and encountered and used the words in a variety of contexts including discussions, definitions, and texts. Their study revealed that these factors positively contributed to vocabulary growth. Further, comprehension was most affected when vocabulary instruction involved processing information rather than just connecting word meaning.

These studies illustrate the consensus of research regarding best practices for vocabulary instruction which emphasize that it is the nature of instruction in unknown terms and concepts that is critical to improving comprehension. Research in this area strongly suggests that vocabulary learning is best facilitated when teachers use instructional approaches that employ both direct and indirect instruction in rich context, repeated exposure to new words, and classroom activities that encourage active

engagement and deep processing (Beck & McKeown, 1991; National Reading Panel, 2000; Stahl & Fairbanks 1986).

### **2.2.3 Typical Classroom Practices**

It seems reasonable that the researched best practices for vocabulary instruction would be commonly employed in the elementary and secondary curriculum materials and teaching practices. Yet, studies exploring school materials and teacher practices show that there is little adherence to instructional recommendations from research (Scott, Jamieson-Noel, Asselin, 2003). Numerous studies have found that classroom instruction in vocabulary does not reflect best practices as articulated by reading instructional research (Blachowicz, 1987; Blanton & Moorman, 1990; Durkin, 1978-1979; Harmon, Hedrick & Fox, 2000; Ryder & Graves, 1994; Watts, 1995).

Studies indicate that classroom teachers and suggestions in teachers' manuals tend to focus on direct and very narrow instruction as the main method employed to further vocabulary learning (Beck, M.G.McKeown, & Omanson 1987; Scott, Jamieson-Noel, Asselin, 2003; Watts, 1995; National Reading Panel, 2000). Instruction typically includes the teaching of vocabulary as a pre-reading event, with the aim of enhancing comprehension through teaching new terms and concepts in which the teacher either verbally provides information regarding the meaning of the new word, and/or directs students to look up the meaning of the words using a dictionary or glossary. The instruction approach of using definitions as the main vehicle to teach new terms is well documented in research (Watts, 1995; Beck & McKeown, 1991; Stahl & Fairbanks,

1986; Harmon, Hedrick & Fox, 2000; Ryder & Graves, 1994; Scott, Jamieson-Noel, Asselin, 2003).

For example, in a study involving classroom teacher's methods for instructing vocabulary, Watts (1995) found that 87% of instruction in new words involved definitional approaches. A similar study by Scott, Jamieson-Noel, and Asselin (2003) also found that definitional approaches accounted for the majority of vocabulary instruction. This study also found the most common procedure involved providing words to students and directing them to find the appropriate definition in a dictionary or glossary and copy it.

In addition to a preference for employing dictionary definitions, studies of teacher practices and published teacher curriculum materials reveal that little is typically done to encourage deep processing and active engagement when learning new words. A study by Harmon, Hedrick, and Fox's (2000) examined the content and teaching suggestions offered to teachers through the teacher's manual. It was determined that teaching suggestions did not reflect the practice of encouraging student engagement and deep processing of definitions when learning new vocabulary. Few suggestions were offered beyond having students passively use the glossary. Watts' study (1985) exploring the vocabulary instruction in six elementary classrooms revealed that dictionary definitions were merely copied by students, and rarely discussed. These activities involve low-level processing skills rather than the deep processing necessary for students to most profit from reading dictionary definitions.

#### **2.2.4 Definitions as a vehicle to learn new words**

Given teachers' preferences for vocabulary instruction that emphasize looking up terms in the dictionary, researchers have investigated the effectiveness of definitions for learning new words (McKeown, 1991, 1993; Miller & Gildea, 1987; Nist & Olejnik, 1995; Scott & Nagy, 1997; Jenkins, Matlock, and Slocum, 1989; Schatz & Baldwin, 1986). Several studies have shown that dictionary definitions may be a poor tool for assisting students in learning new words (McKeown, 1991, 1993; Miller & Gildea, 1987; Nist & Olejnik, 1995; Scott & Nagy, 1997). Therefore, dictionary definitions and instructional approaches using definitions have been further explored to determine why they are not effective. A review of the research concerning dictionary use as a vehicle for learning new words is separated into two main thrusts. The first area of research focuses on the characteristic features of definitions which may hinder the reader's ability to understand words; and the second area of research explores reader characteristics which seem to directly impact individuals' ability to learn new words from dictionary definitions.

##### **2.2.4.1 Characteristic features of definitions**

The features of dictionary definitions that hinder a readers' ability to understand words have been analyzed in several studies establishing that content and structure of dictionary definitions are problematic for word learning (McKeown, 1991; Mezynski, 1983; Nagy



and Herman, 1987). These features relate to the nature of dictionary content, and the nature of written definitions that do little to clearly articulate the meaning of unknown terms.

The nature of dictionaries creates problems for presenting adequate information about new terms. Nagy and Herman (1987) point out that in order to cover the large volume of words within a language; definitions present only abbreviated information about words. They point out that dictionaries are not word encyclopedias, and this abbreviated information may not provide the rich descriptions needed in order to learn new words.

Reviews of definitions found in materials typically used in schools, such as student dictionaries or glossaries have demonstrated that most definitions are problematic (McKeown, 1991; Harmon, Hedrick, & Fox, 2000). These definitions were characterized by features which made accessing the meaning of an unknown word difficult to ascertain based on reading the provided definitions.

McKeown's 1991 study which evaluated the quality of dictionary definitions is widely cited as providing an overview of problematic features of definitions. These features include weak differentiation, likely interpretation, vague language, and disjointed components. Weak differentiation refers to definitions wherein the targeted word is not explained fully enough in the context of its specific use. The definitions for words which suffer from weak differentiation are too broad for specific word knowledge to occur. Likely interpretation refers to dictionary definitions that are either too brief, or do not provide enough contextual information about an unknown term. The provided definition's brevity likely leads the reader to interpret an incorrect meaning for the term.

Definitions which are characterized as vague language offer little specific language regarding a word's meaning. The definitions are worded with phrases that are too unclear to provide enough specific meaning about words. Finally, definitions with disjointed components contain pieces of information about a word's meaning, such as a series of phrases or synonyms about a word. These components fail to reveal how the separate pieces of information relate to one another in order to form a unified representation as to the word's meaning. McKeown's (1991) analysis of definitions determined that many dictionary definitions could be characterized as having multiple problematic features.

#### **2.2.4.2 Reader characteristics**

The second main focus of research regarding dictionary definitions explores the characteristics of learners that impact their ability to learn words using such methods. A consensus of research indicates that readers tend to exhibit certain characteristics which contribute to difficulty in learning new words from dictionary definitions, particularly school-age children (Mezynski, 1983; McKeown, 1991; Harmon, Hedrick, & Fox 2000; Scott, and Nagy, 1997; Miller and Gildea, 1987). Specifically, students typically only target a fragment of the dictionary definition when studying a new word. Thus, they fail to attend to other information which may assist them in fully integrating all of the definition into their understanding of the new vocabulary (Mezynski 1983; McKeown 1991, Miller and Gildea, 1987; Scott & Nagy, 1997).

A study illustrative of this concept was conducted by Miller and Gildea (1987). In this study researchers examined sentences using new vocabulary produced by children

after consulting a dictionary. The researchers found that students tended to focus on only a fragment of the dictionary definition in constructing the sentences. Nagy and Scott (1990) also found that children tended to only integrate a fragment of a definition when identifying or using new vocabulary. This lack of full attention to the total definition hinders a student's ability to learn new vocabulary through dictionary definitions.

### **2.3 INSTRUCTION ADDRESSING FEATURES OF DEFINITIONS AND ACTIVE ENGAGEMENT**

Several studies have been conducted to determine if features in definitions can be improved thus impacting students' ability to learn new word meanings. Far less work has focused on instructional methods aimed at overcoming typical characteristics of readers when learning new words from dictionary definitions (Nist & Olejnik, 1995; Knight, 1994). A discussion of the work aimed at improving definitional qualities will be presented, and then the later issue of reader characteristics will be discussed. Finally a rationale for the present study will be presented.

#### **2.3.1 Studies aimed at overcoming problematic features of definitions**

Several studies have explored overcoming problematic features of definitions through revising the text of the definition. The most widely cited studies in this area were conducted by McKeown (1993). In McKeown's studies fifth grade students were given

traditional and revised dictionary definitions. In the first study students' ability to acquire meaning of new terms was measured through a sentence generation task. Those students who were given revised definitions were able to produce more acceptable sentences than those students who were given unrevised dictionary definitions. The second study explored students' performance on open-ended question tasks about the meaning of new words. Those students who learned new words using the revised definition approach demonstrated more answers to open ended questions that were characterized as "distinct". Distinct responses were those that demonstrated a clear and appropriate use of the vocabulary term. Those students receiving traditional dictionary definitions demonstrated more responses that were either "generic", meaning the use of the word in the sentence was correct but weakly represented, or "unacceptable", meaning the use of the word was incorrect.

Other studies have also shown that quality definitions result in improved performance on tasks measuring knowledge of new vocabulary terms. For example, in a study examining the role of context and dictionary definitions Nagy and Herman (1985) compared "adequate" versus "inadequate" dictionary definitions on college students' ability to learn new words. Their study found that students who received adequate definitions performed better than those that received inadequate definitions.

### **2.3.2 Issues about active engagement**

It is the consensus of several researchers that a key feature of literacy learning is active engagement on the part of the reader. The engagement perspective on classroom

language and literacy learning emphasizes motivation in learning through strategy instruction, and social aspects of learning (Wilkinson, & Silliman, 2000).

### **2.3.2.1 Active engagement through social collaboration**

One of the areas in which motivation in language and literacy is enhanced is through emphasis in the social aspects of classroom instruction (Guthrie & Alverman, 1999). The theoretical basis for social collaboration is based on the view of social construction of knowledge, in which peer interaction facilitates the affirmation or reconciliation of new knowledge (King, 1991). In this view knowledge is constructed from community interaction (Greene & Ackerman, 1995). In proposing principles to enhance engagement researchers have called for an increase in social collaboration in which students build off of one another's contributions to construct meaning (Guthrie, Cox, Anderson, Harris, Mazzone, and Rach, 1998).

Techniques aimed at encouraging the social construction of knowledge have emphasized activities that encourage peer interactions and reciprocal questioning (King, 1989, 1991; Webb, 1989). Researchers studying peer interactions through these techniques have stated that social construction of knowledge is enhanced by asking students questions and allowing for responses. Their work is based on the notion that such activities allow for students to externalize their thoughts, and that group members can affirm or revise their individual perceptions based on the elaborations of their peers (King, 1991).

### **2.3.2.2 Active engagement and comprehension**

Active engagement is also attributed to comprehension growth (Pressley, 2000). One aspect of active engagement related specifically to comprehension can be described as getting readers to consider the ideas in a text deeply, or to actively “grapple” with the ideas in a text (Beck, McKeown & Worthy, 1993). By fostering active engagement students are encouraged to deal with constructing meaning of a text by bringing a problem solving approach to the reading task.

An example of fostering active engagement in reading comprehension can be found in a study by Beck, McKeown, Sandora, Kucan, and Worthy (1996). Their instructional approach, entitled Questioning the Author, involved posing questions to students while reading texts as a class. In the words of the researchers the Questioning the Author approach is described as follows:

[Questioning the Author’s] focus is to have students grapple with and reflect on what an author is trying to say in order to build a representation from it. This is accomplished by having students consider segments of text on-line, in the course of initial reading, and respond to researcher-posed Queries such as ‘What is the author trying to say?’ and ‘What to you think the author means by that?’ The queries are designed to invite students to explore the meaning of what is writing in the texts they read. (Beck, McKeown, Sandora, Kucan, and Worthy 1996) pg. 387

Instructional approaches such as Questioning the Author which engage students in actively constructing meaning while reading texts have shown positive effects for comprehension (Beck, et al. 1996; Taylor, Pearson, Peterson, Rodriguez, 2003).

As it relates to vocabulary learning active engagement might be considered as encouraging students to think deeply about the meanings of new vocabulary. Very little

has been done to explore how to foster active engagement for vocabulary instruction using dictionary definitions.

A study by Jenkins, Pany, and Schreck (1978) examined the effects of interactive versus non-interactive procedures in vocabulary instruction. In this study fourth grade students were presented vocabulary instruction using three conditions. One condition, “Meanings from Context” provided vocabulary terms only by providing an example of the word in context. Two other conditions “Meanings Given” and “Meanings Practiced” instructed vocabulary terms with definitions provided. The “Meanings Given” condition simply provided the vocabulary term and the definition whereas the “Meanings Practiced” supplied the vocabulary term and the definition on flash cards and flash cards drills. Not surprisingly, the “Meanings Practiced” condition resulted in better performance than the other two conditions. It is not possible to determine if the practice sessions offered an opportunity for increased engagement or simply more exposure to the new words.

In another study Kameenui, Carnine, and Freschi (1982) examined vocabulary conditions that included definitions, a practice condition, and a condition that focused on “passage integration”. This “passage integration” condition provided instruction using the meanings of instructed words in which students were asked questions about the words as they may appear in context. Students instructed with the “passage integration” condition demonstrated higher recall measures than the other conditions.

In a series of three classroom studies aimed at identifying successful vocabulary instruction researchers characterized optimal vocabulary methods as “rich instruction” (Beck, Perfetti, McKeown, 1982; McKeown, Beck, Omanson & Perfetti, 1983;

McKeown, Beck, Omanson, & Pople, 1985). One key feature of “rich” instruction includes the principal of fostering active engagement between the student and the new vocabulary terms. Activities built into the instructional program that engaged the learner by having them interact with word meanings as soon as they were introduced. This concept is further described by Beck and McKeown (2006) as follows:

Toward developing deep understanding, a student needs to interact with word information in some way... We implemented the notion of interaction with word meaning by providing quick activities with the words as soon as their meanings were introduced. For example, after encountering an explanation for *commotion*, students might be asked, ‘Would there more likely be a commotion on the playground or in the library?’ and then asked to explain ‘why?’ p. 186

The studies mentioned utilizing rich instruction have described the concept of active engagement for new vocabulary. However, this active engagement has tended to focus on furthering a students’ understanding of instructed word meanings that have been presented using a variety of approaches in contrast to fostering active engagement of a dictionary definition. There appears to be a lack of research that explores the effects of fostering active engagement of dictionary definitions.

Although there has been little research for fostering active engagement of dictionary definitions, a study exploring learning word meanings through context has implications in this area. Goerss, Beck, and McKeown (1999) studied remedial students’ ability to derive word meaning from context using an instructional intervention in which the students grappled with text information and were guided by questions from the researcher. The study revealed that students were able to effectively overcome some of the problems inherent in learning words from context when required to actively engage with the target word.



The research mentioned above relates to the present study to the extent that if students were able to grapple with text information through an approach using a questioning strategy to learn words from natural context the same notion may apply to dictionary definitions. Perhaps engaging questions posed while students read dictionary definitions could serve as a mechanism to foster active engagement. The goals of this study include determining if fostering active engagement while students encounter a dictionary definition may have a positive effect on fourth and fifth graders ability to learn new vocabulary in comparison to approaches in which students are presented with revised definitions or traditional dictionary definitions.

### **3.0 OVERVIEW OF STUDY**

As indicated previously the goal of this study was to compare elementary students' ability to learn the initial meanings of new words using three different approaches: Traditional, Friendly Definitions, and Parsing. These approaches represented techniques for initial introduction of vocabulary terms in contrast to teaching techniques which presented words with discussions or repeated exposures to help students learn new words.

The Traditional approach involved presenting students with definitions taken from a published children's dictionary. The Friendly Definitions approach used definitions that were revised to make the meaning more accessible to the learner. The Parsing approach used traditional definitions but attempted to encourage deeper processing by asking questions aimed at encouraging students to attend to the meaning of the definitions.

## **3.1 METHODS**

### **3.1.1 Context**

This study targeted fourth and fifth grade students. Upper elementary students were selected because such students are expected to learn vocabulary as part of developmental reading instruction. Therefore, elementary students are accustomed to being asked to deal with new terms, and are likely to know less vocabulary than older students.

The grade levels were further narrowed to the fourth and fifth grade levels due to the nature of reading instruction at this intermediate elementary level. In the primary grades of elementary school (kindergarten, first and second) basal teacher's editions traditionally focus on high frequency sight words rather than on words aimed at building a student's store of vocabulary knowledge (Beck and McKeown, 2004). In contrast, a traditional part of fourth and fifth grade reading instruction includes vocabulary instruction of terms that are relatively unknown to students. Therefore, students in the fourth and fifth grade represent a population where teachers would need to use approaches for introducing vocabulary that would prove beneficial for learning unknown words.

#### **3.1.1.1 Study participants**

Fourth and fifth grade students enrolled at three separate elementary schools were involved in this study. Each school was involved in one of three phases in the study. Two phases involved pilot work related to determining materials for the formal study,

while the third phase involved the formal study. Separate IRB approvals were obtained for each phase of the study corresponding to the different work at each school. Copies of the IRB approvals and materials are included in Appendix A, and letters associated with the IRB process are included in Appendix B. To maintain the confidentiality of all participants pseudonyms have been substituted for the actual school titles. Table 2 details the different phases and involvement of each school.

**Table 2. Study Phases and School Participation**

Phase of study	Name of School	Description of Involvement
Phase One: Pilot word list testing	Cypress Elementary	Pilot work in fourth and fifth grade classrooms involving testing vocabulary terms to develop a final pool of words for use in the formal study.
Phase Two: Pilot of parsing technique	Quaker Elementary	Development of the Parsing technique.
Phase Three: Formal Study	Jefferson Elementary	Site of the formal study comparing three techniques for introducing vocabulary conducted in all fourth and fifth grade classrooms.

As shown in the table, each school played a unique role. Quaker and Cypress Elementary schools both served as sites for pilot work, and Jefferson Elementary served as the site for the formal study.

In order to develop a list of vocabulary terms relatively unknown to students in fourth and fifth grades students at Cypress Elementary participated in pre-testing of vocabulary terms. The process for selecting the words is further described under the “Selection of Words” portion later in this chapter. At Quaker Elementary one fourth

grade classroom of 23 students was used to develop a script for the Parsing approach. Finally, Jefferson Elementary served as the site for the formal study. The demographics of each school are described in detail as follows:

Cypress Elementary: Cypress Elementary was located in close proximity to the school used for the formal study, Jefferson Elementary. Cypress Elementary enrolls 680 students in grades 3-6. The students at Cypress come from a variety of socioeconomic circumstances, with the majority of students drawn from a white, middle class background.

Cypress elementary was selected as an appropriate site for pre-testing vocabulary terms because students enrolled at Cypress had higher reading achievement scores than students enrolled at the formal site as reported on the Pennsylvania System of State Assessment (PSSA). Because the students at Cypress Elementary typically have performed better on tests of reading achievement, it was reasonable to assume that if a pool of words could be identified as unknown by the students at Cypress Elementary they would, most likely, be unknown by the students at Jefferson Elementary. Therefore, all students in the fourth and fifth grade classes at Cypress Elementary were administered a pre-test of 100 vocabulary terms as part of the process of selecting a final list of words for the formal study.

As such it was reasonable to assume that words that were unknown by students attending Cypress Elementary would also be likely unknown by students at Jefferson Elementary, the formal study site. The scaled scores for reading achievement for Cypress Elementary and Jefferson Elementary, and the percentages of students reported as proficient and advanced on The Pennsylvania System of State Assessment are illustrated

in Table 3 (Pennsylvania Department of Education, 2005). As shown in the table students enrolled in Cypress Elementary taking the PSSA as third graders demonstrated higher performance than third grade students attending Jefferson Elementary. Consistency over the 2002-2003, and 2003-2004 time period lead to a reasonable assumption of similar performance for students enrolled in the fourth and fifth grades. Because these test scores were obtained in the 2002-2003 and 2003-2004 school years the results reflect reading performance for students enrolled in the fourth and fifth grades at the time of this study. Based on this past test performance it is reasonable to assume that students at Cypress have somewhat higher reading achievement than students at Jefferson.

**Table 3. PSSA scaled scores**

<u>SCHOOL</u>	<u>2002-2003</u>	<u>2003-2004</u>
Jefferson	1322	1322
Cypress	1349	1359

Quaker Elementary: Quaker Elementary, the site selected for piloting the parsing technique, is located in a small city in Western Pennsylvania. This elementary school serves students in grades kindergarten through sixth grade. The enrollment at Quaker Elementary of approximately 600 students is drawn from a middle and lower socioeconomic background of mixed ethnicity.

Quaker Elementary was a convenience selection to the extent that the administration and classroom teacher were known to the researcher and open to

participating in pilot work for this study. Moreover, the students at Quaker Elementary's reading performance is similar to the performance of students at the formal study site as measured by the 2004-2005 third grade reading section of the Pennsylvania System of State Assessment. Therefore, students at Quaker Elementary had similar achievement in reading when compared to students at the formal study site.

Jefferson Elementary: Jefferson Elementary, the site of the formal study, was a rural elementary school located in Venango County, Pennsylvania. Jefferson Elementary serves students in grades kindergarten through sixth with an enrollment of about 240 students. At the time of this study approximately 65 students were enrolled in the fourth and fifth grades, which were divided into two heterogeneous classes at each grade level.

Jefferson Elementary was selected for the formal study because the relatively small size of the elementary school afforded the researcher with the opportunity to involve every classroom at the fourth and fifth grade level. By inviting the total population of all fourth and fifth grade students to participate in the study it was not necessary to stratify by ability level and counterbalance groups.

### **3.1.1.2 Selection of words**

In order to establish the effectiveness of the three instructional techniques it was necessary to determine a corpus of words that would be likely unknown to fourth and fifth grade students.

The selection of vocabulary words occurred through the following processes: 1) initial development of a pool of words; 2) input from vocabulary experts; 3) pre-testing

with fourth and fifth grade students; 4) analysis of test results and random assignment of words to conditions for formal study; 5) assignment of words into groups.

As stated previously the first process for word selection involved developing an initial pool of words. This was accomplished, in part, by referencing The Living Word Dictionary, The words we know, A national Vocabulary Inventory Study (Dale & O'Rourke, 1979). This dictionary lists over 43,000 words according to familiarity scores for various grade levels. For example, a word listed at the fourth grade rating indicates that the word is familiar to 80% of fourth grade students. For the purposes of this study, the researcher only selected words that were rated at eighth grade and above, postulating that students in the fourth and fifth grades would be less familiar with these terms. Word selection was also narrowed by the researcher considering her initial perception of whether the words would be unknown to students in fourth and fifth grade, and would be useful words for students at these grade levels to learn. This perception was based on the researcher's experience as a classroom teacher and reading specialist. As such an initial list of 400 words was identified.

The next step in word selection was to gather input from experts in the field of vocabulary instruction using a framework developed by Beck, McKeown, and Omanson (1987) for identifying which words would be most useful to teach elementary students. Their system organized words into three tiers: Tier 1, basic words that require no direct instruction of meanings; Tier 2, words that instruction may impact a student's acquisition of a mature vocabulary by mastering high utility sophisticated terms; and Tier 3, low frequency words which related to specific domains and specialty subject areas (Beck & McKeown, 2007; Beck, McKeown, & Kucan, 2002). Tier 2 words are considered to be



most appropriate for instruction in the elementary grades because they are words that fit into two criteria: 1) words that are sophisticated or precise ways to describe concepts that students understand, and 2) words that can be used in several domains (Beck, McKeown, & Kucan, 2002).

Drawing on their expertise in vocabulary Drs. Beck and McKeown provided further assistance in selecting words for the study. They rated the list of 400 words independently to determine Tier 2 words for use with students in the fourth and fifth grade. 100 words that were found to be in agreement between both researchers were randomly selected for the pre-test.

Next the 100 words identified as Tier 2 by Beck and McKeown were pre-tested at Cypress Elementary with the goal of determining a core list of thirty six words for the formal study. As stated previously, students at this elementary school were selected for pre-testing because the school demographics and reading achievement results indicated that it was very likely that if vocabulary terms were unknown for students at Cypress Elementary they would also be unknown to the students at Jefferson Elementary.

The pre-test of the 100 vocabulary terms was a multiple choice test administered to all fourth and fifth grade students in Cypress Elementary. The tests were administered as group tests by classroom teachers. Words were assessed by providing students with the word as the stem and four possible definitions for the choices. Each of the four choices were constructed to conform to the semantic category of the word. Table 4 provides an example item from the pretest.

**Table 4. Example from pretest**

<b>benevolent</b> <b>a. hurtful, unkind</b> <b>b. hitting</b> <b>c. to the point</b> <b>d. kind</b>
---

The test results were then analyzed to determine which words were known by 30% or fewer of the students at Cypress Elementary. Of these terms, thirty-six words were randomly selected for use in the formal study. Finally, the thirty-six words were randomly separated into three groups of twelve for use in each of the three conditions in the formal study.

Appendix C includes all word selection documents. These include the initial list of 400 words, the pre-test of 100 words, the list of 36 words for the formal study, and the final list of three groups of twelve words for use in the three conditions.

### **3.1.1.3 Development of the parsing approach**

As already indicated one of the three conditions, Parsing, involved fostering active engagement while reading dictionary definitions. To develop this strategy techniques used in other approaches to foster engagement were explored followed by refining the technique through pilot work. Active engagement has been related to the concept of engaging with text to construct meaning (Wilkinson, & Silliman, 2000). Goerss, Beck, & McKeown (1999) found that students' were able to learn new vocabulary words from

context when assigned to an instructional intervention that required them to actively engage with the new terms guided by questions from the researcher. Additionally, the technique known as Questioning the Author developed by Beck, McKeown, Sandora, Kucan, & Worthy (1996) also encouraged engagement with text by inviting students to consider the meaning of a text through the use of open ended questions.

For the present study the researcher initially developed several open ended queries that could be used to invite students to engage with a text and follow their responses with prompts and further queries. As such an initial script for the Parsing approach was developed, and the technique was piloted in a fourth grade classroom at Quaker elementary and audio taped for transcription and review.

It became quite clear upon review of the audio transcripts that the use of multiple queries and follow-up questions, redirections, and prompts created two issues that were problematic for Parsing for this study. First, the time spent on queries or redirections followed by student responses moved the technique away from an introductory approach and more related to a classroom discussion. Secondly, as the time of the exchange for each word between the students and researcher increased the Parsing technique began to more closely resemble a teacher guided activity.

These two issues were of great concern for the present study. First, Parsing was designed as an introductory technique and to be compared to other introductory approaches. Second, Parsing was intended simply as an invitation for students to engage with the definition as opposed to a teacher guided discussion. Therefore, the technique was re-evaluated to control for equating time between the Parsing and Friendly Definitions, and Traditional conditions, and to avoid teacher guidance.

As such, the Parsing technique was redesigned to merely invite students to grapple with the meaning of vocabulary terms and to limit the amount of student responses in an effort to equate time among all three conditions. Table 5 provides the Parsing queries and procedures for responding to student comments.

**Table 5. Parsing queries and Responses**

<p><b>Responses which are complete and accurate</b></p> <p>Researcher reads the word and the definition out loud Researcher asks, "What does this definition mean?"     Researcher then allows for one response     Student provides an adequate response</p> <p><b>Responses which are not accurate</b></p> <p>Researcher reads the word and the definition out loud Researcher asks, "What does this definition mean?"     Student gives response that shows very poor understanding     Researcher says, Let's read the definition again.     After reading the definition Researcher then says, "Can anyone else say what they think the definition means?"     Researcher then allows for one more response.</p> <p><b>Responses which target only a fragment of the definition:</b></p> <p>Researcher reads the word and the definition out loud Researcher asks, "What does this definition mean?"     Student gives response that only targets a fragment of the definition     Researcher then says, "Can anyone else say what they think the definition means?"     Researcher then allows for one more response.</p>
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As can be seen in the table, the Parsing approach considered three types of student responses: Those that were initially correct, those that were incorrect, and those that targeted only a fragment of the definition. As noted previously, care was taken to keep the interactions between to students and the researcher brief, and to avoid any leading of students on the part of the researcher.

### **3.1.2 Articulation of Instructional Approaches and Conditions**

Twelve different words were assigned to each of the three conditions. The assignment of these words has been described earlier under section 3.1.1.2, Selection of Words. The following section describes each instructional approach in greater detail.

Instructional Approaches: Traditional: The first instructional approach, Traditional, represented a basic approach to vocabulary instruction typical in many elementary classrooms. This approach involved simply presenting students with a vocabulary term and a definition directly from a student dictionary or glossary. Studies show that this method is the most commonly used form of vocabulary instruction in elementary schools (Scott, Jamieson-Noel, & Asselin, 2003). Observations of teachers' behavior in vocabulary instruction reveal that the majority of instruction consists solely of teachers verbally mentioning vocabulary terms and the definitions, or mentioning the vocabulary terms and directing students to copy the definitions from a dictionary or glossary (Scott, Jamieson-Noel, & Asselin, 2003; Watts 1995). Therefore, the Traditional condition in this study involved simply presenting students with a vocabulary term and the corresponding dictionary definition.

For the Traditional condition, definitions were selected by using the American Heritage Children's Dictionary (Pickett, 2003), a best selling dictionary designed for students at intermediate and upper elementary grades. In cases where multiple

definitions were presented, the researcher selected one definition randomly, or the definition which was a stronger expression of the word.

Friendly definitions: There is empirical evidence the students have difficulty with dictionary definitions (Deese, 1967; Miller & Gildea, 1987; McKeown, 1993; Nist & Olenick, 1995; Scott & Nagy, 1997). Based upon this finding, an approach called Friendly explanations has developed over time as a means of improving students' ability to learn word meanings from definitions (Beck & McKeown, 2004). In a study by Margaret McKeown students were presented with vocabulary terms with traditional dictionary definitions. In this study the problems students had in understanding word meaning based on the traditional definitions were analyzed. Through this analysis it was determined that revised definitions could be created to make meaning more accessible to elementary students (McKeown, 1993). The notion of a revised definition which is clearer and more appropriate for elementary students has become known as student-friendly explanations (Beck & McKeown, 2007).

When teaching students vocabulary using student-friendly explanations the word's dictionary definition is replaced with everyday connected language. This revised definition is not only aimed at making the meaning of words clearer for elementary students, but also to help them get an idea of how the word may be used (Beck & McKeown, in press; Beck, McKeown & Kucan, 2002). For example, consider the word "exotic". The traditional definition is written "foreign; strange; not native" whereas a student friendly-explanation is "something that is exotic describes something that is unusual and interesting because it comes from another country far away." (Beck, 2005). For the purposes of this study, the second approach to vocabulary instruction called

“Friendly Definitions” employed the use of revised definitions modeled after the student friendly-explanations.

For the Friendly Definition condition friendly explanations were created by following the guidelines based on research by Beck, McKeown, & Kucan (2002). Student-friendly definitions were created for each word assigned to this condition by characterizing the typical usage of words and explaining word meaning through everyday language.

Parsing: The third instructional approach for this study, Parsing, was based on the theory of deep processing ( Craik & Lockhart, 1972). Processing can be described as a continuum in which new information is analyzed at various levels of depth. Shallow processing refers to dealing with new information only on a surface level, whereas deep processing involves making connections in terms of the information’s meaning and importance.

A variety of research indicates student learning of vocabulary may be enhanced through fostering deeper processing and active engagement on the part of the learner (McKeown, Beck, Omanson & Pople, 1985; Stahl & Fairbanks, 1986; Taylor, Pearson, Peterson, & Rodriguez, 2003). Thus, the aim of Parsing was to ask questions regarding the meaning of a vocabulary definition, thus engaging the student in deeper levels of processing than just following along to a definition read aloud.

An additional aim of the Parsing approach was to assist students in attending to the total meaning of a definition. A variety of research indicates that when confronted with new vocabulary and definitions students typically only target a fragment of the vocabulary definition (Mezynski, 1983; McKeown, 1991; Miller & Gildea, 1987; Scott &

Nagy, 1997). This tendency to only attend to a fragment of the definition often leads students to not integrating information about the word (Miller & Gildea, 1987). Thus, the Parsing approach was intended as a means of encouraging students to attend to more than just fragments of the dictionary definition by virtue of engaging the reader.

For the Parsing condition the 12 vocabulary words were assigned traditional dictionary definitions through referencing the American Heritage Children's Dictionary (2003). As with the Traditional condition if multiple definitions were presented the researcher selected one definition randomly, or used the definition which had a stronger expression of the word. In contrast to the Traditional condition the Parsing condition presented students with the word and definition immediately followed by open ended queries about the meaning of the dictionary definition. As stated previously, these queries were asked by the researcher as an effort to invite students to actively engage with the text of the definitions. As was shown in Table 3.4, the Parsing conditions provided students with an initial prompt to invite their engagement with the definition, and followed with an additional prompt depending on student answers.

## **3.2 PROCEDURES**

### **3.2.1 General Procedures**

Over the course of three weeks all fourth and fifth grade classes at Jefferson Elementary were taught 36 vocabulary terms in sets of 12, with each set representing one of the three



conditions: Traditional, Friendly Definitions, and Parsing. Each condition involved two 45 minute sessions in which the researcher presented six new words and definitions in each of the two sessions.

All classrooms received instruction in each of the three conditions followed by tasks for each word. A concern with this study was that if students were presented with a new instructional approach for learning vocabulary terms during one week they might apply that new instructional strategy when learning new terms the following week. Therefore the Traditional approach, which was already familiar to students, was presented to all the classrooms in the first week as a control condition. Friendly Definitions and Parsing represented approaches which were considered different than typical classroom practices, and therefore were regarded as experimental conditions. To attempt to deal with any carryover of the two experimental conditions the two approaches were counterbalanced during the second and third weeks of the study. Thus, half of the classes were first instructed with the Friendly Definition approach followed by instruction the following week using Parsing, while the other half of the classes received instruction first using the Parsing approach, and then received instruction in the Friendly Definitions approach the subsequent week.

### **3.2.2 Procedures**

#### **3.2.2.1 Instructions to students**

For each approach, during the first session the investigator used an example vocabulary word to demonstrate the procedure and then modeled sentence generation and open ended

question tasks (see 3.3.1). For the Traditional and Friendly Definition conditions this simply entailed reading the word and the definition and explaining the tasks. For the Parsing condition prior to presenting the targeted vocabulary terms the researcher explained that when she presented them with the word and the definition she would also ask them questions. She modeled the approach to the students by presenting an example vocabulary word, the definition, and then asking a parsing query. The researcher then modeled possible responses to the parsing query to reveal to the students the general procedure. Then the researcher explained the tasks for the students.

### **3.2.2.2 Procedures and materials**

For each classroom session each student in the class was given a packet containing one word and definition on a page followed by space to complete two different tasks: sentence generation and open ended questions. In each condition the investigator read the word and the definition aloud to the students. During the Traditional and Friendly Definition conditions after reading the definitions the researcher directed students to complete the two tasks. During the Parsing condition after reading the word and definition aloud to students the researcher asked one or two parsing queries about the meaning of the definition and allowed a few students to respond following the general procedure described earlier in this chapter. After allowing for one or two student responses the class was then directed to complete the two tasks. Additionally, during the Parsing condition the classroom sessions were audio taped so that the transcripts of student responses could be reviewed later. The procedure for the Parsing condition was

described in Table 3.4, and transcripts of the Parsing condition are included in Appendix D.

### **3.3 MEASURES**

#### **3.3.1 Tasks**

Two independent measures were included in this study: A sentence generation task, and an open ended question task. Sentence generation is a traditional form of assessing vocabulary knowledge, and has been used in many studies. Yet sentence generation tasks have limiting features. Mainly, students generating sentences may produce standard sentences, but not adequately reveal their understanding of a word. For example, if asked to write a sentence using the word, veranda, a student may construct a sentence, “I saw a veranda.” This sentence only communicates that a veranda is an object that is visible, and does not indicate the student’s knowledge of the vocabulary term.

In a study assessing student knowledge of vocabulary using friendly definitions McKeown addressed the limited features of sentence generation by also including an open ended question task (1993). In order to more fully assess student knowledge of the vocabulary taught using the three conditions in this study an open ended response task was also included. This second dependent measure used a two question open ended format in which direct questions about the word were asked to provide students with an opportunity to better focus on the meaning of the word and apply the correct usage. For

example, for the term “affinity” two open ended questions aimed at assessing students’ understanding of the term were “When might someone feel an affinity for something?”, and “How might someone act if they had an affinity for dogs?”.

### **3.4 SCORING OF TASKS and DATA ANALYSIS**

To investigate the differences in gaining meaning from vocabulary definitions in this study data from the sentence generation tasks and open ended question tasks were compared among the three conditions. Scoring procedures for each task were developed, and the results were then analyzed quantitatively. Additionally, qualitative data from transcripts, the researcher’s anecdotal notes from each session, and student responses were explored.

#### **3.4.1 Scoring of Tasks**

##### **3.4.1.1 Sentence generation task**

The data for the sentence generation task was scored by sorting responses for each word into categories of acceptability: Full, Vague, Partial, and Unacceptable. These categories were derived by examining how the student generated sentence aligned with the given definition. Because this study explored the acquisition of initial word meaning attention was given to the semantic meaning of the vocabulary word conveyed by the sentence, without exploration of the use of the proper syntax for the vocabulary term. Therefore,

each sentence was examined in relationship to the definition used with each word in each condition. Table 6 summarized the four categories of sentences, and provides examples for the term “affinity”.

**Table 6. Scoring: Sentence Generation Task:**

<b>Definition:</b> Affinity- When you have an affinity to someone you like them or feel like you can really understand them because you have things in common.	
<b>Full</b>	<b>Examples</b>
The response fully integrates the information from the definition.	<p>Mariah and I are best friends we have an affinity toward each other.</p> <p>My brother, Alex, is affinity with me because we have things in common.</p> <p>I have an affinity with my best friend because we always agree.</p> <p>I have affinity with my mom because we understand each other.</p>
<b>Partial</b>	<b>Examples</b>
The response demonstrate that the student has attended to part of the information from the definition	<p>I'm affinity with my friends.</p> <p>I have an affinity for baseball.</p> <p>Jake and I have an affinity friendship.</p> <p>I have affinity for my friends.</p> <p>I have an affinity with my dog.</p>
<b>Vague</b>	<b>Examples</b>
The response does not provide enough information about the word to determine if students used the information from the definition in formulating their response	<p>We affinity to each other.</p> <p>I have an affinity to Austin.</p> <p>I have an affinity for Jake.</p> <p>Carl is affinity.</p>
<b>Unacceptable</b>	<b>Examples</b>
The response indicates no understanding of the definition, or a misinterpretation of the meaning of the definition.	<p>A guy was so affinity when he was looking at me.</p> <p>My dog is affinity because he is cute.</p> <p>I don't know.</p> <p>A student response which was a string of nonsense words</p>

As can be seen in the table sentences scored as “full” were those that indicated a student attended to all information from the definition in writing their sentence. “Partial” scores demonstrated that students attended to a part of the definition, yet failed to fully integrate the total meaning of the definition. “Vague” sentences were those sentences which were written in a manner too ambiguous to determine if the student understood information from the definition. Unacceptable responses were those which clearly demonstrated the student did not reflect the meaning of the definition in the sentence.

For example consider the student responses to the word “benevolent” where the definition was stated as “Inclined to do good”. The following sentence was scored as “full” for fully integrating the meaning of the definition: “*A benevolent person helped me pick up my books I dropped.*” Clearly the student understands this term means more than being good, it is a characteristic of someone who shows a tendency to do good things. Whereas the sentence “*Last Monday I was benevolent because I got a 100% on my spelling test.*” was scored “partial” for partial understanding. In this sentence the student focused on the idea of being good, but their response did not reflect any understanding of the inclination to behave in a good way. “Vague” responses for benevolent included, “*Some people are benevolent.*” or “*Last week I was benevolent*”. In these examples the students have not written enough to determine if they understand the definition, or they are just inserting the word into a sentence in a simply random fashion. Unacceptable responses for “benevolent” included statements that were either nonsense strings of letters, or recopied the definition verbatim. Additionally, unacceptable

responses were those that clearly showed the student had not understood information from the definition, such as “*My parents benevolent me when I was taking a test.*”

All responses to the sentence generation task were scored by the investigator. Reliability for the sentence generation task was determined by having a second rater score a random sample of 25% of the student generated sentences. Inter-rater reliability of 86% was obtained for the sentence generation task.

#### **3.4.1.2 Open ended question tasks**

The data for the open ended question tasks were scored by sorting the responses into two categories: Acceptable and Unacceptable responses. Acceptable responses were those in which the *answers* to the question demonstrated they understood the general meaning of the definition. Unacceptable responses were those in which the answers to the question did not demonstrate that they understood the meaning of the definition, or not enough was written to determine their intention.

Table 7 provides several examples of student responses in each category for the various questions in the study.

**Table 7. Examples of Open Ended Question Categories**

**Question: When might someone feel an affinity for something?**

<u>Category</u>	<u>Examples</u>
<u>Acceptable</u>	<p>If they like them.</p> <p>If they really like it.</p> <p>When they really care for someone and want to spend time with them.</p> <p>When they love it.</p>
<u>Unacceptable</u>	<p>If they helped with something.</p> <p>The might not know how to be [an] affinity.</p> <p>If they can do something great. And if they are identical to like a sport or a thing.</p> <p>If someone scores a touchdown in football they might have an affinity.</p>

**Question: How might someone act if they had an affinity for dogs?**

<u>Category</u>	<u>Examples</u>
<u>Acceptable</u>	<p>They would understand what it takes for the dog to do stuff and they would take care of that dog really well.</p> <p><i>(Student responded as if writing a script)</i> Sue: ooh, my goodness, look at all the cute dogs. Like that one, or that one over there! Pet store owner to Pam: Well, I can see she has quite the affinity [for dogs].</p> <p>They might have a lot of dogs for pets or visit the pound a lot.</p> <p>They might act really nice to a dog.</p>
<u>Unacceptable</u>	<p>They might go crazy or they might just stay away.</p> <p>Happy.</p> <p>They would act weird.</p> <p>They would drink out of the toilet.</p> <p>Student wrote nonsense words</p>



(Table 7, continued)

Question: **Can you think of a time when it would be good to allude to something?**

<u>Category</u>	<u>Examples</u>
<u>Acceptable</u>	When you play charades  If you don't like something someone made and you allude it so you don't hurt their feelings.  When you play Pictionary  You can allude something when you are playing the game "I Spy".  When they can't find something you might give them allude.
<u>Unacceptable</u>	Looking for a robber.  When I came home from work and was exhausted.  When you are sick.  No I can't.  In a store for a certain thing.

As with the sentence generation tasks all responses to the open ended question tasks were scored by the investigator. Reliability for the open ended question task was determined by having a second rater score a random sample of 25% of the student responses to the open ended questions. Inter-rater reliability of 91% was obtained.

### **3.4.2 Data Analysis**

A two way repeated measures analysis of variance was used to analyze performance on the sentence tasks and on the open ended question tasks, and to compare fourth and fifth grade performance. The three instructional conditions were analyzed as

within-subjects groups and the two grade levels were treated as between-subjects variables. Additionally, audio transcripts of classroom discussions and anecdotal notes were studied qualitatively.

## **4.0 RESULTS**

### **4.1 Introduction**

The purpose of this study was to investigate the effects of three techniques for introducing vocabulary to fourth and fifth grade elementary students: dictionary definitions, friendly definitions and parsing. The following question was addressed:

Will fourth and fifth grade students show differences in learning of initial word meanings when assigned to conditions that are Traditional approaches, or seek to address the accessibility and clarity of the text of definitions through Friendly definitions, or seek to engage students with a word's dictionary definition through Parsing?

To determine the answer to this questions two dependent tasks were administered, a sentence generation task and an open ended question task. The data from these tasks were scored quantitatively. A two way repeated measures ANOVA was used to analyze performance on the sentence tasks and on the open ended question tasks, and to compare fourth and fifth grade performance. The three instructional conditions were analyzed as a within-subjects factor and the two grade levels were treated as a between-subjects factor. Additionally, audio transcripts of classroom discussions and anecdotal notes were study qualitatively.

Results of the statistical analysis for the quantitative data will be examined first, by exploring the results for the sentence generation tasks followed by results of the statistical analysis for the answers to open ended question tasks. Finally, qualitative analysis of the transcripts from the parsing sessions and comments from anecdotal notes taken during the study will be considered.

## **4.2 QUANTITATIVE RESULTS**

### **4.2.1 Sentence Generation Tasks**

As described in Chapter 3 (Overview of Study) the sentence generation tasks were scored according to how completely students integrated information from the definition in the sentence. Four categories were used to evaluate the student responses: Full, Partial, Vague, and Unacceptable. Each sentence generated in the study was assigned a code corresponding to one of these categories.

In analyzing the sentence generation tasks two approaches to investigate the data were used: Exploring responses across all four categories--Full, Partial, Vague, and Unacceptable, and then collapsing the four categories into two levels, Full-Partial, and Vague-Unacceptable. All analysis was conducted using the two way analysis of variance described previously.

To examine any effects for condition or grade level across all four categories responses were scored on a scale of 0 to 3, where full responses were given 3 points,

partial 2 points, vague 1 point and unacceptable 0 points. As shown in Table 8, the means for the three conditions were 21.76, 21.59, and 21.13; the means for grades 4 and 5 were 19.90 and 22.77.

**Table 8. Sentence Generation Mean Scores by Condition and Grade Level**

	Grade	N	Mean	Std. Deviation
	4	24	20.25	8.420
Traditional	5	30	22.97	6.234
Definitions	Total	54	21.76	
	4	24	20.58	8.038
Friendly	5	30	22.40	6.038
Definitions	Total	54	21.59	
	4	24	18.88	7.189
Parsing	5	30	22.93	6.777
Approach	Total	54	21.13	
	4	24	19.90	
	5	30	22.77	
Total	Total	54	21.49	

The mean scores were examined to compare any differences related to condition or grade level. The results of this analysis can be seen in Table 9.

**Table 9. ANOVA Summary Table: Sentence Generation Task Full, Partial, Vague, and Unacceptable**

Source of Variation	df	MS	F	p
Within Subjects				
Condition	2*	7.597	.473	.625
Condition X Grade	2*	16.967	1.056	.352
Error	104*	16.070		
Between Subjects				
Grade	1	328.074	2.774	.102
Error	52	118.264		

\*Mauchly's Test of Sphericity was significant. When these degrees of freedom are corrected using the Huynh-Feldt correction factor, they become 1.66, 1.66, and 86.372, respectively, and the p-values for Condition and Condition x Grade become .589 and .342 respectively.

As can be seen from the Table 9, the condition main effect, the condition x grade interaction effect, and the grade main effect were not significant. Therefore no significant differences were present for traditional, friendly, or parsing approaches and no one grade level performed significantly better with a particular instructional strategy.

Sentence generation performance was further explored as noted in the beginning of this section by considering that perhaps the various conditions may have yielded different results for combinations of the four categories. Considering that the sentences generated may have represented different levels of understanding those scored as full and

partial were compared to those scored as vague and unacceptable. Full and partial responses were scored as 1 while vague and unacceptable responses were scored as 0. Data was analyzed using the two way analysis of variance to explore main effects and interactions. Means and standard deviations for conditions and grade levels are reported in Table 10. Results of the ANOVA are reported in Table 11.



**Table 10. Means and Standard Deviations, Sentence Generation Tasks**

	Grade	N	Mean	Std. Deviation
	4	24	6.21	3.551
Traditional	5	30	6.83	2.842
Definitions	Total	54	6.56	
	4	24	6.50	3.323
Friendly	5	30	6.43	2.763
Definitions	Total	54	6.46	
	4	24	6.25	3.011
Parsing	5	30	7.30	2.054
Approach	Total	54	6.83	
	4	24	6.32	
	5	30	6.85	
Total	Total	54	6.62	

**Table 11. ANOVA Summary Table: Sentence Generation Task Full-Partial, Vague-Unacceptable**

Source of Variation	df	MS	F	p
Within Subjects				
Condition	2	1.445	.365	.625
Condition X Grade	2	4.235	1.069	.347
Error	104	3.963		
Between Subjects				
Grade	1	11.497	.651	.423
Error	52	17.656		

\*Mauchly's Test of Sphericity was significant. When these degrees of freedom are corrected using the Huynh-Feldt correction factor, they become 1.785, 1.785, and 92.835, respectively, and the p-values for Condition and Condition x Grade become .671 and .341 respectively.

As can be seen in the Tables 10 and 11 once again the condition main effect, the condition x grade interaction effect, and the grade main effect are not significant.

Taken as a whole these two separate analysis show no indication of an advantage on the sentence generation task for any of the three conditions used to introduce vocabulary. The finding that there were no significant differences between fourth and fifth grade students is somewhat surprising given the difference in age and potential language ability between these two groups.

In this study, the chief problem inherent in the sentence generation tasks was that most students wrote sentences that were too incomplete to determine their intended meaning. If the students had written more, or if the students had a bit more skill with expressing their thoughts, some vague responses may have been considered fully correct. Examples of student generated sentences rated as full as well as examples of student

generated questions rated as vague are provided in Table 12 with the new term in each underlined.

**Table 12. Sentence Generation Examples of Full and Vague Responses**

Mariah and I are best friends we have an <u>affinity</u> toward each other. <i>Full</i>
I have an <u>affinity</u> to Austin. <i>Vague</i>
A <u>hindrance</u> is like something blocking the way it's hard to think. <i>Full</i>
My baby brother is a <u>hindrance</u> at my feet. <i>Vague</i>
In a game of checkers, my dad <u>capitulated</u> because he knew he was going to lose. <i>Full</i>
I <u>capitulated</u> basketball. <i>Vague</i>
Ronald Reagan was <u>benevolent</u> by giving checks to anyone who asked for help. <i>Full</i>
My neighbor is very <u>benevolent</u> to us. <i>Vague</i>
The Amish farmer decided to become <u>devious</u> and become English. <i>Full</i>
She was <u>devious</u> when she joined the club. <i>Vague</i>
I have a very <u>dearth</u> supply of cat food (because we only have dogs). <i>Full</i>
The candy supply is really <u>dearth</u> this year. <i>Vague</i>
She didn't tell the blabbermouth in fear he would <u>divulge</u> it. <i>Full</i>
My friend can't help herself. She has to <u>divulge</u> . <i>Vague</i>
Indiana Jones had many dangerous <u>exploits</u> . <i>Full</i>
Did she <u>exploit</u> in the movie? <i>Vague</i>
The doctor said the mother was <u>prolific</u> when she delivered 13 babies successfully. <i>Full</i>
The art teacher was <u>prolific</u> with his drawings. <i>Vague</i>
Abraham Lincoln helped <u>liberate</u> the slaves. <i>Full</i>
I'll <u>liberate</u> you bird. <i>Vague</i>

In each of these pairs the vague responses have similar undertones in meaning as the full rated sentences. An argument could be made that the students who completed the vague sentences had the same notions for the meaning of the new words as those who completed the full sentences. Yet, those in the vague category were not as skilled in expressing a complete thought. Perhaps what separated the two groups is the students'

ability to express themselves with written language rather than inadequate word knowledge.

As will be discussed in Chapter 5 (Discussion) the lack of difference between the two grade levels, the lack of significant differences among the conditions, and the variability of students to express themselves with written language may indicate that the task of sentence generation is an unreliable measure of initial vocabulary knowledge.

#### **4.2.2 Open Ended Questions Task**

The other dependent measure used in this study was student responses to open ended questions about the vocabulary terms. As described in Chapter 3 every vocabulary term had two open ended questions for students to answer. For example, for the term “fluctuate” the two open ended questions were “What kinds of things could fluctuate?” and “How could you tell if something were fluctuating?”. All answers to the questions were rated as either Acceptable or Unacceptable. Acceptable responses were scored as 1 while Unacceptable responses received a score of 0.

Table 13 presents the mean scores and standard deviations for each condition and grade level.

**Table 13. Open Ended Questions Mean Scores by condition and grade level**

	Grade	N	Mean	Std. Deviation
	4	24	13.63	5.555
Traditional	5	30	16.93	2.993
Definitions	Total	54	15.46	
	4	24	13.29	5.393
Friendly	5	30	15.00	3.842
Definitions	Total	54	14.24	
	4	24	10.21	5.141
Parsing	5	30	14.80	3.934
Approach	Total	54	12.76	
	4	24	12.38	
	5	30	15.58	
Total	Total	54	14.15	

As shown in Table 13, the means for the three conditions were 15.46, 14.24, and 12.76; the means for grades 4 and 5 were 12.38 and 15.58.

Using the two way ANOVA as described previously mean scores were compared for main effects for the three conditions as within factors and explored between-subject effects for the grades. Table 14 presents the ANOVA summary table.

**Table 14. ANOVA Summary Table: Open Ended Question Task**

Source of Variation	df	MS	F	p
Within Subjects				
Condition	2	103.823	18.248	.000
Condition X Grade	2	27.823	4.890	.009
Error	104	5.690		
Between Subjects				
Grade	1	410.311	8.428	.005
Error	52	48.683		

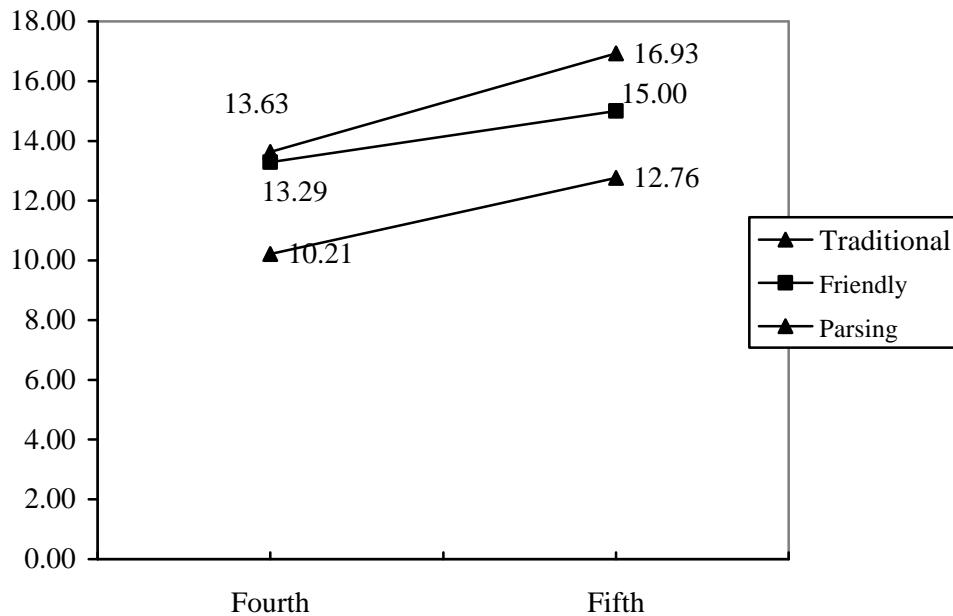
Note: Mauchly's Test of Sphericity was not significant.

As can be seen from Table 14, results from the ANOVA indicated a significant interaction. Table 13 indicates both the fourth and fifth grade students in the Traditional condition scored better than student performance in the Friendly condition, who in turn performed better than student performance in the Parsing condition. Therefore the main effect for condition was interpreted to explore significance.

Comparison of the means of the three conditions indicated that Traditional and Parsing means were significantly different with a difference of 2.70, Friendly and Parsing means were significantly different with a difference of 1.48, and Traditional and Friendly means were not significantly different with a difference of 1.22, but were close to being significantly different.

Figure 1 presents the means for grade level x condition. As indicated in the figure the order among the Traditional, Friendly, and Parsing means for the fourth grade is the same as the order among the Traditional, Friendly, and Parsing means for the fifth grade. As reported in Figure 1 means for fifth grade were consistently larger across the three conditions than for fourth grade. Therefore the main effect for grade was explored. As noted in Table 14  $F=8.428$  and  $p=.005$ .

**Figure 1. Estimated Marginal Means by Grade Level, Open Ended Question Task**





As stated previously, fifth grade students performed better than the fourth grade students for each of the conditions, and on average. Further, these results indicate that in general students performed better on measures of open ended questions for both the traditional and friendly definitions in comparison to the parsing approach. In fact, the parsing approach resulted in a particularly low mean for fourth grade students.

#### **4.2.3 Summary of Quantitative Analysis**

Quantitative data from the tasks in this study revealed that the first dependent variable for sentence generation task rated across full, partial, vague, and unacceptable categories resulted in no significant differences for condition, grade, or interaction between grade and condition. The second dependent variable for sentence generation tasks combined as full and partial and compared that category as a combined vague and unacceptable category also resulted in no significant differences for condition, grade, or interaction between grade and condition. For the third dependent variable, the open ended question tasks, the interaction was found to be significant, but based on examination of means it was reasonable to interpret the main effect for conditions and the main effect for grade. Significance was found for both. Among the three conditions two of the three pairs differed significantly and there was an overall difference between grade four and five.

An aim of this study was to determine whether fourth and fifth grade students could overcome problems inherent in learning words from definitions based on assignment to conditions that sought to address the accessibility and clarity of the text of

dictionary definitions through the use of friendly definitions. Because no significant differences were found between the traditional and friendly definition, the quantitative data did not indicate an advantage for friendly definitions in comparison to traditional approaches. Yet, as will be discussed in Chapter 5, this may relate to issues involved in the design of this study rather than differences between traditional and friendly definition approaches.

A related question was whether an approach that sought to encourage active engagement through parsing would result in improved word learning as compared to traditional or friendly definition approaches. The data indicates that the parsing approach did not result in improved word learning, and in fact proved less effective compared to the traditional and friendly definition approaches.

### **4.3 QUALITATIVE ANALYSIS**

To further explore why students in the parsing condition performed poorly on the open ended question tasks student responses to the tasks were examined along with the transcripts from the parsing sessions and anecdotal notes from all conditions.

As stated previously the aim of parsing was to foster engagement with definitions. Anecdotal notes recorded immediately following each session revealed that the students in the parsing condition did appear more engaged than in the other conditions to the extent that they did asked questions, and seemed eager to participate and complete the

tasks. According to the notes of the researcher, in comparison to the other approaches students seemed to be more enthusiastic about completing the tasks during parsing sessions. While working on tasks, students rarely asked questions to the investigator during the sessions for traditional definitions and friendly definitions. Yet, in parsing students did ask questions while working on the tasks. However, the types of questions asked reflected concern for performance rather than questions about the definitions. Consider some exchanges during the parsing sessions as shown in Table 15.

**Table 15. Question Answer Exchanges**

Fourth Grade

TEACHER: This next word is prolific, and the definition says, “Producing in abundance.” Can anyone say what they think this definition means?

STUDENT 1: Like they would really mess something up.

TEACHER: Let’s read the definition again, “Producing in abundance.” Can anyone else say what they think this definition might mean?

STUDENT 2: Maybe giving up something and it is a nice way to help someone.

TEACHER: Okay, there is a space for your sentence. The first question says, “Why might someone call an author prolific?” Then the second question says, “How might a prolific cook act?”

STUDENT 3: (whispering) What does abundance mean?

TEACHER: Well, I want you to think about it. Think about what you think it means.

STUDENT 4: (Whispering): I really don’t know what to do.

TEACHER: Just take a good guess if you aren’t sure.

Fifth Grade

TEACHER: This next word is lenient and the definitions says, “Not harsh or strict in dealing with others, gentle, merciful.” Can anyone say what they think this definition might mean?

STUDENT 1: Um. It means they are kind, very forgiving, just basically plain old nice.

TEACHER: Can anyone else say what they think this definition might mean.

STUDENT 2: If there is something that someone can’t do well, then you would help them.

TEACHER: Alright, here’s the space for your sentence and the first question is “How could you tell if someone were being lenient?”, and “Describe something a teacher might do that was lenient”.

STUDENT 3: (Whispering) So I think maybe it is like not harsh, or the opposite of strict. Is that right?

TEACHER: I want you to decide. What do you think?

STUDENT 3: OK.

As can be seen from these examples questions ranged from those seeking affirmation, “Does this look alright?”, to those seeking clarification, “What does abundance mean?” to comments that indicated the student did not have an appropriate

response, “I still don’t know what to do.” Questions like these were typical during the parsing sessions and seemed to indicate that the students were confused.

Investigation of the transcripts and student responses to the open ended question task revealed a pattern related to why the parsing approach led to inferior performance. As will be demonstrated later, the data suggests that students took other students’ verbalized responses to the parsing prompts as authoritative statements on the meaning of the new terms. The approach was intended to have students grapple with the meaning of the definitions on an individual basis, but students’ answers to the open ended questions reflect greater attention to what was said by their peers instead of attention to what was written in the definitions.

As described in Chapter 3 during the parsing approach the definition was read aloud and then students were asked by the researcher, “Can anyone say what they think this definition means.” As students responded the researcher followed up on their comments with other questions that did not provide any guidance as to whether the student comments were correct or not. When students provided an incomplete comment other students were asked to also share what they thought the definition meant. If students provided a comment that was not correct the definition was read again, and another student was asked to share the meaning of the definition. At no time did the researcher provide any corrective feedback, thus keeping the focus of the approach on inviting students to engage with the meaning of the definition as opposed to guiding them in the meaning of the definition, and keeping the parsing approach as an introductory technique rather than a more in depth discussion of a word’s meaning.

As new terms were introduced and the parsed questions and answers took place the exchanges between the students and the teacher responses to the parsing prompts ranged in the level of accuracy by which students articulated their perceptions of the definition.

Table 16 provides examples responses that fell into three categories: Accurate, Partially Correct, or Inaccurate. Accurate responses were characterized as students initially providing an appropriate description of the meaning of the definition, or one student initially providing an incomplete meaning followed by another student who added on an accurate clarifying comment. Partially Correct responses were those in which one student provided an incomplete statement or an incorrect description of the definitions meaning, while another student provided a correct description. Those exchanges characterized as Incorrect took place in which two students provided either incomplete or inaccurate explanations of the definition's meaning.

**Table 16. Exchanges in Parsing**

<p><i>Accurate</i></p> <p><b>TEACHER:</b> This first word is improvise and the definition says, “To make from whatever materials happen to be around.” Can anyone tell me what they think that definition means?</p> <p><b>STUDENT 1:</b> Well, if someone like improvises they make something.</p> <p><b>TEACHER:</b> Can anyone else say what they think the definition means?</p> <p><b>STUDENT 2:</b> Well, say if you are allergic to something, so I’m like allergic to blueberries, so instead of making a blueberry pie my mom would like make a cranberry pie, or cranberry pudding, or strawberry pudding. She substitutes the blueberries so that I can still eat it.</p> <p><i>Partially Correct</i></p> <p><b>TEACHER:</b> We’re ready for the next word. This word is prudent, and the definition says, “Having and showing good judgment, sensible”. Can anyone say what they think this definition means?</p> <p><b>STUDENT:</b> Having a good time.</p> <p><b>TEACHER:</b> Okay, let’s read the definition again. “Having and showing good judgment, sensible. Can anyone else say what they think this definition means?</p> <p><b>STUDENT:</b> Being cautious. Maybe watching where you step.</p> <p><i>Incorrect</i></p> <p><b>TEACHER:</b> This next word is prolific, and the definition says, “Producing in abundance.” Can anyone say what they think this definition means?</p> <p><b>STUDENT:</b> Like they would really mess something up.</p> <p><b>TEACHER:</b> Let’s read the definition again, “Producing in abundance.” Can anyone else say what they think this definition might mean?</p> <p><b>STUDENT:</b> Maybe giving up something and it is a nice way to help someone.</p>
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In comparing the transcripts to the responses to the open ended questions the effects of the types of exchanges were strongly evident. When students voiced answers to the parsing prompts that were accurate, it proved to be beneficial for the performance of the whole class. In contrast, when students voiced responses that were either partially

correct, or incorrect, the incorrect comments affected the performance of students in the class. This was particularly the case for exchanges that were incorrect. In cases where incorrect comments were made the majority of the class responded with answers to the open ended questions that were also not correct.

To illustrate, consider the transcript below for the term, “altercation”. In this example the exchange during the parsing prompts fell into the Incorrect category:

TEACHER: The first word in this packet says altercation, and the definition says, “A heated and noisy quarrel.” Can anyone say what they think this definition means?

STUDENT 1: A big city.

TEACHER: Let’s read the definition again. “A heated and noisy quarrel”. Can anyone else say what they think this definition means?

STUDENT 2: A lot of noise that’s not wanted.

STUDENT 2: A lot of noise that’s not wanted.

Now consider the responses for this same term to the open ended questions as shown in Table 17. Within the table student answers have been categorized, grouping like statements together.



**Table 17. Answers to Open Ended Questions, “altercation”**

*Question 1: What would you say to some friends who had an altercation?*

**Responses related to voiced comments**

Please be quiet.

You stink and you're loud.

To quiet down.

Quit being so noisy.

Be quiet.

Shut up.

**Responses related to definition**

Come down.

I would ask what their fight was about and help solve it.

They need to calm down.

Break it up.

Make up.

I would say stop that!

**Responses not related to definition or voiced comment**

[Student wrote a string on nonsense letters]

Unknown.

*Question 2: What might happen if there was an altercation?*

**Responses related to voiced comments**

There is a lot of noise.

It might give you a headache.

It would be hard to hear people.

You would not be able to sleep.

Well they would get caught for being too loud.

Evil pollution.

**Responses related to definition**

Call the cops.

You would come down.

People might get mad at each other.

Everyone would be fighting and wouldn't stop.

They would fight or yell.

They might not talk to one another.

Someone might get in trouble.

**Responses not related to definition or voiced comment**

[Student wrote a string on nonsense letters]

As the table illustrates many students responded with answers to the open ended questions that reflected an understanding of the term altercation as meaning “a lot of noise that’s not wanted”, and one response reflected an understanding of the term altercation meaning “a big city”. It seems that the students paid a great deal of attention to the voiced comments from their peers during the parsing exchange rather than the actual definition.

In contrast, consider the responses in a fifth grade classroom demonstrating an accurate exchange for the same term. The following details the exchange during the parsing session:

TEACHER: This word is altercation, and the definition says, “A heated and noisy quarrel.” What do you think this definition might mean?

STUDENT 1: It means like a really bad fight.

Table 18 lists the resulting student responses to the open ended questions for this same term:

**Table 18. Answers to Open Ended Questions, “altercation”**

*Question 1: What would you say to some friends who had an altercation?*

**Responses related to voiced comment or definition**

Stop fighting and be nice.  
I would say "Calm down."  
You shouldn't argue.  
Just ask the opinion.  
To calm down.  
I would say "Don't have any more of those."  
You need to stop altercating and just talk.  
To calm down.  
To kiss and make up.  
I would say "Calm down."  
Quiet down and no punching.  
That they need to work it out.  
To calm down.

**Responses related to definition only**

That heated altercation is good in the wintertime for heat.

**Responses not related to definition or voiced comment**

[Student wrote a string of nonsense letters]

*Question 2: What might happen if there was an altercation?*

**Responses related to voiced comment or definition**

People would be mad.  
People will be yelling.  
A teacher might stop it.  
Teachers or grown-ups might help.  
You might try to break it up.  
People might start yelling or getting angry over something.  
Yelling and shouting.  
There might be a fight.  
People would be mad with people.  
There might be pushing, hitting or arguing.  
The people will get in trouble.  
People would probably be yelling.  
Someone could get a headache.

**Responses related to definition only**

It would be warm in the house.

**Responses not related to definition or voiced comment**

[Student wrote a string of nonsense letters]

This example shows that many students had correct responses. In one instance it appeared that the student did not integrate the voiced comment with the textual information from the definition, “*That heated altercation is good in the wintertime for*

*heat.*” and “*It would be warm in the house.*” Responses such as these demonstrate that the definition had problematic features. Most likely, this student did not understand the meaning of the word “*quarrel*” in the definition, and thus confused the term *altercation* for some object that supplies heat. Yet, the majority of the class were able to characterize *altercation* appropriately, demonstrating the influence of correct parsing.

Another observation of the student responses indicated that the problems inherent in definitions were too great for parsing to overcome through the few voiced comments during parsing sessions. As an example, the following transcript was recorded for the word, “*devious*” in a fourth grade classroom:

TEACHER: This next word is devious, and the definition says, “Departing from the correct or proper way; erring.” What does this definition mean?

STUDENT 1: I think it means to go somewhere like on a plane and go somewhere.

TEACHER: Let’s read the definition again, “departing from the correct or proper way; erring.” Can anyone else say what they think the definition means?

STUDENT 2: Um, like, being wrong.

In comparing the definition to the parsing exchange students seemed to have difficulty understanding the term “erring” in the definition. The students instead focused on portions of the definition that were more familiar to elementary level readers, such as “departing” or “correct or proper”. The failure to understand the term as an expression of a deviation from an expected practice is reflected in the answers to open ended questions, as can be seen in Table 19. Clearly, the parsing strategy did not help these fourth grade students overcome the unknown term of “erring” within the definition.

**Table 19. Answers to Open Ended Questions, “devious”**

<p><i>Question 1: What are some things someone might do that would be devious?</i></p> <p>Ride a bike but they don't keep their balance. Getting a question wrong that you know and dialing the wrong number that you knew by heart. Saying that they did something that was wrong. Leave from the exit door. To be departing. Go to another country. They might break the rules or law. Killing someone. Cry, yell. Scream, very mad.</p> <p><i>Question 2: What might give you a clue that someone was being devious?</i></p> <p>If they were making trouble or doing something wrong. If they did something wrong or they have a lot of stress that moment. Just by watching them. They might go fast on a test. Always getting in trouble. Lie about something. If no one yelled at them. They are sad. Very sad, unhappy. BLANK</p>
--

Fifth graders also had trouble overcoming difficult components of definitions, such as the following example for the word, “eminence”. The following transcript shows students seemed to struggle with understanding of the dual components of this definition, of standing out and being distinguished:

TEACHER: This word is eminence, and the definition says, “One who stands out above all others; distinguished.” Can anyone say what they think this definition means?

STUDENT 1: If you really like your jacket, because everyone can see it.

TEACHER: Okay, let's read the definition again, "one who stands out above all others; distinguished." Can anyone else say what they think this definition might mean?

STUDENT 2: When you stand out... and... Uh... I don't know?

STUDENT 3: A star would be eminence.

Their responses, as shown in Table 20, demonstrate an understanding of the definition as either being something that is easily seen (standing out), or something that is set apart as special (distinguished). Very few responses integrate both components of the definition.

**Table 20. Answers to Open Ended Questions, “eminence”**

*Question 1: How does someone show eminence?*

If someone draws attention to themselves.  
When they're better and have better stuff than you.  
If they're really good at something.  
They could be brave.  
They might be pretty good at acting.  
To speak for everyone.  
Dress differently.  
They stick out.  
They might dress in bright colors.  
When you are hunting, use a safety vest.  
They would wear bright colors.  
They may wear something different.  
[Student wrote a string of nonsense letters]  
To be \_\_\_\_\_.  
They were mean or funny or nice.

*Question 2: What can you think of that has eminence?*

A famous person.  
A star.  
The leader of a wolf pack would be eminence[t].  
The guy who won American Idol.  
I think Penn Dot is eminence.  
The North Star.  
The Reebok, Adidas, Nike are popular shoes  
Trees are eminence.  
A cat.  
Bright colors.  
Neon colors.  
[A] Black and purple Dr. Seuss hat.  
A computer and a pie.  
[Student wrote a sting of nonsense letters.]  
[Student wrote a string of nonsense letters.]

In summary the results from the qualitative analysis indicate that the Parsing approach may have resulted in some engagement to the extent that students asked questions, and were eager to respond to the Parsing questions. Yet, this engagement, which was necessarily limited for experimental purposes, may have distracted students from attention to the definitions. Thus, the Parsing strategy as a mere invitation to

interact with the meaning of new vocabulary was insufficient to overcome some of the problems associated with dictionary definitions. Furthermore, in terms of the effectiveness for Parsing to assist students in learning new words the results appear to be highly dependent on the quality of the exchange. In cases where students accurately voiced explanations for the vocabulary terms Parsing seems to have had a positive impact. Yet, in instances where students voiced incorrect meanings for the definitions during the Parsing exchanges the entire class was led astray by the remarks. It appears this occurred with enough frequency to sway the performance of the students in the Parsing condition. Considering that the fourth grade students seemed to have more exchanges in the incorrect category might account for the difference between fourth and fifth grade students. In conclusion although Parsing resulted in some engagement it was a failure as a strategy to assist students in learning new words. Implications of this finding will be discussed further in Chapter 5.



## **5.0 DISCUSSION**

### **5.1 INTRODUCTION**

This chapter will discuss questions that arise from findings of this study, discuss the instructional implications of these findings, and finally conclude with a discussion of limitations and implications for future research.

### **5.2 MAJOR FINDINGS AND RELATED QUESTIONS**

The quantitative and qualitative data described in Chapter 4 points to three major findings. First, no advantage for learning new vocabulary was shown between traditional and friendly definitions. Second, the parsing approach was a failure in helping students learn initial vocabulary from definitions. Finally, sentence generation tasks were an unreliable measure of student performance.

The questions that arise from these findings are as follows:

1. Why were there no significant differences between approaches to learning initial word meaning with traditional definitions versus friendly definitions?

2. Why was the parsing condition a failure for assisting students in learning new words?
3. What are the possible reasons for the unreliability of the sentence generation task?

### **5.2.1 Why were there no significant differences between traditional definitions versus friendly definitions?**

As described previously other research has supported the use of friendly definitions over traditional definitions (Beck & McKeown, 2004; McKeown, 1993). Thus, the lack of any advantage for the Friendly Definition condition compared to the Traditional condition was rather surprising. The lack of differences might reside in the study design.

As described previously this study was designed with the intent of giving students traditional definitions as a control condition. The use of Friendly Definitions and the Parsing approach represented the experimental conditions in this study. As such, all students initially received the Traditional condition during the first week of the study followed by a counterbalanced design for Friendly Definitions and Parsing conditions during the second and third weeks of the study.

It was noted by the investigator during the first week of the study that students appeared highly motivated to complete the tasks and were very attentive. Perhaps the novelty of a visitor and the departure from their usual routine had an effect on students' motivation to complete the various tasks during the initial week in which the Traditional condition was delivered. The investigator noted that as the study progressed students seemed to wane in their enthusiasm for working through the various tasks.

Thus, perhaps a different study design may have yielded different results. In retrospect, a design which counterbalanced all three approaches may have been ideal. Or, even an approach which counterbalanced Traditional and Friendly Definitions followed then by the parsing approach may have also been appropriate. The nature of the instructional sessions for both the Traditional and Friendly Definition conditions were identical: students were presented with the definitions and completed tasks. In contrast, the Parsing approach was quite different than the other two conditions in that students had the opportunity for some verbal interaction. The students most likely recognized very little difference between the Traditional and Friendly conditions. As such, counterbalancing these approaches may have provided a clearer picture of advantages for one type of definition over the other.

### **5.2.2 Why did the Parsing Condition Fail to Assist Students in Learning New Words?**

A major aim of this study was to develop the parsing strategy as a method for initial word learning through fostering engagement on the part of students while they read dictionary definitions. The technique was designed with the intent of creating a strategy that would compare favorably with approaches to learning new words through definitions. The results as discussed in Chapter 4 clearly indicated that the parsing approach was not successful.

It was hypothesized that the instructional strategy would pose queries to students as a method for inviting them to engage with the meaning of the definition, thus allowing

students to more fully attend to the meaning of a definition. However, care was taken with the script for Parsing to ensure two important considerations: First, that the time on task among the three conditions remained relatively equal. Numerous studies have shown that increased time on task can lead to increased achievement (Wyne & Stuck, 1982). Therefore, the verbal exchange between the students and the investigator were kept purposefully brief, allowing for only one or two student responses. A second important feature of the Parsing approach was that it was designed as an invitation for student engagement in contrast to an opportunity for teacher guidance. As such, the investigator offered no corrective feedback to student responses. In other words, the hope was that the open ended queries would encourage students to more fully attend to the content of the dictionary definitions and consequently lead them to a greater understanding of their meaning.

As previously described in Chapter 4 students did appear engaged during the Parsing sessions. They asked questions much more frequently about the nature of the tasks and sought feedback regarding their responses during the Parsing sessions compared to the other approaches. These behaviors seem to indicate that the students were engaged with the tasks at hand. Yet engagement with tasks is not the same as engagement with target information, in this case the written definition.

As noted in Chapter 4 the relative success or failure of the parsing approach was highly dependent on the quality of the students' verbal exchanges. It was the case that students attend to verbal input from their peers during the parsing sessions. Were students engaged? Yes, but primarily with one another's verbal comments. Not the written definitions.

Therefore what seems to have chiefly contributed to Parsing's failure was the lack of corrective feedback during the Parsing exchanges. As noted in Chapter 4 in the absence of direction students quickly adopted verbal comments as statements of authority and the incorrect responses tended to lead students astray in interpreting the meaning of a definition.

Other researchers have noted that when readers' elaborations of their background knowledge are not strongly tied to text information such elaborations can inhibit comprehension (Beck & McKeown, 2001; Trabasso & Suh, 1993). In fact, other researchers have stated when students' perceptions are inconsistent with text information the student's background information interferes with the comprehension of text (Alvermann, Smith, & Readence, 1985; Nicholson & Imlach, 1981). In the present study as students elaborated comments that were not consistent with the dictionary definitions the result was that those incorrect comments found their way into the collective thinking of the entire class.

In conclusion, the mere invitation to engage with a definition through questions and responses is not enough to produce gains. In fact, engagement without direction leads to confusion on the part of students, or worse-- errors that are collectively adopted by the majority of a classroom.

### **5.2.3 Why was the Sentence Generation Task an Unreliable Measure?**

As reported earlier, the sentence generation tasks were analyzed according to how completely students integrated information from the definition in the sentence, and were

investigated across four levels of integration with the definition as well as two levels of integration. Results indicated no advantage on the sentence generation task for any of the three conditions used to introduce vocabulary. Further, no significant differences were present between the performance of fourth and fifth graders.

Other researchers have questioned the use of sentence generation as a measure of new word knowledge. Numerous studies have shown that elementary children struggle to generate sentences from dictionary definitions (Fisher, 1994; McKeown, 1993; Nist & Olenjnik, 1995, Scott & Nagy, 1997). In fact, Miller and Gildea (1987) have questioned the utility of asking students to create sentences from dictionary definitions.

What appeared to separate students who performed well on the sentence generation task, from students who performed poorly was students' ability to express themselves in written language. In comparing the two tasks, sentence generation versus responding to open ended questions the linguistic skill necessary to write an acceptable sentence is much greater than skill needed to write an answer to an open ended question.

One aspect of the open ended question task is that the text of the questions, although limited, may provide students with some information regarding the context and characteristic use of a new word and thus assist them in scaffolding their answer. For example a question such as "How might someone act if they resented you?" provides some direction, in that it characterizes the word as a demonstrable action. In contrast, asking a student to create a novel sentence using a new vocabulary word, such as simply present the word "resent" and ask for a written sentence gives the student, who has just been introduced to the word, no direction and no information about the word.

A second difference is that students' written responses to the open ended questions could be quite brief, including short phrases, yet still demonstrate their understanding of the new words. In contrast in order to ascertain a student's intended meaning in a sentence, responses needed to approach a complete thought. This difference in the level of written expression necessitated longer written statements for the sentence generation tasks.

As an example, consider the following samples for both sentences and answers to open ended questions taken from one student in the study from samples across all three conditions in Table 21.

**Table 21. Example Student Answers and scores for sentence generation tasks and open ended questions**

Word: devious		
Sentence:	I am good at being devious.	Rating: Vague
Question and response:	What are some things someone might do that would be devious?	
	Tell a lie.	Rating: Acceptable
Word: exploit		
Sentence:	That was very exploit.	Rating: Vague
Question and response:	Why might someone want to have an exploit?	
	To be brave.	Rating: Acceptable
Word: inclement		
Sentence:	It is very inclement.	Rating: Vague
Question and response:	What might it look like if it were inclement?	
	Cold and stormy and wet.	Rating: Acceptable
Word: dearth		
Sentence:	I love dearth of stuff.	Rating: Vague
Question and response:	How could you tell if there was a dearth of something?	
	If there were not a lot of it.	Rating: Acceptable

As can be seen in the table this student had a tendency to write very little. Although for both tasks the student's written responses were limited the student's intention was clearer for the open ended questions than for the sentence tasks. This study supports the findings of other researchers indicating the use of sentence generation tasks is problematic.

In addition to calling into question the use of sentence generation as a task in research studies for vocabulary, based upon these findings the common instructional practice of asking students to generate sentences after being presented with definitions



should be questioned. It is doubtful such a practice enhances student knowledge of new terms, and given the difficulty elementary students have with producing quality sentences the practice offers little diagnostic information for teachers assessing student understanding of new vocabulary.

### **5.3 IMPLICATIONS**

From these findings implications for both instructional practices and research methods arise. First, the implications from the perspective of conducting reading research will be discussed, followed by a discussion of the implications for classroom practice. Finally, suggestions for future research related to this study will be offered.

#### **5.4.1 Implications for Research Methods**

Two considerations for research methods in vocabulary learning may be derived from this study. The first area of interest relates to issues of the tasks students are given as measures of vocabulary learning. The second area relates more broadly to the overall design of the study.

##### **5.4.1.1 Issues related to vocabulary tasks**

As noted, the sentence generation task for this study was an unreliable measure. These findings point to an underlying issue in vocabulary research related to the tasks given to

measure word learning. The sentence generation task is an example of a measure that is problematic. In exploring this issue further, other researchers have noted that constructing any tasks for measuring vocabulary learning is a challenging endeavor. Pearson (2005) recently stated that despite the long history of research involving vocabulary assessment very little research has indicated the best methods for assessing vocabulary. Furthermore, Pearson went on to call for “significant work on the construct validation of vocabulary assessments.” Recently other researchers have echoed these same sentiments. Blachowicz, Fisher, Ogle, and Watts-Taffe (2006) recently stated that the limitations of vocabulary assessment represent “a clear vacuum in the research and one that should be addressed in a more sensitive way” (p. 534).

The findings of this study also support further research about the best practices for measuring learning in vocabulary research. Given the problems elementary students had in creating sentences care should be taken in future studies to find reliable measures of vocabulary learning that fit the linguistic maturity of the study participants.

#### **5.4.1.2 Issues related to study design**

Concerning the overall design the study implications concerning the conditions include the order of conditions, and the time on task among the various approaches. As noted earlier issues for counterbalancing are important considerations for future research.

In terms of engaging students, designing a study with an improved Parsing approach would need to equate time between the various conditions in some form. Perhaps a future study that used conditions of Traditional, Friendly Definitions, Traditional with Parsing, and Friendly Definitions with Parsing could be employed in

order to add more to Parsing exchanges without disrupting the equity of time on tasks between conditions.

#### **5.4.2 Implications for Instruction**

The limitations of the sentence generation tasks as observed in this study seem to indicate that elementary teachers should avoid the common practice of having students craft novel sentences after referencing dictionary definitions. The problems elementary students have in creating new sentences seems to indicate that other tasks which provide them with more scaffolding for understanding how the word may be is more useful.

The major instructional implication for Parsing is that the questioning approach used in Parsing needs improvement. For Parsing to succeed as an instructional strategy follow up questions to student responses that invite more inquiry and direction would be needed. If Parsing is developed in this manner future studies using the approach would need to take care to either equate time between conditions, as mentioned previously, or, employ a pre-test, post test design.

Considering the failure of the Parsing approach another major implication for instructional practice is that teachers need to be careful not to assume that mere interest and engagement on the part of a learner is enough to facilitate learning. Simply inviting a student to engage with a text through posing questions without providing feedback is not enough to facilitate comprehension. In fact, in the absence of direction other students may be misled by comments from their peers. Engagement without direction does not appear to aid in comprehension, and may indeed be detrimental to group performance.

## **APPENDIX A**

### **IRB APPROVALS**



**University of Pittsburgh**  
**Institutional Review Board**

Exempt and Expedited Reviews

3500 Fifth Avenue  
Suite 100  
Pittsburgh, PA 15213  
Phone: 412.383.1480  
Fax: 412.383.1508

University of Pittsburgh FWA: 00006790  
University of Pittsburgh Medical Center: FWA 00006735  
Children's Hospital of Pittsburgh: FWA 00000600

TO: Mrs. Constance Nichols  
FROM: Sue R. Beers, Ph.D., Vice Chair *Sue R. Beers*  
DATE: March 7, 2006  
PROTOCOL: Pre-Test of Vocabulary Terms

IRB Number: 0602116

The above-referenced protocol has been reviewed by the University of Pittsburgh Institutional Review Board. Based on the information provided in the IRB protocol, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section 45 CFR 46.101(b)(1).

The regulations of the University of Pittsburgh IRB require that exempt protocols be re-reviewed every three years. If you wish to continue the research after that time, a new application must be submitted.

- If any modifications are made to this project, please submit an 'exempt modification' form to the IRB.
- Please advise the IRB when your project has been completed so that it may be officially terminated in the IRB database.
- This research study may be audited by the University of Pittsburgh Research Conduct and Compliance Office.

Approval Date: March 7, 2006  
Expiration Date: March 7, 2009

SRB:kh



**University of Pittsburgh**  
*Institutional Review Board*

3500 Fifth Avenue  
Ground Level  
Pittsburgh, PA 15213  
(412) 383-1480  
(412) 383-1508 (fax)

**MEMORANDUM**

TO: Mrs. Constance Nichols  
FROM: Christopher Ryan, PhD, Vice Chair *Chris*  
DATE: April 11, 2006  
SUBJECT: IRB #0603066: A Pilot Vocabulary Instruction Using a Parsing Technique

---

The above-referenced proposal has received expedited review and approval from the Institutional Review Board under 45 CFR 46.110 (6,7).

If applicable, please include the following information in the upper right-hand corner of all pages of the consent form:

Approval Date: April 11, 2006  
Renewal Date: April 10, 2007  
University of Pittsburgh  
Institutional Review Board  
IRB #0603066

Please note that it is the investigator's responsibility to report to the IRB any unanticipated problems involving risks to subjects or others [see 45 CFR 46.103(b)(5) and 21 CFR 56.108(b)]. The IRB Reference Manual (Chapter 3, Section 3.3) describes the reporting requirements for unanticipated problems which include, but are not limited to, adverse events. If you have any questions about this process, please contact the Adverse Events Coordinator at 412-383-1504.

The protocol and consent forms, along with a brief progress report must be resubmitted at least **one month prior** to the renewal date noted above as required by FWA00006790 (University of Pittsburgh), FWA00006735 (University of Pittsburgh Medical Center), FWA00000600 (Children's Hospital of Pittsburgh), FWA00003567 (Magee-Womens Health Corporation), FWA00003338 (University of Pittsburgh Medical Center Cancer Institute).

**Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office.**

CR:kh



**University of Pittsburgh**  
***Institutional Review Board***

3500 Fifth Avenue  
Ground Level  
Pittsburgh, PA 15213  
(412) 383-1480  
(412) 383-1508 (fax)

**MEMORANDUM**

TO: Mrs. Constance Nichols

FROM: Christopher Ryan, PhD, Vice Chair *Chris*

DATE: April 11, 2006

SUBJECT: IRB #0603154: The Effects of Three Methods of Teaching Elementary Students  
Vocabulary: Traditional, Friendly Definitions, and Parsing

---

The above-referenced proposal has received expedited review and approval from the Institutional Review Board under 45 CFR 46.110 (7).

If applicable, please include the following information in the upper right-hand corner of all pages of the consent form:

Approval Date: April 11, 2006  
Renewal Date: April 10, 2007  
University of Pittsburgh  
Institutional Review Board  
IRB #0603154

Please note that it is the investigator's responsibility to report to the IRB any unanticipated problems involving risks to subjects or others [see 45 CFR 46.103(b)(5) and 21 CFR 56.108(b)]. The IRB Reference Manual (Chapter 3, Section 3.3) describes the reporting requirements for unanticipated problems which include, but are not limited to, adverse events. If you have any questions about this process, please contact the Adverse Events Coordinator at 412-383-1504.

The protocol and consent forms, along with a brief progress report must be resubmitted at least **one month prior** to the renewal date noted above as required by FWA00006790 (University of Pittsburgh), FWA00006735 (University of Pittsburgh Medical Center), FWA00000600 (Children's Hospital of Pittsburgh), FWA00003567 (Magee-Womens Health Corporation), FWA00003338 (University of Pittsburgh Medical Center Cancer Institute).

**Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office.**

CR:kh

**APPENDIX B**

**LETTERS**

**LETTERS TO PARENTS**

**INFORMED CONSENT DOCUMENTS**

**AND LETTERS FROM SCHOOL OFFICIALS**

**Note: All identifying information has been removed to maintain confidentiality of participants.**



## LETTER TO PARENTS FOR PRETESTING OF VOCABULARY TERMS

Dear Parent / Guardian:

I am writing this letter to request your child's participation in my doctoral dissertation research. As a doctoral student at the University of Pittsburgh under the direction of Dr. Isabel Beck I have been studying how students learn to read, understand what they read, and learn new vocabulary words. I have designed a study to determine what types of words are typically known by students in the fourth and fifth grade. The information from this study will be used to help create lessons for different types of vocabulary instruction. I would like your child to participate in this study.

To determine what words are known by students at your child's grade level I have designed a multiple choice packet that classroom teachers in grades four and five will give to students in their class. The content of the packet is very similar to multiple choice papers they receive as a regular part of their classroom instruction. This packet is meant solely for me to determine what words are known by groups of fourth and fifth graders, not individual students. If your child participates in this study no identifiable information will be included on the packet. For example, only the classroom will be listed on the packet materials, no first or last names. It is completely voluntary for students to participate in this study. Their participation in the study and their responses from the packet will have no bearing whatsoever on their performance and standing at [REDACTED] school. In fact, if you elect not to have your child participate they will be given the opportunity to work on something else in the classroom while others complete the packet.

As mentioned previously all information from the packets will be kept anonymous and confidential. The only opportunity to identify a student's work would be if someone would recognize your child's handwriting, but I have taken steps to minimize this chance by planning on scoring the packets myself as opposed to asking the classroom teachers to score the materials.

If you should not wish for your child to participate then please return the enclosed form to the school. I hope you will allow your child to participate in this study as it may help to develop effective teaching strategies for vocabulary instruction.

You may have questions about this study. If you have questions please contact myself, or Dr. Beck. All studies completed through the University of Pittsburgh offer information to participants about their rights. If you have any questions about rights of research subjects you may contact the Human Subjects Protection Advocate at the University of Pittsburgh IRB Office, 1-866-212-2668.

Thank you so very much for your kind time and consideration of this matter.

Truly yours,

Constance Nichols  
Graduate Student,  
University of Pittsburgh

Isabel Beck  
Professor of Education  
University of Pittsburgh

[REDACTED]  
Principal  
[REDACTED] Intermediate

---

*Please return this form to [REDACTED] by March 10, 2005 if you do not wish for your child to participate in the study:*

I, \_\_\_\_\_ do not wish for my child  
*Parent's Name*

---

*Child's first and last Name*

to participate in Constance Nichols research study.

## LETTER TO PARENTS FOR PILOT OF PARSING

Dear Parent / Guardian:

I am writing this letter to request your child's participation in my doctoral dissertation research. As a doctoral student at the University of Pittsburgh under the direction of Dr. Isabel Beck I have been studying how students learn to read, understand what they read, and learn new vocabulary words. I have designed a study to investigate a way in which teachers can ask questions in a whole class setting about dictionary definitions as a way of helping students learn new vocabulary. I would like your child to participate in this study.

If you agree your child will meet with me for one hour with other students who participate in the study. During this time I will present the class with vocabulary words and definitions and I will be asking the class as a group some questions about the content of the dictionary definitions. This class session will be audio taped. This tape will not be used for any purpose other than for my study. All information from the audiotapes will be kept anonymous and confidential.

I hope you will allow your child to participate in this study as it may help to develop effective teaching strategies for vocabulary instruction. If you agree to have your child participate your child will also be asked if they would like to participate in the study at the time of the classroom session. You may wish to share this letter with your child.

You may have questions about this study. If you have questions please contact myself, or Dr. Beck. All studies completed through the University of Pittsburgh offer information to participants about their rights. If you have any questions about rights of research subjects you may contact the Human Subjects Protection Advocate at the University of Pittsburgh IRB Office, 1-866-212-2668.

Thank you so very much for your kind time and consideration of this matter.

Truly yours,

Constance Nichols  
Graduate Student,  
University of Pittsburgh

Isabel Beck  
Professor of Education  
University of Pittsburgh

## INFORMED CONSENT FOR PARSING PILOT

Approval Date: April 11, 2006  
Renewal Date: April 10, 2007  
University of Pittsburgh  
Institutional Review Board  
IRB Number: 0603066

### CONSENT TO ACT AS A SUBJECT IN A RESEARCH STUDY

**TITLE:** A pilot of Vocabulary Instruction Using a Parsing Technique

**PRINCIPAL INVESTIGATOR:** Constance N. Nichols, MS., Reading Specialist, Professor of Education, Grove City College  
3027 100 Campus Drive, Grove City, PA 16127  
Phone: 724.458.3892  
e-mail: cnnichols@gcc.edu

**CO-INVESTIGATORS:** Advisor: Isabel Beck, Ph.D., Professor of Education, University of Pittsburgh  
0647 LRDC, Pittsburgh, PA 15213; Phone: 412.624.7065

#### *Why is this study being done?*

The purpose of this study is to study how students learn to read, understand what they read, and learn new vocabulary words. By teaching new vocabulary words and asking particular questions about the words I (Constance Nichols) hope to develop effective teaching strategies for teaching elementary students new words.

#### *Who is being asked to take part in this study?*

All students who are enrolled in [REDACTED] Hacker's classroom are being asked to participate in the study.

#### *What are the procedures of this study?*

If you agree to allow your child to participate in this study, your child will meet with me for about one hour with the other students who participate in the study. During this time I will present the class with vocabulary words and definitions and I will be asking the class as a group some questions about the content of the dictionary definitions. This class session will be audio taped.

#### *How will my eligibility for the study be determined?*

All students in [REDACTED] Hacker's classroom will be eligible to participate.

***What are the possible risks of this study?***

There is very little risk involved in this study. Learning new vocabulary and responding to questions are regular parts of classroom instruction. Even though these are regular activities, it is important to explain that when research is done in classrooms it is important that any information about students be kept private and confidential. During this class session I will be audio taping the class session. The only potential risk in this study is that there may be a breach of confidentiality. In other words, there is a small risk that if someone were to listen to the audio tapes in the future they may be able to find out what your child said in the classroom. To protect your child's privacy and maintain their confidentiality I will be keeping the audio tape in a locked file, and if any notes are taken about the audio tape I will replace the student's real names with other names.

***Will you or your child benefit from taking part in this study?***

There is no reward, or payment from participating in this study. However, your child may learn some new vocabulary words and some ways of understanding dictionary definitions if they participate.

***Are there any costs for my child to participate in this study?***

There are no costs for your child to participate in this study.

***Will anyone know that my child is taking part in this study?***

As explained above any records involving this study will be kept strictly confidential (private) and any information that could reveal your child's identity will be stored in locked files at all times. Regulations for research studies require that records be kept for a minimum of five years. So, when this study is over any records will remain stored in locked files. If the information from this study is used in an article or published in some way your child's identity will not be revealed in any descriptions or publications of this research.

***Is my child's participation in this study voluntary?***

Yes. Your child's participation in this study is completely voluntary. You may refuse to allow your child to take part in this study, or you may decide to have your child not participate at any time, even after signing this form. Your decision to allow or not allow your child to be involved in this study will in no way affect your child's education at [REDACTED] Elementary School.

***How can I get more information about this study?***

I would be very happy to answer any questions about this research study. You may contact me or my advisor, Dr. Beck if you would like more information. Our numbers are listed at the beginning of this form. For your convenience here is my number again: 724-458-3892. The University of Pittsburgh, where I am a student, has an office that can give you further information if you have any questions about your child’s rights when they participate in a research study. If you wish to contact this office you may do so by calling the Human Subjects Protection Advocate at the University of Pittsburgh IRB Office, 1-866-212-2668.

\*\*\*\*\*  
\*\*\*\*\*

**SUBJECT’S CERTIFICATION**

- I have read the consent form for this study and any questions I had, including explanation of all terminology, have been answered to my satisfaction.
- I understand that I am encouraged to ask questions about any aspect of this research study during the course of this study, and that those questions will be answered by the researchers listed on the first page of this form.
- I understand that the classroom session may be audiotaped.  
I agree \_\_\_\_ I do not agree \_\_\_\_ to the audiotaping
- I understand that my child’s participation in this study is voluntary and that I am free to refuse for him/her to participate or to withdraw my consent and discontinue my child’s participation in this study at any time without affecting my child’s education at [REDACTED].
- I agree for my child to participate in this study.
- I will receive a copy of this consent form.

\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Date

Approval Date: April 11, 2006  
Renewal Date: April 10, 2007  
University of Pittsburgh  
Institutional Review Board  
IRB Number: 0603066

ASSENT:

I certify that I have carefully explained the purpose and nature of this research study to each child-subject in age appropriate language. He/she has had an opportunity to discuss it with me in detail. I have answered all his/her questions and he/she has provided affirmative agreement (i.e.: assent) to participate in this study.

---

*Investigator's Signature*

---

*Date*

---

*Investigator's printed name*

CERTIFICATION of INFORMED CONSENT

I certify that I have explained the nature and purpose of this research study to the above-named individual(s), and I have discussed the potential benefits and possible risks of study participation. Any questions the individual(s) have about this study have been answered, and we will always be available to address future questions as they arise.

\_\_\_\_\_  
Printed Name of Person Obtaining Consent

\_\_\_\_\_  
Role in Research Study

\_\_\_\_\_  
Signature of Person Obtaining Consent

\_\_\_\_\_  
Date



## LETTER TO PARENTS FOR FORMAL STUDY

Dear Parent:

I am writing this letter to request your child's participation in my doctoral dissertation research. As a doctoral student at the University of Pittsburgh under the direction of Dr. Isabel Beck I have been studying how students learn to read, understand what they read, and learn new vocabulary words. I have designed a study to determine what types of words are typically known by students in the fourth and fifth grade. The information from this study will be used to help create lessons for different types of vocabulary instruction. I would like your child to participate in this study.

To determine what words are known by students at your child's grade level I have designed three six short vocabulary lessons that may be conducted in your child's classroom. If your child participates in the study I will teach them new vocabulary words and ask them some questions about the words they learn. Each child will be given a packet in which to record their answers. The content of the packet is very similar to worksheets they receive as a regular part of their classroom instruction. This packet is meant solely for me to determine how groups of fourth and fifth grade student learn vocabulary words, not to judge individual students.

When research studies are completed at the University of Pittsburgh those taking part in the study are asked to sign a consent form. The consent form gives you a great deal of information about the study. Attached to this letter is the consent form. Please sign and return the consent form indicating if you wish for your child to take part in the study. Please have your child return the completed consent form to their teacher by \_\_\_\_\_. I hope you will allow your child to participate in this study as it may help to develop effective teaching strategies for vocabulary instruction.

You may have questions about this study. If you have questions please contact myself, or Dr. Beck. I can be reached at 724-458-3892, or you may call Dr. Beck at 412-624-7065.

Thank you so very much for your kind time and consideration of this matter.

Truly yours,

Constance Nichols  
Graduate Student,  
University of Pittsburgh

Isabel Beck  
Professor of Education  
University of Pittsburgh

Dr. [REDACTED]  
Principal  
[REDACTED] School

## INFORMED CONSENT FOR FORMAL STUDY

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Approval Date: April 11,  
2006  
Renewal Date:  
April 10, 2006  
University of  
Pittsburgh  
Institutional  
Review Board  
IRB Number:  
0603154

### CONSENT TO ACT AS A SUBJECT IN A RESEARCH STUDY

**TITLE:** The Effects of Three Methods of Teaching Elementary Students

**Vocabulary:** Traditional, Friendly Definitions and Parsing

**PRINCIPAL INVESTIGATOR:** Constance N. Nichols, MS., Reading Specialist,  
Professor of Education, Grove City College  
3027 100 Campus Drive, Grove City, PA 16127

Phone: 724.458.3892  
e-mail: cnnichols@gcc.edu

**CO-INVESTIGATORS:** Advisor: Isabel Beck, Ph.D., Professor of Education,  
University of Pittsburgh  
0647 LRDC, Pittsburgh, PA 15213; Phone: 412.624.7065

#### *Why is this study being done?*

The purpose of this study is to study how students learn to read, understand what they read, and learn new vocabulary words. By teaching new vocabulary words and asking particular questions about the words I (Constance Nichols) hope to develop effective teaching strategies for teaching elementary students new words.

#### *Who is being asked to take part in this study?*

All students who are enrolled in the fourth and fifth grade at [REDACTED] Elementary are being asked to participate in the study.

#### *What are the procedures of this study?*

If you agree to allow your child to participate in this study, your child will meet with me in their regular reading class for about one hour each week with the other students who participate in the study. During this time I will present the class as a group with vocabulary words and definitions and I will be asking students some questions about the words they learn. After the class I will be looking at the student answers to see if certain ways of teaching new words seem to be better than others. Your child's answers will only be examined by me, not by the classroom teachers. Therefore, no one but me will know exactly what your child answered to the questions.

***How will my eligibility for the study be determined?***

All students in fourth and fifth grade will be eligible to participate.

***What are the possible risks of this study?***

There is very little risk involved in this study. Learning new vocabulary and responding to questions are regular parts of classroom instruction. Even though these are regular activities, it is important to explain that when research is done in classrooms any information about students should be kept private and confidential. During this class session I will be asking students to fill in answers to questions about the words they learn on a packet. The only potential risk in this study is that there may be a breach of confidentiality. In other words, there is a small risk that if someone were to look at the packets in the future they may be able to find out what your child answered to the questions. To protect your child's privacy and maintain their confidentiality I will be keeping the packets in a locked file, and if notes are taken about the answers I will replace the students' real names with other names.

***Will you or your child benefit from taking part in this study?***

There is no reward, or payment from participating in this study. However, your child may learn some new vocabulary words and some ways of understanding dictionary definitions if they participate.

***Are there any costs for my child to participate in this study?***

There are no costs for your child to participate in this study.

***Will anyone know that my child is taking part in this study?***

As explained above any records involving this study will be kept strictly confidential (private) and any information that could reveal your child's identity will be stored in locked files at all times. Regulations for research studies require that records be kept for a minimum of five years. So, when this study is over any records will remain stored in locked files. If the information from this study is used in an article or published in some way your child's identity will not be revealed in any descriptions or publications of this research.

***Is my child's participation in this study voluntary?***

Yes. Your child's participation in this study is completely voluntary. You may refuse to allow your child to take part in this study, or you may decide to have your child not participate at any time, even after signing this form. Your decision to allow or not allow your child to be involved in this study will in no way affect your child's education at [REDACTED] Elementary School.

***How can I get more information about this study?***

I would be very happy to answer any questions about this research study. You may contact me or my advisor, Dr. Beck if you would like more information. Our numbers are listed at the beginning of this form. For your convenience here is my number again: 724-458-3892. The University of Pittsburgh, where I am a student, has an office that can give you further information if you have any questions about your child's rights when they participate in a research study. If you wish to contact this office you may do so by calling the Human Subjects Protection Advocate at the University of Pittsburgh IRB Office, 1-866-212-2668.

\*\*\*\*\*  
\*\*\*\*\*

**SUBJECT'S CERTIFICATION**

- I have read the consent form for this study and any questions I had, including explanation of all terminology, have been answered to my satisfaction.
- I understand that I am encouraged to ask questions about any aspect of this research study during the course of this study, and that those questions will be answered by the researchers listed on the first page of this form.
- I understand that my child's participation in this study is voluntary and that I am free to refuse for him/her to participate or to withdraw my consent and discontinue my child's participation in this study at any time without affecting my child's education at Case Avenue School.
- I agree for my child to participate in this study.
- I will receive a copy of this consent form.

\_\_\_\_\_  
Parent Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Child's Name

This research study has been explained to me and I agree to participate.

\_\_\_\_\_  
Signature of Child-participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Child-Participant

---

-----CERTIFICATION of INFORMED CONSENT

I certify that I have explained the nature and purpose of this research study to the above-named individual(s), and I have discussed the potential benefits and possible risks of study participation. Any questions the individual(s) have about this study have been answered, and we will always be available to address future questions as they arise.

\_\_\_\_\_  
Printed Name of Person Obtaining Consent

\_\_\_\_\_  
Role in Research Study

\_\_\_\_\_  
Signature of Person Obtaining Consent

\_\_\_\_\_  
Date

**LETTERS FROM SCHOOL OFFICIALS**



## Grove City Area School District

482 E. MAIN STREET • GROVE CITY, PA 16127 • PHONE: (724) 458-7570

OFFICE OF THE ELEMENTARY PRINCIPAL

MR. DAVID FOLEY  
PRINCIPAL

January 5, 2006

Institutional Review Board  
University of Pittsburgh  
3500 5<sup>th</sup> Avenue, Ground Floor  
McKee Place Entrance  
Pittsburgh, PA 15213

To Whom It May Concern:

Constance Nichols has approval to conduct her study, "Pre-testing of Vocabulary Terms" at Hillview Intermediate Center. I understand the nature and duration of this study. The study will be conducted in the fourth and fifth grade classrooms. The teachers of these classrooms have also agreed to work with Constance to conduct this study.

Sincerely,

David W. Foley  
Principal

Institutional Review Board  
University of Pittsburgh  
3500 5th Avenue, Ground Floor  
McKee Place Entrance  
Pittsburgh PA, 15213

Case Avenue Elementary  
36 Case Avenue  
Sharon, PA 16146  
724/983-4015  
Fax: 724/983-4021



January 5, 2006

To Whom It May Concern:

Constance Nichols has approval to conduct her study, "A pilot of the parsing educational method for vocabulary instruction" here at Case Avenue School. I understand the nature and duration of this study. The study will be conducted in a fifth grade classroom. Kim Hacker, the teacher of this classroom has also agreed to work with Constance to conduct this study.

Yours,

A handwritten signature in cursive script that reads "Bill Dunsuore".

Mr. Bill Dunsuore,  
Principal



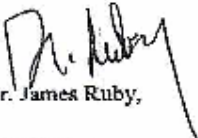
Institutional Review Board  
University of Pittsburgh  
3500 5th Avenue, Ground Floor  
McKee Place Entrance  
Pittsburgh PA, 15213

January 5, 2006

To Whom It May Concern:

Constance Nichols has approval to conduct her study, "The effects of three methods of teaching elementary students vocabulary: Comparisons of traditional, friendly definitions, and parsing approaches" here at Victory Elementary School. I understand the nature and duration of this study. The study will be conducted in fourth and fifth grade classrooms. The teachers of these classrooms have also agreed to work with Constance to conduct this study.

Yours,

  
Dr. James Ruby,  
Principal

**APPENDIX C**

**WORD SELECTION DOCUMENTS**

## Initial List of 400 Words

abate	avid	circumvent
abhorrent	bane	citadel
abiding	barbarian	clod
abode	battlement	cluster
abolish	beacon	coalition
absolve	beck	cohort
abundant	benevolent	collaborate
accolade	benign	collaborator
accord	beseech	commandeer
accost	besiege	commendation
accrue	blazon	commute
acquaintance	blemish	complacent
acquisition	bliss	comply
adaptation	blowhole	concise
adept	boutique	condense
adequate	boycott	confection
adjacent	brag	conspicuous
adornment	bramble	consume
adulation	brevity	contradict
affinity	buccaneer	copious
affluent	bungle	coronation
alienate	burr	corral
alleviate	cajole	courier
allude	calico	covert
alluring	canopy	covet
ally	capitulate	crag
altercation	capsize	crestfallen
altruistic	caravan	crevasse
amends	caress	cumbersome
amicable	cease	cunning
anarchy	celebrated	cupola
antidote	chaps	dapper
Archaic	charitable	dearth
Assailant	charity	decipher
Atrocity	charming	decorum
Audacious	chatter	decrepit
Aurora	cinch	deduce

deduct	enormity	furl
deduct	entangled	garnet
deformity	entreat	genteel
demure	epitome	gibe
depravity	erratic	girth
destitute	erroneous	glade
deter	evanescent	glaring
detestable	excel	glean
deviate	excruciating	gleeful
devious	exhort	goblet
devout	exotic	gossamer
diligent	explicit	grapple
disrupt	exploit	gravitate
diverse	extortion	griffin
diverse	famine	haggle
diversity	fatigue	hedgerow
divert	feign	heifer
divulge	feline	henchman
doleful	fervent	heroine
domicile	fife	hew
donate	final	hindrance
dormant	finale	hobo
doting	finicky	hovel
douse	firmament	hypocrite
drab	flail	illusion
draught	flaw	illusive
dredge	fleece	immerse
droll	fluctuate	imp
ebony	fodder	impede
ecstasy	foray	impediment
edict	forlorn	impetus
eerie	forsaken	impose
eloquent	frail	improvise
emancipate	fret	inaudible
eminence	frivolous	inaugural
enable	frolic	inception
encase	frontage	inclement
enigma	froth	incompetent
enmity	frugal	indefinite

inept  
infallible  
infidel  
infraction  
inhibit  
inspire  
insufferable  
iridescent  
irksome  
irrevocable  
jaded  
jaunt  
jubilee  
kindle  
kindling  
knoll  
lagoon  
lair  
lax  
leery  
lenient  
lethargic  
liberate  
lichen  
lute  
maul  
medallion  
meddler  
mentor  
mimic  
mishap  
mite  
mock  
molar  
monocle  
morbid  
mortify  
mosaic  
murky

mutiny  
negligence  
negligent  
nonchalant  
novice  
nozzle  
nullify  
omit  
onset  
opaque  
optimism  
pacifist  
pagoda  
par  
parapet  
pendulum  
petrify  
philanthropist  
pinnacle  
poll  
praiseworthy  
prance  
precaution  
precise  
prolific  
prominent  
propel  
prototype  
prudent  
purge  
purveyor  
quaint  
quid  
rankle  
rebound  
recant  
recollect  
refuse  
regret

reinforce  
rend  
resent  
resentful  
residue  
resolution  
retain  
rigid  
rigorous  
rile  
ringlet  
rivet  
rotate  
rut  
saber  
sacrifice  
scamp  
scapegoat  
scoff  
scoundrel  
scuffle  
sedate  
settee  
severe  
sheath  
shod  
shrine  
shrivel  
skulk  
smirk  
smite  
sojourn  
solicit  
spiteful  
sporadic  
sprawl  
sprawling  
stagnant  
stalk

stammer  
stealth  
strapping  
stupefy  
succulent  
surly  
tally  
tamper  
tarnish  
tempt  
testy  
tether  
thrive  
thrust  
timid  
tirade  
toil  
tome

transitory  
travesty  
trivial  
trundle  
typical  
tyrant  
undulate  
unruly  
vacate  
vagrant  
vale  
vanquish  
variegated  
vicarious  
vigilant  
viper  
visage  
vital

vivacious  
vow  
waft  
wager  
waif  
wallop  
wanton  
warp  
welt  
whittle  
windfall  
wiry  
wistful  
withstand  
woeful  
wanderlust  
wrathful  
wretch

## Pretest

Directions: Try to pick the choice that you think means the same as the word. Mark your choice by circling the letter. You may not know the meaning of the words listed. If you are unsure of an answer, just make a good guess.

Here's an example:

liquid

- a. a solid object
- b. something that is wet
- c. a sled
- d. something that does not change

In the above example choice "b" is the best choice. So you would mark it on the sheet like this:

liquid

- e. a solid object
- f. something that is wet
- g. a sled
- h. something that does not change

Now you may begin.

1. negligent
  - a. constantly trying
  - b. a useful way
  - c. careless action
  - d. flexible or accepting of change
  
2. abolish-
  - a. to put an end to; get rid of
  - b. to clean carefully
  - c. to hit or scold
  - d. to fit into a small space
  
3. cajole
  - a. to make fun of
  - b. to break in two
  - c. to be excessively kind with words
  - d. to roll or to spin
  
4. tirade
  - a. stealing
  - b. angry outburst or speech
  - c. an ancient ruler
  - d. a discount or sale
  
5. benevolent
  - a. hurtful, unkind
  - b. hitting
  - c. to the point
  - d. kind
  
6. liberate
  - a. speaking clearly
  - b. sleeping for a long time
  - c. acting out
  - d. to set free
  
7. vivacious
  - a. kind, helpful
  - b. full of words
  - c. lively or full of spirit
  - d. thoughtful
  
8. gravitate
  - a. move towards
  - b. telling a lie
  - c. to rip or to tear
  - d. to settle an argument
  
9. vacate
  - a. to not be able to make a decision
  - b. to relax for a short period
  - c. to give up, to leave
  - d. to cover
  
10. collaborate
  - a. working together
  - b. understanding
  - c. fixing something
  - d. to replace something
  
11. hindrance
  - a. a lie
  - b. a popular item
  - c. something that is in the way
  - d. a hint; a small amount
  
12. eminence
  - a. an event that is certain
  - b. a person who is important
  - c. a difficult problem
  - d. someone who you cannot trust
  
13. resent
  - a. to repeat
  - b. to feel nervous
  - c. to win
  - d. to feel angry at something



14. scoundrel
- something scary
  - a lie
  - a lost animal
  - a dishonest character
15. prominent
- cowardly
  - easily to spot
  - quick-thinking
  - Simple minded
16. divert
- to cover or to hide
  - to push or to shove
  - to turn towards
  - to change
17. rigorous
- difficult
  - fresh air
  - wicked
  - bumpy
18. divulge
- to kick
  - to cover up
  - to tighten or stiffen
  - to tell or make known
19. adept
- swift or fast
  - clever or good
  - broken
  - show-off
20. benign
- not dangerous
  - jumpy
  - deadly
  - growing
21. eloquent
- full of wealth
  - risky
  - good with words
  - active
22. avid
- well done
  - sticky
  - happy or glad
  - warm
23. mimic
- to cause to laugh
  - to hold a grudge against
  - to copy
  - to avoid
24. novice
- A master or expert
  - A person new to an activity
  - A shy person
  - A reader of fiction
25. altruistic
- kind to other people
  - bossy
  - selfish
  - sneaky
26. accolade
- a type of car
  - words of praise
  - a soft object
  - a stern warning
27. besiege
- to run quickly
  - to surround with an army
  - to react
  - to think fast

28. tempt
- a. to walk quickly
  - b. to work hard
  - c. to get someone to do something
  - d. to cut something up
29. complacent
- a. unlikable, mean
  - b. over active
  - c. boring
  - d. lazy
30. transitory
- a. unchanging
  - b. simple; straightforward
  - c. lively
  - d. temporary
31. amicable
- a. sour
  - b. unlovable, unkind
  - c. agreeable, pleasant
  - d. hard-working
32. travesty
- a. something that is unfair
  - b. ugly clothing
  - c. a very long trip
  - d. a bold statement
33. trivial
- a. a large amount of money
  - b. not very important
  - c. a king or a queen
  - d. full of energy
34. brevity
- a. scary
  - b. a boss
  - c. short or brief
  - d. crazy
35. capitulate
- a. to cut out
  - b. to give up
  - c. to throw long distances
  - d. to go to the capitol
36. precise
- a. never changing
  - b. good looking; eye catching
  - c. wise in advice
  - d. clear; easy to understand
37. impede
- a. to jump on
  - b. to try to stop
  - c. to blow up
  - d. to agree
38. frugal
- a. careful with money
  - b. unwise or foolish
  - c. loud and showing off
  - d. afraid of many things
39. charming
- a. casting spells
  - b. delightful or attractive
  - c. buying of jewelry
  - d. harmless
40. comply
- a. to bend or mold into shape
  - b. to not listen to warnings
  - c. to fit two things together
  - d. to obey rules or laws
41. exploit
- a. to repeat over and over or tell again
  - b. to get something by being unkind
  - c. to break apart
  - d. to work quickly

42. concise
- unfriendly
  - fake
  - short
  - old
43. abundant
- bright
  - an angry person
  - a lot of something
  - a beautiful tree
44. cunning
- sneaky or clever
  - sharp or pointy
  - quiet
  - helpful
45. adequate
- something that holds water
  - fake, not true
  - a hard and strong tool
  - having enough of something
46. prolific
- telling the future
  - to make a lot
  - famous
  - Having a lot of energy
47. conspicuous
- running away
  - hidden, covered
  - attracting of attention
  - cloudy, unsure
48. illusion
- a drawing in a book
  - a guess
  - a curtain
  - something that is not really there
49. fatigue
- blending in
  - a large tent
  - being tired after hard work
  - forgetting to do work
50. covet
- wanting something
  - giving a hint
  - standing beside
  - strengthen through trust
51. decrepit
- scary, frightening
  - weak because of old age
  - picked from the earth
  - wealthy
52. copious
- overflowing, plentiful
  - joyful, carefree
  - evil, wicked
  - against the law
53. dearth
- muddy ground
  - not having enough
  - a stone fireplace
  - a rude remark
54. optimism
- something highly valued
  - a kind looking face
  - Thinking that good things will happen
  - An eye doctor
55. severe
- colorful
  - polite
  - unkind; harsh
  - difficult

56. deviate
- to turn aside
  - to light up
  - to throw
  - to think hard
57. excruciating
- on time
  - very painful
  - colorful
  - cool
58. devious
- warm
  - old-fashioned
  - popular
  - sneaky, tricky
59. diligent
- hard- working and dedicated
  - shiny or bright
  - a dip in the road
  - a sad feeling
60. allude
- to escape
  - to read in depth
  - to speak to a group
  - to hint
61. enigma
- decorations
  - something hard to understand
  - folk music
  - a type of eagle
62. reinforce
- to repeat
  - to fight against
  - to make stronger
  - to look at
63. fervent
- emotionally intense
  - tired or worn out
  - difficult or impossible
  - bored or uninterested
64. erratic
- careless
  - insensitive
  - beautiful
  - not regular
65. infallible
- bright
  - clumsy
  - capable
  - bouncing up and down
66. antidote
- a hint
  - a short story
  - a medicine or cure
  - an incorrect answer
67. lethargic
- long
  - full of energy
  - small
  - lazy
68. erroneous
- rugged or bumpy
  - mistaken, wrong
  - foggy
  - black
69. typical
- common or every day items
  - extra special
  - quick movements
  - made of little parts

70. atrocity
- feeling sad
  - something very wicked
  - wanting to run fast
  - a mistake or blunder
71. frivolous
- sparkly, glittery
  - expensive or costly
  - silly, without importance
  - forgetful
72. impetus
- an unkind word
  - a large bird
  - being very smart
  - the beginning of something
73. alleviate
- to agree
  - to make lighter
  - to eat
  - to tell a story
74. inhibit
- to win
  - to look carefully
  - to hold back
  - to break or tear
75. stagnant
- not moving or flowing
  - small or short
  - very old
  - brownish in color
76. fluctuate
- to cover completely
  - to release in order to flow
  - to complete or finish
  - to change constantly
77. inspire
- to build to a peak
  - to pound or hit
  - to support or encourage
  - to turn away
78. exotic
- from a foreign country, strange
  - tame and peaceful
  - gigantic in size
  - quick thinking
79. audacious
- bold, daring, fearless
  - hard to handle
  - not brave
  - useless
80. irrevocable
- kind-hearted
  - impossible to change
  - transparent or clear
  - dishonest in intention
81. leery
- not knowing the answer to a question
  - full of energy
  - leaning or bending over
  - careful and not trusting
82. explicit
- being very rude
  - kind and thoughtful
  - a clear explanation
  - surprising or unexpected
83. affluent
- wealthy
  - smart
  - full of happiness
  - colorful

84. lenient
- harsh or severe
  - easy-going and kind
  - tilted to one side
  - lending money
85. prudent
- unwise
  - sensitive
  - careful
  - not moving
86. altercation
- a change
  - a part of a church
  - a fight
  - A group of flowers
87. nullify
- to run after
  - to look closely
  - to trade with
  - to cancel or end
88. improvise
- To get ready
  - to invent on the spot
  - to judge harshly
  - to make up your mind about someone
89. sporadic
- when something does not happen at a usual time
  - when something never changes
  - when something is broken
  - a type of pine tree
90. wanton
- giving and kind
  - wanting to start a fight
  - good behavior
  - too much of something
91. inclement
- bad weather
  - peaceful, safe
  - mean and unfriendly
  - accused of a crime
92. solicit
- to look away
  - to ask for something
  - to rest and relax
  - to make up your mind quickly
93. stealth
- sneaky movements
  - taking something that isn't yours
  - rules that should be followed
  - giving away freely
94. adulation
- waves on the ocean
  - a long story or poem
  - kind words, praise
  - being confused
95. affinity
- forever
  - liking something
  - when a magnet connects to metal
  - having a lot of money
96. succulent
- good looking, pleasing to the eye
  - taking a lot of time
  - full of worry
  - full of juice or sap

97. tamper

- a. to rebuild
- b. to get in the way
- c. to be very angry
- d. to be very hot

98. inept

- a. careful
- b. painful
- c. useless
- d. very tired

99. wistful

- a. floating in the air
- b. very rich
- c. follow directions
- d. wishing and day dreaming

100. thrive

- a. to grow or bloom
- b. to step back
- c. to fall or trip
- d. to act suddenly

## Words Used in Formal Study

affinity  
affluent  
allude  
altercation  
amicable  
benevolent  
capitulate  
complacent  
comply  
concise  
copious  
dearth  
deviate  
devious  
divulge  
eloquent  
eminence  
explicit  
exploit  
fluctuate  
hindrance  
impetus  
improvise  
inclement  
infallible



lenient  
lethargic  
liberate  
prolific  
prominent  
prudent  
resent  
succulent  
tamper  
trivial  
wanton

## **Words by condition**

### **Traditional**

Presented during week 1 of study

*affluent*

amicable

comply

copious

dearth

deviate

explicit

infallible

liberate

prominent

succulent

**trivial**

## **Friendly and Parsed**

Presented in two groups, counterbalanced during weeks 2 and 3 of study

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### ***Group 1***

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Affinity

Allude

Complacent

Concise

Devious

Exploit

Improvise

Inclement

Lenient

Prolific

Prudent

Tamper

---

*Group 2*

---

altercation

benevolent

capitulate

divulge

eloquent

eminence

fluctuate

hindrance

impetus

lethargic

resent

wanton

## STUDY MATERIALS

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WORD	DEFINITION	FRIENDLY DEFINITION	QUESTIONS
affinity	A natural, personal attraction	When you have an affinity to someone, you like them or feel like you can really understand them because you have things in common.	When might someone feel an affinity for something?  How might someone act if they had an affinity for dogs?
affluent	Having much money or property; rich		How could you tell if a person was affluent?  What makes a person affluent?

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allude	To hint at someone or something unnamed; refer indirectly	If you allude to something, you give someone a hint about something without really saying what you mean.	Can you think of a time when it would be good to allude to something?
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How might you act if you tried to allude something?

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altercation	A heated and noisy quarrel	An altercation is a fight or a loud and angry argument.	What would you say to some friends who had an altercation?
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What might happen if there was an altercation?

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amicable	Friendly in feeling; peaceable		What might give you an amicable feeling?
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What's an amicable way to greet someone?

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benevolent	Inclined to do good	A benevolent person is someone who is kind and generous to others	How might someone act in a benevolent way?
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What kinds of things  
could someone do if they  
were benevolent?

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capitulate	To surrender or give up to an enemy under certain conditions	To capitulate means to decide to give up and do what someone else wants you to do.	What might happen that would make someone want to capitulate?
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How would someone  
show they wanted to  
capitulate?

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complacent	Pleased with oneself	A complacent person is very pleased with themselves and acts as if they have nothing to worry about.	If someone were complacent about something, how might they act?
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What kinds of things  
might someone act  
complacent about?

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comply	To follow a request or rule		What might someone do in order to comply with something?
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Why might someone need to comply with something?

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concise	Saying much in a few words; brief	Something that is concise explains things clearly without using a lot of words.	What might give you a clue that something is concise?
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What might someone need to do in a concise way?

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copious	More than enough, plentiful		When might someone do a copious amount of writing?
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What might you like to have a copious amount of something?

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dearth	A too small supply; scarcity		How could you tell if there was a dearth of something?  What is something you might do if you had a dearth of something?
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deviate	To turn aside from the expected way, goal, rule or standard		How might someone deviate from what they are doing?  Why would someone want to deviate from something?
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devious	Departing from the correct or proper way; erring	When someone is devious, they use tricky and secretive ways to do something dishonest	What are some things someone might do that would be devious?  What might give you a clue that someone was being devious?
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divulge	To disclose a secret; reveal	If you divulge something, you give someone private or secret information	When should one be careful not to divulge something?
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How might you divulge  
something?

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eloquent	Showing clear, forceful and effective language	Speaking or writing in an eloquent way is very polished and can convince others to take your point of view	When would be a time when it would be good for someone to be eloquent?
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How could you tell if  
someone was eloquent?

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eminence	One who stands out above all others, distinguished	A person with eminence has a special title or is famous and people look up to them	How does someone show eminence?  What can you think of that has eminence?
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explicit	Clearly stated so that nothing is misunderstood.		What is something that should be explicit?
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When might you tell someone to be explicit?

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exploit	A very brave or daring act	An exploit is an adventure someone has in which they acted bravely	Why might someone want to have an exploit/
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What is something you might like to do if you were on an exploit?

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fluctuate	To rise and fall; keep changing or wavering	Something that fluctuates changes often by getting larger or smaller or going up and down	What kinds of things could fluctuate?
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How could you tell if something were fluctuating?

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hindrance	The act of getting in the way of, hampering, obstruction	A hindrance is something in your way that makes it hard to get things done	What is something you would not want a hindrance to?  What kinds of things could be a hindrance?
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impetus	Any force that helps something along; stimulus	An impetus is a force that makes events happen or gets things started	What would be an impetus to work hard?  What impetus could you give someone to get up early?
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improvise	To make from whatever materials happen to be around	When you improvise you make something you need using whatever material that is right around you	What might happen that would make someone want to improvise something?  How might you improvise something?
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inclement	Not clement; harsh; stormy; rigorously cold	Inclement weather is unpleasantly cold or stormy	What might it look like if it were inclement?
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What is something you  
might do if it were  
inclement outside?

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infallible	Not capable of making a mistake		What might make you call someone infallible?
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How could someone  
show they were an  
infallible athlete?

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lenient	Not harsh or strict in dealing with others; gently, merciful	Someone who is lenient is not very strict in punishing someone	How could you tell if someone was being lenient?
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Describe something a  
teacher might do that was  
lenient?

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lethargic	Drowsy, inclined to sleep, dull	When you feel lethargic, you are lazy, sleepy or don't have much energy	What might make someone feel lethargic?
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How might someone act if they were lethargic?

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liberate	To set free		How could a person liberate something?
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What is something you might do if you were just liberated?

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prolific	Producing in abundance	Being prolific means creating a lot of something	Why might some call an author prolific?
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How would a prolific cook act?

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prominent	Sticking out, easy to see or well-known		What can you think of that would be prominent?
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What would give you a  
clue that something is  
prominent?

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prudent	Having and showing caution and good judgment; sensible	Someone who is prudent thinks things over carefully before making decisions	What is something that should be done in a prudent way?
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When might you tell  
someone to be prudent?

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resent	To feel anger or bitter about	If you resent something, it means you have a feeling of anger or jealousy about it	What might happen that would make someone have a resentful feeling?
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How might someone act  
if they resented you?

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succulent    Full of juice; juicy

How could you tell if  
something was succulent?

Why might someone say  
an orange is succulent?

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tamper    To handle carelessly;  
            meddle

To tamper with something means to  
secretly change it so that it does not  
work properly or becomes harmful

How might someone  
tamper with something?

Why might someone  
tamper with something?

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trivial

Having little  
importance or value,  
trifling

How could you tell if  
something was trivial?

Why might someone say  
that a story is trivial?

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wanton

Paying no attention to  
what is right

Someone who is wanton behaves  
however they want without thinking  
about the damage or waste it might  
cause

What might someone do  
in a wanton way?

How might you prevent  
wanton behavior?

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**APPENDIX D**  
**TRANSCRIPTS**

*Fourth Grade, class 1, First parsing session*

TEACHER: The first word in this packet says altercation, and the definition says, “a heated and noisy quarrel.” Can anyone say what they think this definition means?

STUDENT 1: A big city.

TEACHER: Let’s read the definition again, “a heated and noisy quarrel.” Does anyone else have an idea for what they think this definition means?

STUDENT 2: A lot of noise that’s not wanted.

TEACHER: There’s a space for you to write a sentence, and then the first question says, “What would you say to some friends who had an altercation?” and then, “What might happen if there were an altercation?”

TEACHER: This next word is benevolent, and the definition says, “inclined to do good.” Can anyone tell me what they think this definition means?

STUDENT 1: If you’re set to do good.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: You have a feeling inside of you that you have to do good.

TEACHER: There’s a space for the sentence, and then the first question says, “How might someone act in a benevolent way?” and then, “What kinds of things could someone do if they were benevolent?”

TEACHER: This next word is capitulate, and the definition says, “to surrender or give up to an enemy under certain conditions.” Can anyone say what they think this definition means?

STUDENT 1: If they’re in a war and they say that they don’t need to fight anymore.

TEACHER: Can anyone else say what they think the definition means?

STUDENT 2: Maybe to agree on a certain thing.

TEACHER: The two questions say, “What might happen that would make someone want to capitulate?” and then, “How would someone show that they wanted to capitulate?” This next word is divulge, and the definition says, “to disclose a secret; reveal.” Can anyone say what they think this definition means?

STUDENT 1: To tell a secret.

TEACHER: There's a space for the sentence, and then the first question says, "When should someone be careful not to divulge something?" and then, "How might you divulge something?"

Teacher: This next word is eloquent, and the definition says, "showing clear, forceful, and effective language." Can anyone say what they think this definition might mean?

STUDENT 1: If you're really serious.

TEACHER: Let's read it one more time, "showing clear, forceful, and effective language."

STUDENT 2: When someone is saying mean words about you.

TEACHER: The first question says, "When would be a time when it would be good for someone to be eloquent?" and "How could tell if someone were eloquent?"

TEACHER: This last word is eminence, and the definition says, "one who stands out above all others; distinguished." Can anyone say what they think this definition means?

STUDENT 1: To stand out.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: A smart person.

TEACHER: (Many children raised their hands) Some of you have other ideas, you can use those when you write the sentence, and then the first question says, "How does someone show eminence?" and "What can you think of that has eminence?"

*Fourth Grade, class 1, second parsing session*

TEACHER: Go ahead and turn to the first word. This first word is fluctuate, and the definition says, "to rise and fall; keep changing and wavering." Can anyone say what they think this definition means? To rise and fall; keep changing and wavering.

STUDENT 1: If someone wins something they would rise in victory, or they would fall.

TEACHER: Can anyone else say what they think this definition might mean?

STUDENT 2: Something that goes up and down.

TEACHER: There's a space for the sentence, and then the first question says, "What kinds of things could fluctuate?" and the second question says, "How could you tell if something were fluctuating?" This next word is impetus, and the definition says, "any

force that helps something along; stimulus.” Can anyone say what they think this definition means?

STUDENT 1: Help something.

TEACHER: Let’s read the definition again, “any force that helps something along; stimulus.” Can anyone else say what they think this definition means?

STUDENT 2: There’s like a force or something that’s helping.

TEACHER: Okay, go ahead and use the word in a sentence and then the two questions say, “What would be an impetus to work hard?” and, “What impetus could you give someone to wake up early?” This next word is lethargic, and the definition says, “drowsy; inclined to sleep; dull.” Can anyone say what they think this definition means?

STUDENT 1: Like a secret, maybe?

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: Like if you couldn’t sleep like all night and then you woke up you would be lethargic.

TEACHER: There’s a place for the sentence, and then the first question says, “What might make someone feel lethargic?” and the second question is, “How might someone act if they were lethargic?”

STUDENT 1: (Whispering) I’m not sure how to answer this question.

TEACHER: How might someone act if they were lethargic?

STUDENT 1: You probably wouldn’t like them.

TEACHER: The next word is hindrance, and the definition says, “the act of getting in the way of; tampering; obstruction.” Can anyone say what they think this definition means?

STUDENT 1: Something that isn’t letting you do something.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: You act like you want something and everybody says no.

TEACHER: There’s a space for the sentence, and then the first question says, “What is something you would not want a hindrance to?” and the second question says, “What kinds of things could be a hindrance?” This next word is resent, and the definition says, “to feel angry or bitter about.” Can anyone say what they think this definition might mean?

STUDENT 1: You might be angry at someone because they accidentally hit you and you didn't think it was an accident.

TEACHER: Can anyone else say what they think this might mean?

STUDENT 2: You might be angry at your mom and dad.

TEACHER: There's a place for the sentence, be sure to use the word resent in the sentence, and then the first question says, "What might happen that would make someone have a resentful feeling?" and the second one says, "How might someone act if they resented you?" This last word is wanton, and the definition says, "paying no attention to what is right." Can anyone say what they think this definition means?

STUDENT 1: A person who isn't following what's right.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: A house maker who isn't paying attention to how to make the house and stuff.

TEACHER: Okay, there's a place for the sentence be sure to use the word in the sentence, and the first question says, "What might someone do in a wanton way?" and, "How might you prevent wanton behavior?"

*Fourth Grade, class 2, first parsing session*

TEACHER: (Explains directions by giving an example.) Let's turn to the first word in the packet. This word is affinity, and the definition says, "a natural, personal attraction." Can anyone tell me what they think this definition means?

STUDENT 1: Twitterpated.

TEACHER: Can anyone else say what they think the definition means?

STUDENT 2: I think a person who does something and they're really good at it. If they are really good at a sport.

TEACHER: Do you see the place where there's a space for the sentence? Then the question says, "When might someone feel an affinity for something?" and the next question says, "How might someone act if they had an affinity for dogs?"

This next word is allude and the definition says, "to hint at someone or something unnamed, refer indirectly." Can anyone say what they think this definition might mean?

STUDENT 1: I think it means if you don't know the name of something and you guess at it or try to think of the name for it.

TEACHER: Can anyone else say what they think the definition might mean?

STUDENT 2: Well, say someone's on a team and then they lose the game whenever they're playing and then they say that SOMEONE did something or SOMEONE did that because they're mad at other people and they don't want them to know.

TEACHER: So there's a space for the sentence and then the first question says, "Can you think of a time when it would be good to allude to something?" and the second question says, "How might you act if you tried to allude to something?"

This next word is complacent, and the definition says, "pleased with oneself." Can anyone say what they think this definition means?

STUDENT 1: Like if you're good at basketball and you think that then you're complacent with yourself.

TEACHER: Can anyone else say what they think the definition means?

STUDENT 2: When you think happy thoughts about yourself when you're like (INAUDABLE)

TEACHER: There's a space for your sentence, and then the questions say, "If someone were complacent about something how might they act?" and "What kinds of things might someone act complacent about?"

This next word is concise, and the definition says, "saying much in a few words; brief." Can anyone tell me what they think this definition means?

STUDENT 1: If you're saying a small sentence but people really understand and they think that it's like a big paragraph you're saying so much in one sentence.

TEACHER: Can anyone else say what they think the definition means?

STUDENT 2: You say a short amount of words but you're actually saying a lot of something.

TEACHER: There's a space for the sentence using the word concise, and then the questions say, "What might give you a clue that something is concise?" and the next question says, "Why might someone need to do something in a concise way?"

TEACHER: I think we're ready for the next word. This next word is devious, and the definition says, "departing from the correct or proper way; erring." Can anyone say what they think this definition means?

STUDENT 1: I think it means to go somewhere like on a plane and go somewhere.

TEACHER: Let's read the definition again, "departing from the correct or proper way; erring." Can anyone else say what they think the definition means?

STUDENT 2: Um, like, being wrong.

TEACHER: There's a space for the sentence, and then the first question says, "What are some things that someone might do that would be devious?" and then the second question says, "What might give you a clue that someone was being devious?"

TEACHER: This last word is exploit, and the definition says, "a very brave or daring act." Can anyone tell me what they think this definition means?"

STUDENT 1: If you were doing something that no one else would normally do, like climb a really really big mountain or something that a person could do that nobody else could.

TEACHER: Can anyone else say what they think the definition means?

STUDENT 2: If you're like scared of heights and you start climbing a high tree because you got your kite stuck up there and someone is underneath you they might say that you're exploit because you're scared.

TEACHER: Okay, there's a space for a sentence, and then it says, "Why might someone want to have an exploit?" and then the second question says, "What might you like to do if you were on an exploit?"

*Fourth grade, class 2, second parsing session:*

TEACHER: This first word is improvise and the definition says, "To make from whatever materials happen to be around." Can anyone tell me what they think that definition means?

STUDENT: Well, if someone like improvises they make something.

TEACHER: Can anyone else say what they think the definition means?

STUDENT: Well, say if you are allergic to something, so I'm like allergic to blueberries, so instead of making a blueberry pie my mom would like make a cranberry pie, or cranberry pudding, or strawberry pudding. She substitutes the blueberries so that I can still eat it.



TEACHER: There's a space for your sentence, and the first question says, "What might happen that would make someone want to improvise something?" Then the next question is, "How might you improvise something?"

STUDENT: (whispering) I still don't know.

TEACHER: Just look at the definition again and try to do the best you can.

TEACHER: We're ready for the next word. This next word is inclement. The definition says, "Not clement. Harsh, stormy, rigorously cold." Can anyone say what they think this definition might mean?

STUDENT: I think if you get punished and you do something really bad, but the punishment is even worse than what you already did.

TEACHER: Let's look at the definition again. Not clement. Harsh, stormy, rigorously cold. Can anyone else say what they think this definition might mean?

STUDENT: Um, like bad weather, having like a snow storm, or having something really bad happen.

TEACHER: There's a space for your sentence. The first question says, "What might it look like if it were inclement?" and the other question says, "What is something you might do if it were inclement outside."

TEACHER: This next word is lenient and the definition says, "Not harsh or strict in dealing with others, gentle, merciful." Can anyone say what they think this definition means?

STUDENT: Maybe a person that is kind to others, and would be nice to them—not backstab or hurt them.

TEACHER: OK, Can anyone else say what they think this definition might mean?

STUDENT: Not bad, um, not too bad, really nice, something that is really good.

TEACHER: There's a space for the sentence and then the two questions say "How could you tell if someone were being lenient?", and "Describe something a teacher might do that was lenient".

STUDENT: Does this look alright?

TEACHER: That's fine.

TEACHER: This next word is prolific, and the definition says, "Producing in abundance." Can anyone say what they think this definition means?

STUDENT: Like they would really mess something up.

TEACHER: Let's read the definition again, "Producing in abundance." Can anyone else say what they think this definition might mean?

STUDENT: Maybe giving up something and it is a nice way to help someone.

TEACHER: Okay, there is a space for your sentence. The first question says, "Why might someone call an author prolific?" Then the second question says, "How might a prolific cook act?"

STUDENT: What does abundance mean?

TEACHER: Well, I want you to think about it. Think about what you think it means.

STUDENT: (Whispering): I really don't know what to do.

TEACHER: Just take a good guess if you aren't sure.

TEACHER: Let's go on to the next word. This next word is prudent, and the definition says, "Having and showing caution and good judgment, sensible". Can anyone say what they think this definition means?

STUDENT: Um... Like nice, or something?

TEACHER: Okay, let's read it again, "Having and showing good judgment, sensible."

STUDENT: Cause you are cautious around others and you wouldn't hurt them or you are patient and fair.

TEACHER: Here's the space for the sentence. The first question says, "What is something that should be done in a prudent way?" and "When might you tell someone to be prudent?"

TEACHER: Okay. The last word is tamper. The definition says, "To handle carelessly, meddle." Can anyone say what they think this definition means?

STUDENT: Maybe if you like are at a baseball game and you don't care what you are going to do when you are up to bat, and you never swing or you don't care what you do.

TEACHER: Let's read the definition again, "To handle carelessly, meddle." Can anyone else say what they think this definition might mean?

STUDENT: Well maybe if you are holding something and you drop it or something.

TEACHER: Here's the space for your sentence. The first question says, "How might someone tamper with something?" and the second question says, "Why might someone tamper with something?"

*Fifth grade, class 1, first parsing session:*

TEACHER: This first word is affinity, and the definition says, "a natural, personal attraction." Can anyone tell me what this definition means?

STUDENT 1: This definition might mean something that you really like or something you enjoy doing.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: When you like something or you can't resist.

TEACHER: So there's a space for the sentence using the word affinity and then the two questions say, "When might someone feels an affinity for something?" and then the next question says, "How might someone act if they had an affinity for dogs?"

TEACHER: This next word is allude, and the definition says, "to hint at someone or something unnamed, refer indirectly." What does this definition mean?

STUDENT 1: It basically means if you're talking about someone then the person might know that person and say it about the wrong person that you're talking about.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: It might mean if someone needs something and trying to give someone hints that they're trying to help them without actually cheating, I saw in a movie once that someone, it was actually Harry Potter and the Goblet of Fire, when they hinted to Harry that if he wanted to solve a clue he should go to a certain room to do it. So he was sort of alluding him sort of not trying to cheat, but he's sort of helping them.

TEACHER: There's a space for the sentence, and then the first question says, "Can you think of a time when it would be good to allude to something?" and then, "How might you act if you tried to allude something?" This next word is complacent, and the definition says, "pleased with oneself." What does this definition mean?

STUDENT 1: If you got a good grade.

TEACHER: Who else can say what they think this definition means?

STUDENT 2: It might mean that they're satisfied with what they did.

TEACHER: There's a space for the sentence and then the first question says, "If someone were complacent about something how would they act?" and "What kinds of things might someone act complacent about?" This next word is concise, and the definition says, "saying much in a few words; brief." What does this definition mean?

STUDENT 1: A short story.

TEACHER: Can anyone else say what they think this means?

STUDENT 2: If you made something and it took a long time maybe the next time you wouldn't put all of the details into it.

TEACHER: There's a space for the sentence and then the first question says, "What might give you a clue that something is concise?" and the second question says, "Why might someone need to do something in a concise way?" This next word is devious, and the definition says, "departing from the correct or proper way." What does this definition mean?

STUDENT 1: Like maybe if someone belongs to a certain church or you have to wear uniforms and you have to go to these certain places at certain times, like they decide to go to Wal-Mart instead of going to this certain designated store.

TEACHER: Okay, can anyone else say what they think this definition means?

STUDENT 2: Devious, I think it means that it is an ultimate way of doing things (INAUDABLE) I think devious might mean like strange, or unorthodox.

TEACHER: Okay, there's a space for the sentence, and then the first question says, "What are somethings someone might do that are devious?" and then the next question is, "What might give you a clue that someone was being devious?" This last word is exploit, and the definition says, "a very brave or daring act." What does this definition mean?

STUDENT 1: When you have courage.

TEACHER: Who else can say what they think it means?

STUDENT 2: Like the people who are in Iraq they are very exploit because they do a lot of brave things.

TEACHER: Okay. There's a space for the sentence, and then the first question says, "Why might someone want to have an exploit?" and then, "What is something you might like to do if you were on an exploit?"

*Fifth grade, class 1, second parsing session:*

TEACHER: This first word is improvise and the definition says, “To make from whatever materials happen to be around.” Can anyone say what they think that definition means?

STUDENT: Use what you can find

TEACHER: Can anyone else say what they think the definition means?

STUDENT: Like you are trying to make something and you are trying to do it with just what you have.

TEACHER: There’s a space for your sentence, and the first question says, “What might happen that would make someone want to improvise something?” Then the next question is, “How might you improvise something?”

TEACHER: This next word is inclement. The definition says, “Not clement. Harsh, stormy, rigorously cold. Can anyone say what they think this definition might mean?”

STUDENT: Um. Just plain old rotten weather or whatever.

TEACHER: Can anyone else say what they think this definition might mean?

STUDENT: Just raining.

TEACHER: There’s a space for your sentence. The first question says, “What might it look like if it were inclement?” and the other question says, “What is something you might do if it were inclement outside.”

TEACHER: This next word is lenient and the definitions says, “Not harsh or strict in dealing with others, gentle, merciful.” Can anyone say what they think this definition might mean?

STUDENT: Um. It means they are kind, very forgiving, just basically plain old nice.

TEACHER: Can anyone else say what they think this definition might mean.

STUDENT: If there is something that someone can’t do well, then you would help them.

TEACHER: Alright, here’s the space for your sentence and the first question is “How could you tell if someone were being lenient?”, and “Describe something a teacher might do that was lenient”.

STUDENT: (Whispering) So I think maybe it is like not harsh, or the opposite of strict. Is that right?

TEACHER: I want you to decide. What do you think?

STUDENT: OK.

TEACHER: This next word is prolific, and the definition says, "Producing in abundance." Can anyone say what they think this definition means?

STUDENT: When you are talking about prolific you are thinking about like a factory, and the production of... well... I lost my train of thought.

TEACHER: That's Okay. Can anyone else say what they think the definition means?

STUDENT: Well, maybe like creating a whole lot of something.

TEACHER: Okay, there is a space for your sentence. The first question says, "Why might someone call an author prolific?" Then the second question says, "How might a prolific cook act?"

TEACHER: We're ready for the next word. This word is prudent, and the definition says, "Having and showing good judgment, sensible". Can anyone say what they think this definition means?

STUDENT: Having a good time.

TEACHER: Okay, let's read the definition again. "Having and showing good judgment, sensible. Can anyone else say what they think this definition means?"

STUDENT: Being cautious. Maybe watching where you step.

TEACHER: Here's the space for the sentence. The first question says, "What is something that should be done in a prudent way?" and "When might you tell someone to be prudent?"

TEACHER: This next word is tamper, and the definition says, "To handle carelessly, meddle." Can anyone else say what they think this definition means?

STUDENT: Like if a burglar is trying to break into the cash register they might tamper with the cash register so they can get it to open.

TEACHER: Here's the space for your sentence. The first question says, "How might someone tamper with something?" and the second question says, "Why might someone tamper with something?"

*Fifth grade, class 2 First parsing session:*

TEACHER: (Explains reason for presence of tape recorder and discusses directions with students.)

TEACHER: Alright, so with that, let's get started. And remember, stay right with me, don't go ahead and the blue sheets are in between so I can be sure that everybody in the same place. Let's turn to the first word. This first word is altercation, and the definition says, "a heated and noisy quarrel." Can anyone say what they think this definition means?

STUDENT 1: An argument.

TEACHER: There's a space for you to write a sentence, and then the first question says, "What would you say to some friends who had an altercation?" and then, "What might happen if there were an altercation?" This next word is benevolent, and the definition says, wait for us okay, "inclined to do good." Can anyone say what they think this definition means?

STUDENT 1: When someone is benevolent, they are inclined to do good.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 3: To do a good deed.

TEACHER: There's a space for the sentence, and then it says, "How might someone act in a benevolent way?" and "What kinds of things could someone do if they were benevolent?" We are ready for the next word. This next word is capitulate, and the definition says, "to surrender or give up to an enemy under certain conditions." Can anyone say what they think this definition means?

STUDENT 1: Like in a war, if one side of the battle is losing too many people then they would capitulate to their opponent.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: Say if two countries are fighting and the one was losing and they wanted to give up, but not really give up, they wanted to fight more. They would capitulate.

TEACHER: There's a place for the sentence and then it says, "What might happen that would make someone want to capitulate?" and "How would someone show they wanted to capitulate?" This next word is divulge, and the definition says, "to disclose a secret; reveal." Can anyone say what they think this definition might mean?

STUDENT 1: If someone gave you a secret, they wouldn't want you to divulge it.

TEACHER: Can anyone else say what they think the definition might mean?

STUDENT 2: They force me to tell a secret so I had to divulge it.

TEACHER: The first question says, "When should someone be careful not to divulge something?" and "How might you divulge something?" So there's a place for your sentence, and then answer the two questions. This next word is eloquent, and the definition says, "showing clear forceful and effective language." Can anyone say what they think this definition means?

STUDENT 1: A lawyer would be eloquent.

TEACHER: (Noise in background, so teacher clarifies) A lawyer would be eloquent? (Student nods). Can anyone else say what they think this definition means?

STUDENT 2: A judge might be.

TEACHER: There's a space for your sentence/ The first question says, "When would be a time where it would be good for someone to be eloquent?" and, "How could you tell if someone were eloquent?"

TEACHER: This last word is eminence, and the definition says, "one who stands out above all others; distinguished." Can anyone say what they think this definition means?

STUDENT 1: If you really like your jacket, because everyone can see it.

TEACHER: Okay, let's read the definition again, "one who stands out above all others; distinguished." Can anyone else say what they think this definition might mean?

STUDENT 2: When you stand out.. and.. uhh... I don't know?

TEACHER: Not sure?

STUDENT 3: (Student interjects) A star would be eminence.

TEACHER: Okay, you can write your sentence, then the two questions say, "How does someone show eminence?" and "What can you think of that has eminence?"

STUDENT: (whispering) I don't get it. I still don't understand what was wrong with mine.

TEACHER: I just wanted to see what someone else would say if we looked at the definition again.



*Fifth grade, class 2, second parsing session.*

TEACHER: You can turn to the first word. This first word is fluctuate, and the definition says, “to rise and fall; keep changing and wavering.” Can anybody say what they think this definition means?

STUDENT 1: Going up and down.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: Um, like the stock market is always going up and down, so it would be like, fluctuating.

TEACHER: I see you have other ideas, that’s good, they might help you on the paper, there’s a space for the sentence and then the first question says, “What kinds of things could fluctuate?” and the second question says, “How could you tell if something were fluctuating?”

STUDENT 1: (student whispers to teacher he doesn’t know how to answer)

TEACHER: (whispering to student) Okay, let’s see, what can you think of that would tell you, “oh, this is fluctuating.”?

STUDENT 1: Birds?

TEACHER: Yes, that’s fine. I think we’re ready for the next word. This word is impetus, and the definition says, “any force that helps something along; stimulus.” Can anyone say what they think this definition means?

STUDENT 1: Well, it would be like something that gives it an extra push.

TEACHER: Can anyone else say what they think this definition means?

STUDENT 2: If someone’s in a race, people encourage you to go faster.

TEACHER: Okay, there’s a place for the sentence, and then the first question says, “What would be an impetus to word hard?” and “What impetus could you give someone to get up early?” This next word is lethargic, and the definition says, “drowsy, inclined to sleep; dull.” Can anyone say what they think this definition means?

STUDENT 1: (INAUDABLE)

TEACHER: Lethargic? Okay, did everybody hear that? Can anyone else say what they think this definition means?

STUDENT 2: You might work hard to win a competition or something and when you get home you're really drowsy.

TEACHER: There's a place for the sentence, and then the first question says, "What might make someone feel lethargic?" and the second question is, "How might someone act if they were lethargic?" We're ready for the next one, go ahead and turn to the next one and wait for us to talk about it before you write anything. This word is hindrance, and the definition says, "the act of getting in the way of; tampering; obstruction." Can anyone say what they think this definition means?

STUDENT 1: Little kids if you're trying to do something are always like, wanting something when you're trying to get something done.

TEACHER: Can anyone else say what they think the definition means?

STUDENT 2: I agree with what he said.

TEACHER: There's a space for the sentence, and then the first question says, "What is something you would not want a hindrance to?" and the second question says, "What kinds of things could be a hindrance?" We are ready for the first word. This word is resent, and the definition says, "to feel angry or bitter about." Can anyone say what they think this definition might mean?

STUDENT 1: If you get fired from work.

TEACHER: Can anyone else say what they think this means?

STUDENT 2: If someone hits you or pushes you.

TEACHER: So there's a place for the sentence, and then the first question says, "What might happen that would make someone have a resentful feeling?" and the second one says, "How might someone act if they resented you?" Okay, we're ready for the very last word. This last word is wanton, and the definition says, "paying no attention to what is right." Can anyone say what they think this definition means?

STUDENT 1: Some people think when they do something wrong, it's right, so they're wanton.

TEACHER: Can anyone else say what they think it means?

STUDENT 2: A scoundrel is wanton.

TEACHER: There's a place for the sentence, and the first question says, "What might someone do in a wanton way?" and, "How might you prevent wanton behavior?"

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