USING WALK TALK WORDS TO IMPROVE FIRST-GRADE STUDENTS'

VOCABULARY DEVELOPMENT

by

TAMMY CHRISTINE RYAN

(Under the Direction of Linda Labbo)

ABSTRACT

The formative experiment reported in this dissertation explored how two first-grade teachers implemented a vocabulary intervention, *Walk Talk Words*, which incorporated storybook read-alouds, nonstorybook activities, and digital technologies with available classroom resources to improve 29 first-grade students' vocabulary development. During an 8-week intervention phase, the researcher worked with two first-grade teachers through focus group meetings to increase the amount of Tier Two words included in instruction. Tier Two words are shown in previous research to be associated with students' reading comprehension and academic success. Quantitative baseline data were collected to establish students' entering vocabulary knowledge. Qualitative data were collected during baseline and intervention phases of the study that focused on how the teachers increased students' exposure to and interactions with Tier Two words through Text Talk methods and Digital Language Experience Approach (D-LEA) activities. Qualitative data included interviews, focus group meeting videotapes, teacher reflective journal entries, teacher pedagogical vocabulary goal statements, lesson plans, informal discussion with the teachers, classroom observations and field notes, and coded transcripts of lesson videotapes. Inductive analysis and constant comparative methods showed that teachers could implement

Walk Talk Words through thematic units using two cycles of implementation: visualizing the walk and creating the talk that engaged students in learning and using Tier Two words through relevant and meaningful experiences. Descriptive analysis revealed that students improved in vocabulary knowledge on PPVT-4 stanine scores. Descriptive analysis also indicated that students learned more Tier Two words when the words were included in D-LEA class books as identified on the teachers' word knowledge assessment instruments. Important factors that enhanced and inhibited implementing the intervention in the classroom were identified. Implications for further research and classroom practice are discussed. Also discussed is how using a formative experiment in the present study aligned with effective principles of staff development.

INDEX WORDS: Vocabulary, Primary grades, Tier Two words, Text Talk, Digital Language Experience Approach, Digital technologies, Formative experiment, Interactive whiteboards

USING WALK TALK WORDS TO IMPROVE FIRST-GRADE STUDENTS'

VOCABULARY DEVELOPMENT

by

TAMMY CHRISTINE RYAN

B.A., University of Florida, 1983

M.S., Nova Southeastern University, 1995

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial

Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2008

USING WALK TALK WORDS TO IMPROVE FIRST-GRADE STUDENTS'

VOCABULARY DEVELOPMENT

by

TAMMY CHRISTINE RYAN

Major Professor: Linda Labbo

Committee: Michelle Commeyras
Stacey Neuharth-Pritchett

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
August 2008

DEDICATION

This dissertation is dedicated to Claudia Mazaros - we did it. I also dedicate this

dissertation to my husband, Barry, who stood behind me through it all.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

> To be a good word learner, one must be hungry for words. Learning (and using) new words can be exciting because a new word not only is a sign of growing up, but it also is a sign of greater control and understanding about one's world. Effective instruction should make children seek out words, be sensitive about hearing and learning more about new words. It is not enough to fill children up with words as if they were an empty vessel. Instead, teachers and parents should create an environment where children go out and seek new words as well. Good vocabulary teaching in the primary grades is talking about words found in books, on trips, in the classroom, bringing them in and sending children out to find more (Stahl & Stahl, 2004, pp. 75-76).

This quote underscores the importance of merging three essential ingredients found in a typical primary classroom: (1) active, curious, and willing participants naturally awaiting the moment to explore their surroundings, (2) classroom materials such as storybooks, concrete items, and (3) digital equipment that when brought together may empower children's vocabulary development. Specifically, the quote reflects the essence of and captures my interest in designing, *Walk Talk Words*, a vocabulary intervention that utilizes books but moves beyond books to enhance children's vocabulary development. Thus, this study explored the decision-making processes and practices of two first-grade teachers as they discovered, enriched, and embedded *Walk Talk Words* into their classroom community to immerse children in the world of words.

Over the years vocabulary development and instruction have received ongoing and considerable attention in the field of reading education. For almost two decades, researchers have contributed insights into the teacher's role in supporting students' vocabulary development. For example, several studies found that while listening to storybooks during read-alouds, students'

word growth and language development increased (Adams, 1990; Baker, Scher, & Mackler, 1997; Snow, Barnes, Chandler, Goodman, & Hemphill, 1991). Further, research has identified specific conditions that contribute to students' vocabulary development such as multiple readings of the same book (Elley, 1989; Robbins & Ehri, 1994; Senechal & Cornell, 1993; Senechal, Thomas, & Monker, 1995), and multiple readings with and without word explanations (Elley, 1989; Robbins & Ehri, 1994; Senechal, 1997). Researchers have examined the influence of direct instruction (Biemiller & Slonim, 2001; Feitelson, Goldstein, Iraqi, & Share, 1991; Whitehurst et al., 1994) and the effects of interactive read-alouds (Beck, McKeown, & Kucan, 2002; Wasik & Bond, 2001) on the enhancement of children's word growth.

Research studies suggest that vocabulary development affects students' academic success. Young students' verbal development (Sternberg, 1987), word recognition (Nagy, 2005), reading comprehension (Beck & McKeown, 2001; Cunningham & Stanovich, 1997; Dickinson & Tabors, 2001; McKeown & Beck, 2004; Scarborough, 1998), and reading comprehension of English language speakers (Beck, Perfetti, & McKeown, 1982) and English language learners (Carlo et al., 2004), depends to some extent on their vocabulary acquisition. In addition, several studies indicate that vocabulary knowledge influences the amount of independent reading students complete inside the classroom (Allington, 2001) and outside the classroom (Stanovich, 1986; 2000).

Recent suggestions for vocabulary instruction frequently draw from the National Reading Panel's (2000) report, which indicates that effective vocabulary instruction may consist of various methods such as contextualized definitions, multiple exposures to words, multiple experiences with words, connections to one's own experiences, the development of independent strategies, or integration with computer technology (Blachowicz, Beyersdorfer, & Fisher, 2006;

Graves & Watts-Taffe, 2002; Nagy, 2005; NRP, 2000; Stahl & Fairbanks, 1986). Indeed the research literature is replete with suggestions on ways that research on vocabulary development can inform effective instructional practice (Baumann & Kame'enui, 2004; Beck et al., 2002; Biemiller, 1999; Graves, 2006; Hiebert & Kamil, 2005; Stahl, 1999).

Nonetheless, while there is a substantial amount of important vocabulary research in the field of reading, the National Reading Panel (2000) found too few studies conducted with children in kindergarten through second grade to draw sufficient conclusions on what explicit instruction in the primary grades should entail. The Panel also found too few studies that have investigated the effects of computer-related vocabulary instruction on students' word growth. In addition, little is known about the decision-making processes that primary teachers employ when they conduct vocabulary instruction within the naturalistic context of their classrooms with and beyond storybook read-alouds (Biemiller & Boote, 2006).

Thus, this study explored the potential of using *Walk Talk Words* as an intervention to incorporate both storybook read-alouds and nonstorybook activities in a primary classroom to increase children's vocabulary development. In the remaining sections of this introductory chapter, I will (a) share the origins of *Walk Talk Words,* (b) describe *Walk Talk Words* as a vocabulary intervention, (c) state the purpose and research questions of the study, (d) offer a rationale for selecting a formative experiment methodology to conduct the study, (e) state the significance of the study, (f) share and define key terms, and (g) provide a summary of this chapter and an organization framework for the remaining chapters of this study.

<div align="center">Origins of *Walk Talk Words*</div>

My interest in exploring children's vocabulary development started some twenty-three years ago during my first teaching position as a Chapter 1 sixth-grade teacher in an inner city

school in Miami. Many of the students had never ventured beyond their community to dip their toes in the sand or swim in the waters of the Atlantic Ocean, located only twenty minutes from the school. To bring the world to the students, I brought in starfish, shark's teeth, coral, shells, and sea gull feathers. Items not easily found or too difficult to bring to the classroom, I represented through pictures. I displayed the items in an exploration center in a corner of the room to develop students' vocabulary and background knowledge. Throughout the year, I refreshed the center with different objects pertaining to the themes and concepts we discussed. The literature and content area discussions needed concrete enrichments to extend children's background knowledge so they could connect to and better comprehend the material.

Two years later, I accepted a position closer to home in a prestigious and affluent private school. Immediately, I noted the differences in students' background knowledge that contributed to our lively and rich discussions. These experiences resulted from the children's rich literacy engagements. Several children took trips throughout the year to visit relatives in Israel. Some children spent their summers at sleep-away-camps, while others vacationed in various regions around the world. To connect to, enrich, and extend our areas of discussion, children often brought in various souvenirs. We had papyrus paper from Egypt, a Kimono dress from China, and many letters and pictures sent in from relatives around the world. I learned from these students about places I had never been nor knew much about. Many of these students lived in environments where parents had attended Ivey League schools and education was valued in both quality and quantity of literacy experiences.

After having my own two children, I became even more intrigued with the power behind rich emergent literacy experiences and explored ways to immerse my own children in rich language experiences to develop and extend their vocabulary and background knowledge. Aware

of the long lasting benefits of rich language experiences on children's literacy development, I exposed my children to the world around them by taking them on neighborhood walks and trips. I read storybooks aloud to them nightly to develop vocabulary and background knowledge. Weekly trips often included going to the beach, playing at local parks, and riding the city bus to visit the mall. During the journeys, as we walked we talked as I embedded rich vocabulary into our discussions. I defined words, used them in multiple contexts, and encouraged my children to use them in sentences of their own.

When my children were young, we transferred often across the country. These transfers provided more interesting and diverse learning experiences. Our summer vacations included riding dog sleds in Alaska, sailing on boats in the Bay of Fundy, and walking along the pier in San Francisco to listen to seals bark. As we *walked*, we *talked,* and shared the camera to take pictures to capture these moments. At home, we created memory books, shared the pen to add captions to the pictures to describe the adventures. Often, we revisited these experiences, using the pictures to link to our memories while cuddling up at night for storybook readings. Over time, I noticed how these experiences contributed to building and strengthening my children's comprehension and how they used vocabulary associated with an experience to make connections to stories read-aloud. The benefits of scaffolding young children's background knowledge with rich literacy experiences to develop vocabulary were confirmed after my son started kindergarten. His kindergarten teacher commented that he "loved sharing during story time and that his extensive vocabulary led to interesting discussions." Similar comments continued throughout both my children's school experiences.

After my children entered formal schooling, I returned to teaching. That seed of interest planted several years earlier, to expose young children to various vocabulary experiences to

enrich their background knowledge and vocabulary growth, had now blossomed into a full fledge

passion. I continued experimenting with ways to bring the world into the classroom to instill in

young children the love for words through hands-on activities, rich discussions, vocabulary

activities, and quality literature.

I share an extensive overview of these experiences because they are the inspiration for

this study's intervention *Walk Talk Words*. Over time, with different populations, and in various

contexts, I have seen significant benefits to and gains in children's vocabulary growth and

background knowledge when children are given access to words through rich literacy

experiences.

<div align="center">*Walk Talk Words* as a Vocabulary Intervention</div>

Walk Talk Words combines three essential ingredients of effective vocabulary practice to

assist teachers in using available classroom resources to immerse children in a world of words.

First, *Walk Talk Words* is a vocabulary intervention intended for use in the primary grades. It

assists teachers in honing the craft of selecting and interweaving robust vocabulary (e.g., Tier

Two words; Beck et al., 2002) with available materials, storybook favorites, Internet sites, E-

books, and hands-on application to engage children in word learning and word awareness

experiences. Second, *Walk Talk Words* extends Text Talk (Beck & McKeown, 2001; Beck et al.,

2002; McKeown & Beck, 2003) to maximize learning experiences as teachers contextualize

selected words in book read-alouds, conversations, and hands-on application. For example, a

teacher might use *Walk Talk Words* to enrich a science lesson on living things as a she integrates

Walk (e.g., offering concrete objects such as seeds and sprouts), *Talk* (e.g., telling a group of

children to scrutinize their sprouts for any change in growth) with *words* (e.g., selecting the Tier

Two words scrutinize and sprouts for instruction). Third, *Walk Talk Words* positions children in

active roles to engage them in receptive and expressive literacy events. Fourth, *Walk Talk Words* uses Digital Language Experience Approach (Labbo, Eakle, & Montero, 2002; Labbo, Sprague, Montero, & Font, 2000; Turbill, 2003) to capture and continually keep in motion the language children produce when engaged with Tier Two words. Lastly, *Walk Talk Words* offers a vocabulary intervention that is friendly and flexible enough for teachers to make it their own and take it where they can to sustain word awareness and word learning in the primary grades.

Purpose of Study and Research Questions

The purpose of this study is to use a formative experiment methodology to investigate teachers' instructional decision-making processes and practice as they implement *Walk Talk Words*, a vocabulary intervention that I have designed, and the effects of that intervention on students' vocabulary growth. As an instructional intervention, *Walk Talk Words* integrates several essential ingredients of successful vocabulary instruction. The ingredients include the following: (a) the notion of Tier Words (Beck et al., 2002), (b) Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) and (c) Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003).

Walk Talk Words is grounded in research on how teachers can determine or target words for instruction (e.g., Tier Two words, Beck & McKeown, 1985) and how they can contextualize words and word definitions during read-alouds of favorite storybooks, content area topics, and everyday conversations (e.g., Text Talk, Beck & McKeown, 2001; Beck, et al., 2002; McKeown & Beck, 2003). Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) extends children's experiences with words through a process of taking and using photographs to document engagements with Tier Two words encountered in the classroom. D-LEA enriches the learning experiences, as children become active participants,

use background knowledge to connect to words, and compose multimedia presentations and class books that provide continual exposure to the instructed Tier Two words reinforce the learning of the words. Specifically, the following two research questions were explored:

1. What is the nature of teachers' decision-making processes and practice as they implement *Walk Talk Words* to improve first grade students' vocabulary development?

2. What are the effects of *Walk Talk Words* on first grade students' vocabulary development?

<div align="center">Rationale for a Formative Experiment Methodology</div>

A formative experiment methodology (Reinking & Watson, 2000) addresses the cultural conflicts that a teacher turned researcher often encounters when shifting from teaching as a practice to educational research as a practice (Labaree, 2004). A cultural conflict results when one views the world from either a normative or an analytical lens. A normative perspective includes working from a practical, particularistic, and experimental perspective such as when teachers' instructional decision-making processes adjust for unanticipated factors. An analytical perspective involves working from an intellectual, universalistic, and theoretical lens to produce explanations and understandings of an event to solve educational issues. A normative lens is case sensitive; however, an analytical lens generalizes, tests, and advances research. A formative experiment as a methodology aligned with my teacher turned researcher stance to analyze data from both a normative (e.g., qualitative) and analytical (e.g., quantitative) lens. In addition, it provides the opportunity to conduct research that is rigorous, valid, and contributes to both the research community and a practitioner's growing knowledge base regarding effective vocabulary instruction.

Statement of Significance

The purpose of this study was to use a formative experiment methodology to investigate the nature of teachers' implementation and the effect of *Walk Talk Words*, a vocabulary intervention that draws from Tier Words (Beck et al., 2002), Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003), and Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003), on first-grade students' vocabulary development.

This study is significant because it will contribute to the vocabulary research literature and to students' word learning growth in at least four ways. First, this study will add to the existing literature on effective vocabulary instruction in the primary grades. It explores the potential of using *Walk Talk Words* as an approach to incorporate both storybook read-alouds and nonstorybook activities in a primary classroom to increase children's vocabulary development. Second, *Walk Talk Words* provides first-grade students with an opportunity to discover new words, to understand the importance of words, and to develop habits of word learning. Third, it explores additional ways teachers can use digital technologies to extend and enrich young children's word learning experiences. Lastly, it provides an opportunity to investigate the potentials of combining effective principles of professional development with a formative experiment methodology to bring about pedagogical change.

Key Terms Defined

The meanings of the following terms are defined to clarify their use in the remaining sections of this dissertation:

Digital Language Experience Approach: A Digital Language Experience Approach (D-LEA) uses computers and digital photography to enhance Language Experience Approach

(Van Allen, 1982) methods and activities (Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003).

Expressive and Productive Vocabulary: Expressive or productive vocabulary is one's ability to use words to communicate meaning through speech and writing tasks (Kamil & Heibert, 2005).

Formative Experiment: A formative experiment is a research methodology implemented in a naturalistic setting that involves the researcher and participants in implementing an intervention to achieve a pedagogical goal. Qualitative data is collected with the option for quantitative data. The study occurs through six steps. Cyclical periods of data collection inform the need to modify the intervention due to unanticipated factors inhibiting or enhancing the ability to achieve the study's goal (Reinking & Bradley, 2004; Reinking & Watson, 2000).

Generative Theory of Multimedia Learning: A generative theory of multimedia learning is a theory used to understand how "people integrate verbal and visual information during multimedia learning" (Mayer, 1997).

Jot note: Jot notes "are the words, phrases, or sentences that are recorded during the course of a day's events primarily as aids to memory" (Dewalt & Dewalt, 2002, p. 144).

Oral Vocabulary: Oral vocabulary consists of words children learn through listening and reading activities (Kamil & Heibert, 2005).

Print Vocabulary: Print vocabulary includes words children learn through signs, icons, drawings, pictures, animations, and environmental print (Kamil & Heibert, 2005).

Receptive Vocabulary: Receptive vocabulary refers to one's ability to learn words through oral activities such as listening and reading (Kamil & Heibert, 2005).

Sociocognitive Perspective: Sociocognitive perspective is a theoretical framework used to

understand how learning occurs through psychological tools, external stimuli, memory aids, cycles of learning, and a learner's zone of proximal development (Vygotsky, 1962; 1978).

Tier Words: Tier Words are words that comprise mature, literate adults' vocabularies. Words are grouped into three categories according to frequency and use. Tier One words are basic words such as dog, door, and walk that are acquired through direct experience and typically do not require instruction. Tier Two words are high frequency words such as commotion, saunter, and bewildered that cut across many domains. Tier Three Words are low frequency words pertaining to specialized domains such as isotope (Beck et al., 2002).

Text Talk: Text Talk is an explicit vocabulary method that incorporates storybook read-alouds, context, student participation, and multiple exposures to Tier Two words (Beck et al., 2002) to strengthen students' word learning and comprehension development (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003).

Vocabulary: Vocabulary is one's knowledge of word meanings learned through oral, print, productive and expressive means (Kamil & Heibert, 2005).

<center>Summary</center>

In the previous section, I provided an overview of the importance of instructing Tier Two vocabulary in the primary grades, offered the origins of *Walk Talk Words,* and described *Walk Talk Words,* as a vocabulary intervention. I have offered the purpose and research questions of this study and the rationale for selecting a formative experiment as the methodology to conduct the study. Lastly, I presented the significance of the study and defined key terms.

Organization Framework for Remaining Chapters

The remaining chapters of this study are arranged according to the six characteristics of a formative experiment methodology (Reinking &Watson, 2000). The six characteristics unique to designing, conducting, and reporting a formative experiment include the following:

1. Establishing a pedagogical goal based in theory.

2. Implementing an intervention to achieve the pedagogical goal.

3. Collecting data to identify factors enhancing or inhibiting the ability to achieve the pedagogical goal.

4. Modifying the intervention based on unanticipated factors.

5. Noting how the intervention changes the classroom environment.

6. Determining positive and negative unanticipated effects of the intervention.

In Chapter 2, I address the first two characteristic of a formative experiment methodology by situating this study's pedagogical goal, to improve first-grade students' vocabulary development, in relevant theory and by stating the theoretical perspectives used to conduct this study. Second, I review the literature pertaining to the three essential ingredients combined to design this study's intervention, *Walk Talk Words*, and I explain how the ingredients have potential to achieve this study's pedagogical goal. Lastly, I review the research on effective principles of staff development that align with the characteristics of a formative experiment methodology.

In Chapter 3, I discuss the methodology, method of data collection, and procedures for data analysis. In Chapter 4, I address the third and fourth characteristics of a formative experiment methodology by reporting the findings of this study's intervention, *Walk Talk Words;* discuss factors that enhanced or inhibited meeting the study's goal; and share the modifications

made to the intervention. In Chapter 5, I summarize and discuss the results of the findings, address how the intervention changed the classroom environment, and share unanticipated effects of the intervention. I also address significance of findings and implications for future research and practice. I reflect on how a formative experiment methodology aligned with the Principles of Effective Professional Development and present limitations of the study.

CHAPTER 2

REVIEW OF THE LITERATURE

In this chapter, I present the research that pertains to this study's goal to improve children's vocabulary development by addressing the first two characteristics that are unique in designing and conducting a formative experiment. The first two characteristics include the following:

1. Establishing a pedagogical goal based in theory

2. Implementing an intervention to achieve the pedagogical goal

In this section, I will review the literature that pertains to the pedagogical goal of this study to improve first-grade students' vocabulary development. First, I offer literature that supports how young children know and learn words, share vocabulary instructional approaches and computer-assisted vocabulary instruction, and discuss using a sociocognitive approach and a Generative Theory of Multimedia Learning to improve students' vocabulary development.

Second, I will present the literature that supports the implementation of this study's intervention *Walk Talk Words*. I review the literature pertaining to the three vocabulary approaches combined to design the intervention: (a) Tier Words (Beck et al., 2002), (b) Text Talk approach (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003), and (c) Digital Language Experience Approach (Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003). Lastly, I offer a review of the literature supporting effective principles of professional development.

The Pedagogical Goal Based in Theory

In this section, I review the literature that supports how one knows and learns words and the vocabulary approaches that influence vocabulary development in the early years. Next, I provide the research on how a sociocognitive approach supports children's vocabulary development. Lastly, I present the research on Generative Theory of Multimedia Learning and computer-assisted instruction.

How One Knows and Learns Words

Children make significant gains in learning vocabulary during the primary years (Nagy, Herman & Anderson, 1985; White, Graves, & Slater, 1990). A considerable amount of vocabulary development occurs through the nature of language arts, before children start formal schooling, and before children read independently to learn new words (Becker 1977).

Young children develop emergent literacy through a simultaneous interaction of listening, speaking, reading, and writing. This interaction of the language arts is foundational for children's word learning and the nature of the interactions impacts the number of words young children know when they enter formal schooling (Teale & Sulzby, 1986). Learning and knowing words are expressed in three forms: oral vocabulary, print vocabulary, and productive or expressive vocabulary (Kamil & Heibert, 2005). *Oral or receptive vocabulary* refers to how children learn words incidentally during storybook read-alouds and while listening to words used in conversations, on television, and during storybook discussions. *Print* vocabulary, sometimes referred to as logographic reading, contributes to word learning such as when young children first learn to read environmental print like Blockbuster, McDonalds, or Burger King before reading sight words and easily decodable words found in most beginning readers. Additionally, children demonstrate knowing words through productive and receptive means (Kamil & Heibert,

2005). *Productive vocabulary or expressive vocabulary* contains words that children know well enough to use when speaking and writing. In the primary grades, words in young children's oral vocabularies exceed the number in their productive vocabularies.

Hart & Risley (1995) found that for preschool children living in poverty or in low socio-economic environments, the number of words known is significantly lower than for children living in affluent homes. They found that children living in affluent homes had nearly five times the receptive vocabularies of children living in homes receiving Aid to Families with Dependent Children (AFCD). Children in affluent homes heard more words, were spoken to in fuller sentences, and received *Motherese* experiences with conversations, a type of talk when an adult repeats words and extends concepts. Children living in less advantaged homes heard fewer words and were spoken to in more directive sentences.

When children start formal schooling, their word knowledge reflects early literacy experiences. Estimates indicate that six-year-old children know approximately 8,000 words (Senechal & Cornell, 1993). The average number of words learned per year is roughly 4,000 (Nagy & Anderson, 1984). However, another estimate places word learning between 1,000 to 5,000 words per year, with the average number of words learned at 3,000 words (White et al., 1990).

The Peabody Picture Vocabulary Test as an instrument to measure young children's vocabulary growth showed that young first-grade children know roughly the same number of words as older kindergarten children and that younger second-grade students know roughly the same number of words as older first-grade students (Cantalini, 1987). The study suggests that age, not school instruction, influences vocabulary growth, and reinforces the importance to establish a vocabulary approach in the primary grades (NRP, 2000). Further, other researchers

suggest that learning vocabulary is proportional to the number of words known when entering school (Biemiller, 1999). For instance, children do learn words at school but they start and end the year at different vocabulary levels due to differences in early literacy experiences

Word learning is a complex and multidimensional process. It occurs in small steps and over time. Nagy and Scott (2000) suggest that words are learned and known in five ways. The steps contribute to understanding how children learn words through various stages. Children begin with a *spontaneous concept stage* that builds from their interactions with concrete situations, objects, and real world experiences. Children next progress to a *scientific concept stage* where they restructure their previous knowledge by thinking in more abstract terms and using words in ways that are more abstract. Nagy and Scott's five steps include: (a) *incrementality*, learning words in small steps and stages; (b) *polysemy*, the multiple meanings associated with words; (c) *multidimensionality*, knowing a word according to its various functions, contexts, and uses in order to select a word for precision to clarify meaning when speaking or when writing; (d) *interrelatedness*, knowing how words are semantically linked to other known words; and (e) *heterogeneity*, knowing word categories and types of words. For example, children know that function words such as *and*, *the*, and *of,* are used differently than specialized words such as thematic words associated with dinosaurs.

In conclusion, children learn a vast number of words through listening, speaking, reading, and writing literacy events. The number of words known varies according to studies. Often school experience contributes little to vocabulary development in the primary years (Cantalini, 1987), as no set vocabulary approach is yet established in the primary grades (Biemiller & Boote, 2006; NRP, 2000). In the next section, I present research that investigated vocabulary approaches that do influence vocabulary development in the early years.

Vocabulary Approaches in the Early Years

Studies indicate that three vocabulary experiences influence the number of words young children learn in the early years. Word learning occurs incidentally, through direct instruction of word meanings, and through interactive engagements.

Prior to formal schooling, children learn words incidentally through conversation such as *Motherese*, a type of talk that often occurs between an infant or toddler and an adult during early conversations (Hart & Risley, 1995). During the talk with toddlers, an adult scaffolds the child's learning by repeating words that extend concepts conversationally. This learning is effective because the adult starts with what is familiar to the child in the immediate context and then scaffolds the child's learning experience through comments or questions.

Incidental learning of words occurs through verbal context (Elley, 1989; Nagy, Anderson, & Herman, 1987; Robbins & Ehri, 1994; Senechal & Cornell, 1993; Senechal, Thomas, & Monker, 1995). Before children read independently, vocabulary development occurs when a word is presented in oral context such as through storybook read-alouds, movies, television, and videos. Studies show that when children listen to rereadings of the same storybook their word learning increases by 9% (Biemiller & Boote, 2007; Brabham & Lynch-Brown, 2002; Elley, 1989; Penno, Wilkinson, & Moore, 2002; Robbins & Ehri, 1994).

Vocabulary knowledge is often a predictor of vocabulary gains when listening to stories (Robbins & Ehri, 1994; Senechal et al., 1995). For example, Robbins and Ehri (1994) found that after listening to the same storybook read twice on different days, kindergarten children showed gains in learning targeted words. A multiple-choice posttest was used to test children's knowledge on 11 targeted words heard during the reading of a story and 11 words not heard.

Results indicate that word gains were proportional to the ability of the student and that higher ability students outperformed lower ability students.

In a similar study, Penno et al. (2002) examined the impact of listening to stories with and without word explanations on children's vocabulary growth and found that higher ability children learned more words than lower ability students when using a multiple choice pre- and posttest and a retelling assessment.

In contrast, Elley (1989) found that the lower ability students showed the greatest gains in word learning. He investigated the word learning of first and second grade students in New Zealand after a story was read to the whole class on three separate occasions. Students were divided into four ability groups based on a pretest. Posttest gains showed that the children scoring lowest on the pretest showed the most gains. Children in the other three ability groups showed gains roughly equal in the number of words learned.

Studies have shown that direct instruction that provides word explanations during a single read-aloud increases children's word learning by 15% (Biermiller & Boote, 2007; Nicholson & Whyte, 1992; Senechal & Cornell, 1993). In comparison, when children hear repeated readings of the same storybook and receive word explanations, their vocabulary learning increases to 26% (Biermiller & Boote, 2007; Brett et al., 1996; Elley, 1989; Penno, Wilkinson, & Moore, 2002; Senechal et al., 1995). Importantly, the 26% gains remained consistent regardless of the number of targeted words explained per read-aloud (Biermiller & Boote, 2007).

Talk surrounding the reading of a storybook plays a significant role in the number of words learned (Senechal et al., 1995; Whitehurst et al., 1988). One shared reading approach, dialogic reading, involves children in discussing the story read aloud (Whitehurst et al., 1988). The adult reader involves children in responding to open-ended questions and retellings. *Who,*

what, when, where, and *why* questions guide children's oral responses. Whitehurst and colleagues (1994) found that dialogic reading experiences not only increased word learning but also increased low-income children's language skills, writing skills, and concepts of print.

Wasik and Bond (2001) explored the effects of interactive book reading on 4-year-old children's language development. Teachers were trained to ask open-ended questions that encouraged children to respond orally, use concrete objects to reinforce the meanings of targeted words, and offer additional experiences with the words using different books. Results indicated that the children demonstrated significant gains on the Peabody Picture Vocabulary Test-III and on additional receptive and expressive measures.

Context supports children's learning of words (Carey, 1978). Carey found that children between the ages of 2 and 6 often learn words using a fast mapping, cognitive approach when hearing a word for the first time. Fast mapping refers to when a child makes a quick association to the word's meaning using the word's syntactic clue. For example, when a child comprehends a story being read aloud and hears a new word such as petunia, the child uses the context of the story to create an initial understanding of the word's meaning. If the word is completely unknown and a concrete object is unavailable, an adult provides a brief explanation of the word to assist the child in creating a fast mapping association to the word. As the child receives continued exposure to the word through different contexts, the child begins to use the initial mapping to expand the word's meaning.

Interactive engagements with storybook read-alouds influence the number of words children learn (Dickson & Smith, 1994). Dickson and Smith's study investigated the reading styles of 25 teachers. They videotaped teachers as they read-aloud a story and discovered three different types of read-aloud behaviors: performance style, didactic interactional style, and

coconstructive interactional style. Performance style means that the teacher limits discussions with analytical talk before and after the storybook reading. Analytical talk includes making predictions, discussing character and events, making text-to-reader connections, discussing vocabulary, and evaluating statements about the story. In contrast, factual talk involves chiming or choral reading of memorized parts, recall of facts, labeling, and skill routines such as singing and saying the alphabet. Didactic interactional style involves children in limited talk before, during, and after the reading of the book. The teacher engages children in reciting text in a choral fashion and answering factual based questions. Coconstructive interactional talk involves the children in predicting, analyzing, drawing conclusions, and discussing vocabulary during the reading of the story with little talk before or after the story. Regression analysis on the differences in styles revealed that the analytical talk predicted children's vocabulary development as measured by the Peabody Picture Vocabulary Test-R one year later.

In conclusion, children learn words incidentally when hearing them orally produced (Elley, 1989; Nagy, Anderson, & Herman, 1987; Robbins & Ehri, 1994; Senechal & Cornell, 1993; Senechal, Thomas, & Monker, 1995). Children lean words through interactive engagements (Carey, 1978; Dickson & Smith, 1994; Hargrave & Senechal, 2000; Waist & Bond, 2001; Whitehurst et al., 1988). When children listen to repeated readings of the same storybook with direct instruction on word explanations, they learn approximately 26% of the words instructed (Brett et al., 1996; Elley, 1989; Penno et al., 2002; Senechal et al., 1995). When children hear a single storybook reading with word explanations, they learn approximately 15% of the words explained (Nicholson & Whyte, 1992; Senechal & Cornell, 1993). However, when children hear repeated readings of the same story without word explanations, the number of

words learned decreases to roughly 9% of the words incidentally heard (Brabham & Lynch-Brown, 2002; Elley, 1989; Penno et al., 2002; Robbins & Ehri 1994).

Computer-Assisted Vocabulary Instruction

Computer-assisted studies (De Jong & Bus, 2002; Medwell, 1998) and studies using Digital Language Experience Approach (Labbo et al., 2002; Labbo, Love, & Ryan, 2007; Labbo, Sprague et al., 2000; Turbill, 2003) are showing promise for enhancing children's vocabulary development). Medwell (1998) compared the scaffolding of a teacher's traditional reading instruction using modeling on how kindergarten children read along with the multimedia features of a talking book. First, children read along with and attended to the talking book's narration in a linear fashion similar to the teacher's modeling. Then, children reread the book, stopping to access whole sentence speech feedback features before selecting a single word feedback feature. Children accessed animated features after they were familiar with the process of linear reading. Accessing speech features supported the children's reading when reading independent printed books. In addition, she found that the talking books supported the children's retellings. Results showed that children gave accurate retellings of electronic books compared to the retellings of printed text. However, the children showed fewer gains in word recognition when reading from talking books because the words were presented in isolation and out of context of the story.

In a similar study, De Jong and Bus (2002) found that talking books benefited and supported young children's early literacy experiences. Results indicated that when children read from both electronic books and printed text, children learned more words, practiced more forms of spoken and written text, and internalized story structures.

In a similar study, results showed that after 15 weeks of interacting with electronic books, kindergarten children who knew fewer words on a pretest measure showed the most gains

(Segers, Takke, & Verhoeven, 2004; Segers & Verhoeven, 2002; Segers & Verhoeven, 2003). .
In other words, prior knowledge was not predictive of students' vocabulary development

Studies using Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) such as Vocabulary Flood (Labbo, Love, & Ryan, 2007), an oral language approach, found significant improvements in low socioeconomic kindergarten children's vocabulary development. The method encourages children to notice, nominate, and make word connections as words are encountered during storybook read-alouds. After reading, students are encouraged to think, talk, and use the words in multiple ways. Vocabulary Flood emphasizes not only the importance of noticing words but also the importance of recycling words. Results indicate that recycling the words is the "glue" that helps children make connections to words across literacy events. Pre-posttest scores showed a 26% gain in receptive vocabulary and a 33% gain in expressive vocabulary. The study concluded that Vocabulary Flood used with D-LEA allowed teachers "to more effectively focus students' attention on visual representation of vocabulary terms and offered students a chance to think analytically when viewing photographs as they talked and wrote about their own experiences" (Labbo, Love, & Ryan, 2007, p. 587).

Furthermore, Labbo (1996) found that young children employed symbolism when constructing and interacting with KidPix software's toolbar options. Children's drawings and symbols reflected their growing representations, understandings, and expressions about the world. Students were found to use expressive vocabulary when sharing and discussing composed drawings and selected icons. Even though these students were not able to read text independently, technology offered various ways to scaffold, strengthen, and develop a student's receptive and expressive vocabulary.

Sociocognitive Approach to Vocabulary Development

A sociocognitive approach to vocabulary development acknowledges that students learn through social interactions and language experiences with more capable adults or peers (Vygotsky, 1962; 1978). Vygotsky's theory of sociocognitive development posits that children learn when they are engaged in activities offered in cognitively supportive environments. Learning is mediated by psychological tools such as language, concepts, signs, and symbols. This learning occurs over time, during specific time spans, and within a child's zone of proximal development.

Vygotsky (1978) states that children go through specific stages of speech development that relate to their cognitive development. First, children experience and become exposed to language through social contacts and inter-actions with others. Second, children use signs (logographs) to solve problems (e.g., a young girl studies the different pictures posted on a restaurant's bathroom doors to decide which to enter). Third, children use egocentric speech, a manner of talking out loud to regulate or adjust their thinking. Last, egocentric external speech eventually turns inward to become an intra-active speech that is used to regulate thinking. Over time as children interact with psychological tools in their environments, their lower mental behaviors, such as perception, memory, and general attention, gradually matures, shifting into higher mental behaviors such as problem solving, logical reasoning, and selective attention.

Word development occurs during these stages in various cognitive forms. Vygotsky (1978) states that semiotic mediation develops conceptual thinking and learning about words. In other words, children first associate words to signs before signs become symbols to represent concepts. For example, the child examining the signs posted on the bathroom door (mentioned in the previous paragraph) will, when more cognitively mature, read letters that are strung together

as a word to make the decision on which door to enter. As children learn the meanings of words, their first cognitive formations are referred to as *spontaneous concepts*. During this period, children use concrete objects and everyday life experiences to label, categorize, and organize their thinking. As this stage progresses, children learn to make associations to items according to traits or attributes. When children start formal schooling, they are typically in a stage referred to as *potential concepts*, which means that children are shifting from spontaneous concepts to abstract thinking referred to as *scientific concepts*. The final stage of cognitive development, *genuine concepts*, occurs when one uses inner speech to conduct abstract thinking.

When children are in the primary grades, they are typically in a transition period between *spontaneous concepts* and *scientific concepts*, known as *potential concepts*. During this potential concepts stage, cognitive development occurs through verbal interactions as children begin to use words as thinking tools. Abstract synthesis begins to develop when children learn to synthesize words by utilizing similarities and differences. Visualization techniques, such as semantic maps and word webbing, help children restructure spontaneous thinking to more abstract ways of knowing words (Dixon-Krauss, 1996).

Furthermore, Vygotsky (1978) posited that cognitive development occurs as children *use* what they are experiencing to *learn*, emphasizing that using precedes learning. This notion is in sharp contrast to other schools of thought that assume that learning precedes using (Piaget & Inhelder, 1969). Vygotsky states that learning occurs through a learner's zone of proximal development (ZPD). A ZPD is the distance between a learner's actual development, meaning what they can do on his or her own, and their potential development, what they can do with the assistance of a more capable other. This learning occurs through scaffolding (Bruner, 1978) and

language. Instruction within a learner's ZPD proceeds or leads learning as the goal of ZPD is to move the learner from social learning regulated by others to self-learning regulated by oneself.

In a classroom environment, effective teachers adjust their instructional practice to support children's word learning within the child's ZPD using either direct instruction or hints (Dixon-Krauss, 1996). Teachers monitor children's learning and progress when listening to children's oral responses and evaluating printed products for specific literacy skills. Teachers adjust instruction to fit the learning needs of individual children. As students function within a potential concept stage, the oral responses of other children and adults help to develop a child's internal cognitive structuring and conscious awareness to new words and word learning.

A sociocognitive approach to vocabulary development is particularly important to understand how children engage in the process of learning new words and how instruction focusing on challenging words such as Tier Two words (Beck et al., 2002) leads or precedes children's cognitive paths through a child's zone of proximal development. When teachers offer challenging words, students' learning is reinforced through psychological tools such as language, signs, symbols, photographs, and illustrations. After multiple word exposures, teachers gradually release instruction until children demonstrate use of the words to *learn* independently.

Generative Theory of Multimedia Learning and Computer-Assisted Vocabulary Instruction

A Generative Theory of learning originated as a way to understand how "people integrate verbal and visual information during multimedia learning" (Mayer, 1997, p. 4). This theory draws from Wittrock's (1974; 1989) Generative Learning Theory and Paivio's (1986) Dual Coding Theory. Wittrock's theoretical perspective contributes to the design of generative theory of multimedia learning by stating that learners pay attention to, select, organize, and ultimately integrate new information in ways that generate new knowledge. Paivio's dual coding theory

also contributes to Mayer's Generative Theory of Multimedia learning because it provides information on how cognitive processing occurs within two different information processing systems. For example, learners have a visual channel to process all incoming visual information and a verbal channel to process all verbal information.

Mayer (1997) states, "The learner is viewed as a knowledge constructor who actively selects and connects pieces of visual and verbal knowledge" (p. 4). A Generative Theory of Multimedia Learning is used to understand how a person processes multimedia information that is presented digitally. A generative theory of multimedia learning suggests that as a learner views a hypertextual, multimedia text on a computer screen, he or she selects particular visual, graphic, animated, or video elements considered important and through the eyes, this information is sent to short-term memory. Simultaneously, the learner also selects particular audio features, such as music, narration, sound effects, and through the ears, this information is sent to short-term memory. Now, the visual parts are organized into coherent wholes separate from the verbal parts that are also organizing parts into coherent wholes. This process is referred to as *whole working verbal* or *whole working visual* models. During the final step of cognitive processing, the visual integrates with the verbal and with already known information that is subsequently stored in long-term memory.

The Generative Theory of Multimedia Learning and Dual Coding Theory suggest that when too many visuals enter the visual channel, short-term memory becomes overloaded due to its limited capacity to hold information. For example, this theory suggests that if the teacher had composed the narration to printed subtext and presented the text along with the children's viewing of a iMovie (Apple, 2008) the visual channel would overload because attention is split between incoming visual representations, text and iMovie. This splitting of attention may result

in a reduction of information that is selected, retained, and retrieved. To optimize learning, a Generative Theory of Multimedia Learning suggests it is appropriate to present one visual form simultaneously with an auditory form. For example, teachers may focus students' attention on an iMovie first with the visual enactment and narration without accompanying subtext. On subsequent days, after children have processed the information, text can be added during reviewings of the iMovie. A Generative Theory of Multimedia Learning informs how Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) may affect children's cognitive processing when learning challenging words through pictures, animations, oral language, and written text.

<div align="center">*Walk Talk Words* as a Vocabulary Intervention</div>

In this section, I review the research supporting the essential ingredients combined to create *Walk Talk Words*. First, I discuss selecting Tier Two words (Beck et al., 2002). Second, I discuss contextualizing Tier Two words using the Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) method. Lastly, I describe using a Digital Language Experience Approach (Labbo, Eakle, & Montero, 2002; Labbo, Sprague, Montero, & Font, 2000; Turbill, 2003) to improve first-grade students' vocabulary development.

Selecting Tier Two Words

Selecting words for vocabulary instruction often is left to teacher judgment or pre-prepared vocabulary lists that are contained in commercial materials. After completing several studies investigating the kinds of words that require instruction, Beck and McKeown (1985) leveled words into tiers, known as Tier Words.

Tier One Words consist of basic words such as dog, food, and chair, words most often learned incidentally during oral language experiences in and outside of school. According to

Beck and McKeown (2001) these types of words do not need direct instruction. *Tier Three*

Words are words with low frequency because they are limited to specific domains and unique

occasions. These types of words, such as pedantic, isotope, or apogee, are domain or discipline

specific and require intensive direct instruction.

However, *Tier Two Words* (Beck et al., 2002) are words of high utility because they cut

across many domains, and are easily connected to other known concepts. The meanings of Tier

Two words, such as ajar, radiant, and commotion, are likely to be useful in different contexts.

For example, if children understand the concept of 'the door is left half-open', teachers can

expose children to and scaffold their understandings of using the word ajar by saying, "The door

is ajar. We need to shut the door." Tier Two words are typically new to children, are slightly

challenging, and are most often learned through oral language activities such as when hearing

teachers or peers use the words, encountering the words during discussions, and engaging in

interactive read-alouds. Tier Two words are often the words that show up on standardized tests

after third grade.

Tier Words are reflective of the vocabulary known by most literate, mature adults. The

following criteria are used to select Tier Two words (Beck et al., 2002, p. 19):

- *Importance and utility:* Words that are characteristic of mature language users and

  appear frequently across a variety of domains.

- *Instructional potential*: Words that are useable in a variety of ways to aid children in

  building rich representations of words and make connections to other words and

  concepts.

- *Conceptual understanding*: Words for which children understand a general concept

  but offer precision and specificity in describing a concept.

Beck and McKeown (2001) suggest that primary teachers include Tier Two words in instruction because these words are the most important and most powerful for advancing young children's oral vocabulary development and comprehension. Depending on the needs of the children and the complexity of Tier Two words contained in a storybook, they suggest targeting two to four words per story and two to three stories per week (Beck & McKeown, 2001; McKeown & Beck, 2004). In doing so, teachers can enrich students' vocabulary development by approximately 400 words per year.

Teachers highlight Tier Two words during storybook read-alouds but the words can also be sprinkled into the context of classroom conversations. For example, a teacher can request that a student turn the lights on to illuminate the room. When teachers are aware of sophisticated words like Tier Two words they can use classroom contexts and informal occasions to enhance the vocabulary development of the classroom community.

Contextualizing Tier Two words using Text Talk

Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) is a method that uses both read-alouds and discussions to target and teach Tier Two words (Beck et al., 2002). Text Talk uses narrative text to engage children in open-ended questions after a storybook read-aloud. Discussions draw on children's background knowledge in order to help them establish connections between known words and targeted Tier Two words. First, the teacher reads the story without interruption. Then after the first reading, the teacher shares and discusses story illustrations. Story illustrations are shown after the story to prevent any confusion that may arise due to picture details that do not coherently develop the main idea of the story. Text Talk (Beck et al., 2002, p. 51-52) occurs after a story is read in the following manner:

- Teacher rereads the word in the context of the story.

- Students repeat the word to create a phonological representation of the word.

- Teacher uses a child friendly definition to define the word's meaning.

- Teacher offers examples beyond the story context to reinforce the meaning of the word.

- Students provide examples that draw from and are relevant to their every day experiences.

- Students repeat the word again.

Multiple exposures to words for students' vocabulary maintenance and growth occur in a variety of ways (e.g., charts, tally marks, and morning message). Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) incorporates devices and activities such as Word Wizard. After reading, hearing, or using interesting words in written tasks, children receive a tally mark on a chart posted in the classroom.

Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) originated with teachers and their kindergarten and first-grade students who attended schools in high-poverty areas as a means to enrich classroom discussions, extend students' vocabulary knowledge, and build upon what the students already knew. Beck and McKeown (2007) investigated the effects of Text Talk on students' vocabulary achievement in a quantitative study. Using a receptive vocabulary instrument similar in design to the Peabody Picture Vocabulary Test (PPVT), children completed both a pretest and posttest on targeted words. Results showed that both kindergarten and first grade children who received Text Talk instruction showed significant gains in vocabulary growth over a control group. Results also indicate that the lowest performing children showed significant gains in vocabulary growth as compared to the control group.

Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) supports oral language development and word learning through context. It involves children in learning vocabulary through narrative text and contextualized language. Contextualized language refers to the use of gestures, shared knowledge, and intonation during oral readings to construct meanings. It also emphasizes a child's ability to listen, think about, and give meaning to the richness of individual words heard during storybook readings.

Other studies support the use of responses and discussions in developing and extending young children's vocabulary development (Beck et al., 2002; Guthrie, Anderson, Alao, & Rinehart, 1999; Jewell & Pratt, 1999; Lenski, 2001; Wasik & Bond, 2001). Jewell and Pratt, both primary teachers, designed a student-led literature discussion group and found that children used more inferential thinking, stated more opinion sentences, connected better to the text and to peers' interpretations, used supporting evidence, and demonstrated increased motivation when participating in discussion groups.

Further, Beck et al. (2002) suggest that teachers extend vocabulary instruction by providing multiple exposures to words that occur beyond the classroom environment. The Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) method emphasizes the importance of creating a rich learning environment where word learning, word awareness, and curiosity to learn new words becomes a daily practice, a routine, and a habit for learning. Similar to the steps followed when teachers reinforce targeted words during narrative readings, teachers can extend Text Talk by adding Tier Two words (Beck et al., 2002) into classroom conversations as the words arise during spontaneous moments or special events.

Digital Language Experience Approach to Improve Vocabulary Development

Digital Language Experience Approach (Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) is an innovation on the Language Experience Approach (Van Allen, 1982). It involves teachers and students in taking and using photographs to develop a variety of literacy skills.

Language Experience Approach was created by Dr. Roach Van Allen (1982) while working with children on the Texas/ Mexico border to understand why some children could learn to read more easily than others did. He discovered that what children could say they could write about and what they could write about they could read. He found the method highly motivating because children were writing and reading about events important and of interest to them. This instructional method continues in popularity today.

Used with Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003), teachers use a digital camera to capture snapshots of students engaged in various activities (e.g., re-enacting a story, following procedural text, conducting a science experiment, playing dress up). The digital aspect of D-LEA involves taking and importing pictures into a computer and presentation software program. Children then use the program's record option to narrate text in either expository or narrative forms or use the keyboard to type text. To extend learning, programs like KidPix offer icons, drawing tools, and slide show options to adapt learning to meet individual needs, revisit previous work, and engage children in interactive roles. Pictures serve as a memory link that allows students to recall the experience, describe the experience, place the photographs in chronological order, and write an account of the experience that accompanies the photographs. Teachers may display the D-LEA picture essays as a power point slide show or print a hard copy for students to reread and revisit

in the classroom environment or at home. As an instructional method, D-LEA reinforces, enhances, and extends literacy learning through such skills as decoding, word meanings, sentence structure, writing skills, and comprehension (Labbo et al., 2002; Turbill, 2003). Further, these studies found the photographs to function as strong visual, cognitive links because of the children's personal connections to the literacy engagement. Labbo et al. (2006) suggests the following steps to complete a D-LEA:

- Set Up the Experience: teacher and children select a stimulus experience; discuss which pictures to take and how they will be taken to capture an experience.

- Photograph the Experience

- Compose a Multimedia Story or Photo Essay: import pictures to a software program, view, reflect on the experience, and sequence pictures to tell a story. Children dictate a story for each picture, listen to the computer read text, make changes, and add music or animations, and record voices narrating the story.

- Engage in Follow-Up Activities: reread composed stories through choral or echo reads. Print stories for independent reading, view as a slide show, and save on the computer for future revisits.

In sum, *Tier Two words* (Beck et al., 2002) assist teachers in determining the importance, potential, and conceptual understandings of words to select for vocabulary instruction. Second, *Text Talk* (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) provides a framework to help teachers understand the how to's and why's of discussing words within the context of read-alouds and or other classroom context (e.g., field trips, science experiments, writing, informal conversations). Third, *Digital Language Experience Approach* (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) helps teachers capitalize on students'

word learning experiences as photographs capture students' engagements with targeted words. For example, at the beginning of the school year, a teacher can reinforce positive learning behaviors by capturing students working diligently on a writing task, meticulously on a drawing, or entrenched in a good book. After the pictures are imported into a software program, whole class writing activities will allow students to recycle the words into their classroom compositions. Pictures will serve as an additional resource to revisit words during reading, writing, listening, and speaking activities.

Principles of Effective Professional Development

A formative experiment was selected as the methodology for this study because it allows the researcher to work alongside the participants as they implement and modify an intervention to achieve successfully a study's pedagogical goal. To offer effective assistance to the teachers implementing the study's intervention, I reviewed literature pertaining to effective principles of professional development to bring about pedagogical change.

The National Evaluation of the Eisenhower Professional Development Program (2001), a federally funded program that supports literacy reforms, recently synthesized studies, and determined several factors as commonalities necessary for effective professional development. This longitudinal study, informed by a national sampling of teachers, uncovered six key ingredients essential for effective professional development:

- Reform type: learning through study groups, mentoring, internships, and teacher research.

- Duration: time spent connected to peers, engagement with an activity, and spans across time.

- Collective participation: group sharing of similar goals and interests within a particular school.

- Active learning: active engagement, analysis of instruction, effect on student learning, work samples, and feedback.

- Coherence: aligning the experience to teacher goals and interests.

- Content focus: structured to deepen and strengthen teacher knowledge base.

One example of professional development that uses these key ingredients is literacy coaching, also referred to as peer coaching or cognitive coaching (Garmston, 1992). Literacy coaching is an initiative that resulted from the No Child Left Behind Act of 2001 as a way to increase student achievement and promote teacher training. It is collaborative in nature, supported in research, and designed to transform both the nature of learning for students and teacher pedagogy (Darling-Hammond & McLaughlin, 1995; Little, 1993).

As a form of professional development, literacy coaching incorporates theory, demonstration, practice, feedback, is non-evaluative, and is conducted in the naturalistic context of classrooms (Dole, 2004; Showers & Joyce, 1996). A literacy coach supports the teachers' long-term and short-term instructional needs through instructional guidance, role-modeling in and out of the classroom, workshops, innovative practice, materials, expertise, and professional leadership. Teachers participate by working together to solve individual, grade level, or school wide instructional concerns through peer conferencing, observation, modeling, and self-reflection (Stafford, 1998).

Morrow and Casey (2004) studied the key elements of effective professional development to improve literacy instruction and influence teacher change. The study was completed in an at-risk district with disadvantaged children from a range of diverse backgrounds.

The study examined 12 primary teachers' participation in professional development. During the implementation phase of the study, teachers demonstrated active involvement as they participated in discussions, modeled strategies and lessons, gave feedback for advancement, and reflected on issues enhancing or inhibiting instructional change. Monthly a literacy coach met with individual teachers to offer guidance, support, and assistance. Results of the study revealed that several factors contributed to teacher change: instructional observations, collaborations with peers and coaches, administrative support, time for change to occur, discussions, access to materials, and observation in other classrooms. One significant factor that brought about change was observing the coach modeling a lesson. In addition, the teachers reported that monthly meetings centering on discussions, asking questions, and sharing teachable moments encouraged their attempts to change instructional habits and routines. Lastly, Morrow and Casey found that honoring teacher differences in pedagogical beliefs, management styles, and classroom organizations was particularly important as a factor to bring about successful teacher pedagogical change.

The characteristics of a formative experiment methodology align with the Eisenhower professional development suggestions and the findings of Morrow and Casey's (2004) professional development study. Table 2.1 represents the alignment between a formative experiment's characteristics and the Eisenhower suggested key elements of professional development. Both the Eisenhower professional development model and a formative experiment methodology utilize data to plan interventions to improve instruction and children's literacy learning. Both use work samples and test scores to inform and modify instruction or an intervention. Peer support, feedback, and reflection help to shape and design upcoming phases of the intervention or program. Collecting and sharing data in each approach allows the participants

to understand the complexities involved in the change process, plan for unanticipated factors that enhance or inhibit bringing about a change, and modify an intervention to meet the intended pedagogical goal.

In conclusion, Morrow and Casey (2004) stated, "when learning is based on research and proven practice, established feelings of self-worth increase. If teachers believe in themselves, they will work toward making their classrooms successful. Without this belief, they will give up easily" (p. 668). As stated above, the formative experiment methodology used in this study aligns with the principles of effective professional development to support the teachers' implementation of the study's intervention, *Walk Talk Words*.

Table 2.1

Alignment of a Formative Experiment to the Eisenhower Professional Staff Elements

Formative Experiment	Research on Professional Development
Establishing a pedagogical goal based in theory	*Coherence*: aligning the experience to teacher goals and interests. *Content focus:* studying a particular literacy skill
Implementing an intervention to achieve a pedagogical goal.	*Collective participation*: group sharing of similar goals and interests within a particular school. *Reform type:* learning through study groups, mentoring, internships, and teacher research.
Collecting data to identify factors enhancing or inhibiting the ability to achieve the pedagogical goal	*Duration:* time spent connected to peers, engaged with an activity, and spans across time.
Modifying the intervention based on unanticipated factors.	*Active learning:* active engagement, analysis of instruction, effect on student learning, work samples, and feedback.

Summary

In this chapter, I have presented the research that pertains to the pedagogical goal of this study, which is to improve first-grade students' vocabulary development by reviewing the literature supporting knowing and learning words, vocabulary development through instructional approaches, a sociocognitive approach to vocabulary development, and a Generative Theory of Multimedia Learning. Additionally, I presented the literature that supports the implementation of this study's intervention *Walk Talk Words* by reviewing literature pertaining to the three essential ingredients combined to design *Walk Talk Words:* Tier Words, Text Talk, and Digital Language Experience Approach. The chapter concluded with a review of the literature supporting effective principles of professional development that align with a formative experiment methodology to bring about a pedagogical change.

In the next chapter, I provide the methodology and method used to design, conduct, and report this study. I provide an overview of a formative experiment methodology, offer a description of the research setting and participants, describe the data collection and analysis methods, and explain the procedures for collecting data during each phase of the study.

CHAPTER 3

METHODOLOGY AND METHOD

The purpose of this study was to use a formative experiment to explore the nature of teachers' decision-making processes and practice as they implemented *Walk Talk Words,* a vocabulary approach designed to improve first-grade students' vocabulary development and the effects of that approach on the students' vocabulary development.

In this chapter, I provide (a) an overview of a formative experiment methodology, (b) a description of the research setting and participants, (c) the data collection and analysis methods, and (d) the procedure for collecting data during each phase of the study.

An Overview of a Formative Experiment

This study utilized a formative experiment because it aligns with the goals of this dissertation to allow a rich examination of the complexities of teaching and the intricate processes involved in effective teaching for student learning (Reinking & Watson, 2000). A formative experiment is a

> Research methodology that addresses specifically how promising instructional
>
> interventions might be implemented in classrooms to achieve valued pedagogical goals.
>
> Such a methodology would acknowledge the complexities of classroom teaching and be
>
> aligned with the day-to-day management of that complexity. It not only would enlighten
>
> practitioners about research-based pedagogies to enhance literacy, but also would
>
> provide them with specific insights about how they might effectively implement
>
> instructional interventions. (Reinking & Bradley, 2004, p. 151).

A formative experiment is unique in that it allows both the researcher and teacher to scrutinize and interrogate any variables impacting the implementation of an intervention to successfully achieve a study's goal. Through cycles of data collection and monthly focus group meetings, this study involved both the researcher and teacher in seeking answers to this study's research questions. As stated in Chapter 1, this study followed the six characteristics of a formative experiment methodology.

A formative experiment is conducted with one or more teachers in the real world of practice to test theory, complete empirical research, and investigate questions to produce results important to both practitioners and the research community. Specifically, a formative experiment aims to produce research immediately transferable to practice while isolating factors needing further research in both experimental and naturalistic designs.

The formative experiment methodology is relatively new (Reinking & Watkins, 2000) and gaining in popularity as a methodology to address a broad range of questions. For instance, a formative experiment has been used to explore:

a. how technology implemented in an earth science program reorganized classroom interaction, teacher collaboration, and instructional design (Newman, 1990);

b. how a Books Aloud intervention contributed to the early literacy abilities of economically disadvantaged children (Neuman, 1999);

c. the effects of a multimedia book review on increasing the amount and type of reading fourth- and fifth- grade students engaged in over a two-year period (Reinking & Watkins, 2000);

d. the combination with teacher action research (Duffy-Hester, 1999; Garfield, 2000).

A formative experiment is uniquely different from other methodologies as the researcher can "draw on and acknowledge the importance of intuitive professional knowledge" (Reinking & Bradley, 2004, p. 154). It acknowledges that classrooms are complex environments and anticipates and plans for any factors enhancing or inhibiting meeting a study's goal. In this respect, a formative experiment is distinctly different from traditional research that tests a hypothesis without allowing confounding variables to shape and reshape phases of the study. Formative experiments "value and systematically identify how the intuitive knowledge of experienced practitioners might elucidate and refine, and perhaps, occasionally negate, the findings generated by other research methodologies" (p. 155). Further, Reinking and Bradley (2004) state that a formative experiment design is flexible enough to include both qualitative and quantitative methods in order to understand both the process and product occurring during the testing of research questions.

In this study, I implemented a modified version of Reinking and Watson's (2000) formative experiment. Instead of a long-term study extending over two years, I designed a short-term study extending approximately 16 weeks. Second, similar to Reinking and Watson's study, I used focus group meetings comprised of two teacher participants from one school site and myself. The focus group met every three weeks to share insights, assessment data, discuss implementation of the intervention, and offer suggestions on ways to modify the intervention based on factors enhancing and inhibiting achieving the study's goal. I served as a participant observer (Patton, 2002) by conducting the focus groups and as an observer when collecting field data in the classrooms (Dewalt & Dewalt, 2002; Patton, 2002) during Phase 1 and Phase 2 of the study.

Lastly, I established the overarching pedagogical goal, which was to extend and enrich children's vocabulary development. The teachers and I determined "what it takes in terms of materials, organization, or changes in the technology to reach the goal" (Newman, 1990, p. 10). Teachers had flexibility in implementing *Walk Talk Words* in ways that aligned with their instructional beliefs, personal interests, curriculum materials, and requirements.

<div align="center">Research Setting and Participants</div>

In this section, I describe the research site, provide information about the participants, share information regarding both intervention classrooms, and give an overview of the digital equipment used to enhance *Walk Talk Words* lessons.

Research Site

This study was conducted in two first-grade classrooms in one elementary school. The elementary school was located in a suburban community in the southeast region of the United States. At the time of the study, the school was the smallest school in its district. It contained one of the county's self-contained special education facilities. According to the county's 2006-2007 accountability report, 9% percent of the students were classified as ESOL, 17% special education, 45% free or reduced lunch, 10% Asian, 28% African American, 15% Hispanic, 41% White, and 6% Multiracial students. The results of the State's Criterion Reference Competency Test indicate that all grade levels had met or exceed the reading, language arts, and math subsections of the test.

The school consisted of approximately six hundred-sixty-four students in grades k-5. In grades K-2, the school had six kindergarten classrooms, five first-grade classrooms, and six second-grade classrooms. Class sizes ranged between 18-22 students. The school is the site

where I was invited to step into the role of a primary literacy coach for four months during the fall of 2006.

Gaining entry into the research site was straightforward. The previous fall I had worked part-time in the school as one of the school's two literacy coaches. That spring, I arranged a meeting with the principal and assistant principal to discuss the possibility of implementing my dissertation in two first-grade classrooms in the school and to discuss data collection starting in the fall of the same year. The principal and assistant principal agreed that the study could be conducted in the school and were excited about the possibility of contributing to a vocabulary research project. I then visited the two first-grade teachers I was interested in using as participants to implement this study's intervention. I provided a brief overview of *Walk Talk Words*, and we discussed the possibility of their participation in the study. Each teacher showed interest, stated they would consider the possibility, and would make a decision when school started again in the fall.

Participants

I recruited the participants in this study using purposeful sampling (Patton, 2002) that met the following criteria:

1. Employment as a first-grade teacher,

2. Interest in exploring innovative vocabulary methods while using technology to enhance students' vocabulary growth,

3. Agreed to having data collected in their classrooms for approximately four months,

4. Agreed to participate and contribute to two focus group meetings before the intervention and two held during the intervention,

5. Agreed to share copies of students' work samples, lesson plans, and any vocabulary Assessments,

6. Agreed to keep a reflective journal,

7. Have minimal technology experience (e.g. ability to open, create, and save PowerPoint presentations, and familiarity with using a word processing program),

8. Commitment to innovate on ways to extend the existing first-grade curriculum, to enhance vocabulary instruction using digital camera that capture students engaged in *Walk Talk Words* activities, to create PowerPoint presentation and vocabulary lesson templates; to learn innovative ways to use an interactive whiteboard with *Walk Talk Words* activities.

As stated earlier, I had met the two teacher participants while working part-time in the school as one of the school's two literacy coaches during the fall of 2006. I conducted workshops with each teacher's grade-level team, modeled reading and writing strategies in their classrooms, and assisted them in planning and delivering effective literacy lessons. During that time, each participant shared an interest in learning more about effective vocabulary approaches while we created literacy lessons. In addition, they showed an interest in learning effective ways to incorporate technology into their instructional routines.

While minimal digital technology experience was required, I was particularly interested in recruiting teachers who showed a sincere interest and commitment to investing the necessary time beyond typical classroom routines to experiment with ways digital technologies might extend and enrich the county's first-grade standards and students' vocabulary development. The participants selected for this study agreed to and met the above stated criteria.

Intervention Classroom: Ms. Adler

Ms. Adler had taught first-grade for 17 years. In this study, all participants were assigned pseudonyms to protect their anonymity. Ms. Adler, after earning a bachelor's degree in business administration from a state college, returned to earn a certificate in education. She had been the school's first-grade chair for five years, had taught in the school for a total of seven years, and had participated in a two-day county literacy coach staff development training the year prior to participating in the study.

Student participants included 5 boys and 10 girls. Six students were classified as White non-Hispanic, four as Hispanic, four as African American, and one as other. Three students received English for Language Learners services, two were being test for the gifted program, and one student was visually impaired and received regular classroom assistance from a teacher in the visually impaired services department. In August, 20 students and their parents received a consent form to participate in this study as approved by the university's Institutional Review Board (IRB). Fifteen of the students returned the consent form to participate in the study. I administered Form A of the *Peabody Picture Vocabulary Test*, Fourth Edition (PPVT-4; Dunn & Dunn, 2007) to these students during Phase 1 of this study and Form B during Phase 3 of the study. According to beginning-of- the-year-assessments, six of the students were assessed as performing below grade level, four students were performing on grade level, and five students were performing above grade level.

Intervention Classroom: Ms. Bee

Ms. Bee, the second intervention teacher, had 11 years of teaching experience in grades prekindergarten through grade five. She had a Master's Degree in Elementary Education with a focus in literacy education. It was her second year teaching in the school. The previous year she

had started the year teaching first-grade and was reassigned after four weeks to second-grade. This was her first full academic year as a first-grade teacher.

The initial student participants in Ms. Bee's intervention classroom included eight boys and nine girls. During weeks six and seven of Phase 2, one girl and two boys withdrew from the school, leaving fourteen students completing all phases of the study. Nine were classified as White non-Hispanic, two as Hispanic, one as African American, and two as other. Two students received English for Language Learner services. Three of the students received free or reduced lunch. In early August, 22 students and their parents had received a consent form to participate in this study as approved by the university's Institutional Review Board (IRB). Seventeen of the students returned the consent form to participate in the study. These students received Form A of the PPVT-4 during Phase 1 of the study. Due to three students withdrawing from the school, fourteen student participants received Form B of the PPVT during Phase 3 of the study. Only the scores for the students completing all phases of the study are included in this study's data and findings. Ms. Bee's beginning-of- the-year-assessments showed that seven students were performing below grade level, six students were performing on grade level, and one student was performing above grade level.

In this study, I selected two teachers to explore the variability in teacher decision-making processes and practices as they implemented and modified the intervention *Walk Talk Words.*

Digital Equipment used During the Intervention

The spring before implementing the study, I had contacted a SMART authorized reseller to solicited the use of SMART equipment. I believed the findings of this study would be significantly increased if the teachers had immediate access to use equipment in their rooms to display digital photographs on an interactive whiteboard (SMART Board) when creating and

displaying *Walk Talk Words* activities. The reteller offered me a seed agreement to conduct an evaluation of interactive whiteboard technology during the 16 weeks of the study. During Phase 1 of the study, each of the intervention classrooms received a SMART Board 680, a Mobile floor stand, and a USB audio system for the SMART Board 600 series. The teachers also received an Espon 83c projector as part of EPSON America, Inc.'s agreement evaluation plan. Given an option to purchase the equipment, the school purchased the two boards and stands but chose to return the two speakers because the school had speakers. EPSON donated one of the two projectors to the school.

One of the participants had received a Best Buy Technolgoy Grant the year before her participation in this study. As a result, each classoom had a Hewlett Packard PhotoSmart M357 Megapixel Digital Camera, a 2 GBit SD Memory Card, a Hewlett Packard PhotoSmart C4180 All-in-One printer/scanner/copier, and an amble supply of paper, black and color ink cartridges. Each teacher used a county assigned IBM laptop to create SMART Board templates and used Microsoft Word PowerPoint (2003) to create Digital Language Experience Approach presentations.

<div align="center">Data Collection and Analysis</div>

A formative experiment is flexible in design collecting both qualitative and quantitative methods to understand the process and product occurring during the testing of research questions (Reinking & Bradley, 2004). In this study, I collected both qualitative and quantitative data to investigate teachers' instructional decision-making processes and practices as they implemented *Walk Talk Words*, a vocabulary approach, and the effects of that approach on students' vocabulary growth. In this section, I present Patton's (2002) five dimensions of fieldwork variations, state the criteria used to establish quality and credibility in this study, detail the

sources of qualitative data , provide qualitative analysis procedures, and detail sources of quantitative data and analysis procedures.

Five Dimensions of Fieldwork

Patton's (2002) five dimensions of fieldwork variations continuum guided my data collection process. These variations and their continuum include: (a) the role of the observer [full participation to part onlooker], (b) insider versus an outsider perspective; (c) who conducts the inquiry [solo research to people in the setting being studied]; (d) disclosure of the observer's role to others [overt or covert]; (e) duration of observations and fieldwork [short, single observation to long-term multiple observations]; and (f) focus of observations [from a narrow to a broad focus]. My data collection process fell in the middle of each of the five dimensions as described below.

First, I was both participant and observer. I was observer as I collected field notes in each classroom during the implementation of *Walk Talk Words.* I sat off to the side in Ms. Adler's classroom and in the back of the Ms. Bee's to silently watch, listen, and take field notes. During the first half of the study, I often placed a video camera near the bookshelf or on the desk close to where I was observing. I made every attempt to enter quietly because I did not want to interrupt the teacher's established routines and procedures. After a few weeks of observations, the students only glanced up as I made my way to my observation space. I became a participant during focus group meetings when I coached the teachers on ways to implement Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) and offered suggestions on various ways to create Digital Language Experience Approach activities. I was also a participant on several occasions when a teacher would informally share an experience or request feedback

on a *Walk Talk Words* lesson before or after an observation. For example, Ms. Bee stated one

morning after a lesson:

R: Tell me about yesterday.

B: Oh yesterday, I didn't think I would have time [to teach *Walk Talk Words*] because we are so far behind, but we went ahead and read the *True Story of the Three Little Pigs* [Scieszka, 1996]. I introduced the word *convinced*, and we were doing that you know more shared talk. And they were like saying, "I *convinced* my mom that I could spend the night at my friend's house." And so, they really started to get it. Then I thought, my concern was, that they were not recycling these words so I told them it's your responsibility that you need to start talking about these words. I want to hear you, and I am going to tally them. Then I decided to recycle them in my reading groups too. So I brought out a book, and it's about weather. It had all these cool pictures in it. It had one picture of a stormy sky. So I said how does that picture make you feel? "Ah, *glum*." And, they started telling me about how the sun is *illuminating* the sky. They were bringing in all these words.

R: With how much prompting?

B: Not very much at all.

R: Oh, how exciting.

B: And even this morning, even one talked about *toppled* so it's coming. It's coming. I see it, and I am so thrilled, and I'm excited. Oh yeah, *radiant* is another word that was coming out. The sun was *radiating*.

B: My prompting was more of the book and it brought those words out.
(Videotape transcript, dated September 9, 2007)

Further, I was a participant with the students as I administered the Peabody Picture

Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007) and shared a script with the

students to request their help with a research project I was conducting about how kids learn new

words.

Second, I approached an analytical perspective from both an emic and etic position. I

selected a formative experiment methodology because it allowed me to understand the emic

perspective of the participants through a rich collection of data from both a participant and

observer stance. Further, I approached analysis from an etic perspective as I attempted to stand "far enough away from or outside of a particular culture to see its separate events, primary in relation to their similarities and their differences" (as cited in Patton, 2000, p. 268).

Third, the participants and I collaborated equally in the inquiry process of implementing the study's intervention. We shared and used our teaching insights during informal conversations and Focal Group meetings to make modifications when necessary to the intervention.

Fourth, I did not disclose my research role to many staff members. I was often asked why I spent so much time in the school when I was not working their as the literacy coach. However, the teachers on the same hallway were aware of the research study as they observed the students being administered the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007). They often asked how it was going and shared an interest in preliminary findings.

Fifth, this study fell between a long study and a short, single observation. I spent 16 weeks observing and collecting various forms of data in the classrooms. Table 3.1 shows the total number of minutes I observed and videotaped in the classes during Phase 1 and Phase 2 of the study.

Table 3.1

Total Number of Minutes Observing and Videotaping

	Ms. Bee		Ms. Adler	
	# of observations	Total Time Videotaping	# of observations	Total Time Videotaping
Baseline	5	155 mins.	5	220 mins.
Intervention	17	505 mins.	22	1065 mins.

Sixth, this study was narrow in focus as I limited data collection and observations to teachers' decision-making processes and practices as the implemented *Walk Talk Words* over the course of 16 weeks.

Establishing Criteria for Quality and Credibility

To establish quality and credibility using qualitative methods, I followed Patton's (2002) suggestions to employ criteria that judges quality and credibility based on a socio construction and constructivist framework. The criteria includes trustworthiness, authenticity and reflexivity, an enhanced and deepened understanding, praxis, particularity, contribution to dialogue, triangulation, and acknowledgment of one's subjectivities.

To insure trustworthiness (e.g., rigor), authenticity (e.g., truthfulness), and reflexivity (e.g., thinking about one's perspective) between the teachers and myself, I continually returned to past data sets to reflect on the process of implementing *Walk Talk Words*. I added memos, theorized, and color-coded thoughts in a field note journal. I compared these ongoing journal reflections against the teachers' journal entries and lesson plan documentation. This process was important to enhance and deepen the understanding of how both teachers were bringing meaning to the lessons implemented with *Walk Talk Words*. I continually viewed and compared my classroom observations, field notes, video tapings, and transcripts to the teachers' written lesson plans and journal reflective entries to understand the teachers' decision-making processes as they implemented the intervention.

Praxis means using a practical side of ones background and experiences to understand the world (Patton, 2000). Particularity refers to an interest in the immediate environment or classroom context and not a generalization to a broader focus (Patton, 2000). I met these criteria as both the teachers and myself invested in the successfulness of meeting the study's goals.

Separately, and as a team, we attempted to resolve problems that emerged while implementing the intervention. For instance, even though the teachers' rooms were across the hall from one another, daily time constraints prevented their sharing thoughts about creating lessons, 'aha' moments, activities, and use of the equipment. Focus meetings became the forum to grow, share, refine, and make modifications to a component in *Walk Talk Words.*

Theorizing and contribution to dialogue (e.g., using other's perspectives to understand) included member checking my interpretations of events with the teachers through informal discussions and focus group meetings. For example, Ms. Adler and I shared thoughts about her use of a tape player to audiotape her reflections. As the grade-level chair, she balanced meeting all her professional duties. She had limited time to write the detailed reflective entries she wanted to share regarding her thoughts and decision-making processes behind implementing *Walk Talk Words* in her classroom. Her rich and insightful thoughts would contribute greatly to my understanding of the process so after two weeks of writing reflective journal entries, Ms. Adler began audiotaping her reflections. I imported the recordings to my laptop and frequently audiotaped a return response.

Triangulation of data sources occurred as I collected various forms of data using two methods. For example, in order to check consistency across findings, I collected 10 different types of qualitative data., which included transcribed semi-structured interviews, teachers' pedagogical vocabulary goal statements, transcribed videotapes, written reflective journal entries, *Walk Talk Word* lesson plans, observational field notes, jot notes of informal conversations, photographs of books, word charts, and concrete props, other work samples. I also collected 3 different types of quantitative data. These included scores on the Peabody Picture Vocabulary Test, Fourth Edition (Dunn & Dunn, 2007), scores on teacher created Tier Two

Word Knowledge Assessment Instrument, and collection of photographs and other artifacts to verify the number of Tier Two words taught per week. I also member checked preliminary interpretations and emerging trends with the teachers during the third and fourth focus group meetings and throughout the study during informal conversations.

My subjectivities include bringing 15 years of practical teaching experience and graduate level coursework to the design and implementation of this study's intervention, *Walk Talk Words,* to improve vocabulary instruction and development in the primary grades. I adhere to a social constructivist approach (Vygotsky, 1978) to learning where students and learners of all ages learn best when they are active participants in the learning process, when they complete hands-on activities, and when they engage in authentic tasks.

As a social constructivist, it is my stance that the nature of reality comes into mindful existence when human beings interact. In a classroom environment, perceptions, perspectives, and consciousness toward natural events become alive when students engage in think-alouds, discussions, and express themselves when collaborating during co-construction of written compositions. Learning occurs when teachers and students listen to, learn from, and construct knowledge together. These learning experiences create scaffold understandings and enhance one's background knowledge. Understandings are not fixed but fluid, continually evolving through the surrounding context that shapes and reshapes the shared learning experiences. Further, Ruddell and Unrau's (1994) interactive reading model strongly influenced the design of this study's vocabulary intervention. Ruddell and Unrau suggest that reading involves a simultaneously interactive process between a reader, the text, and the teacher. For effective and affective instruction, this interaction happens simultaneously. The reading model recognizes several conditions: (a) students are recognized and appreciated for their active role in theory

building; (b) students need to participate in meaningful language tasks; (c) oral and written experiences develop reading abilities; (d) and readers construct meaning while interacting with verbal, nonverbal, semiotics, and printed materials. Furthermore, an interactive reading model recognizes the importance of the teacher in establishing an affective, risk-free learning environment, where both the learner and teacher as co-constructors of knowledge. Thus, vocabulary instruction should recognize and accommodate students' abilities to assemble knowledge through authentic learning activities, meaningful collaborations, and open-ended tasks that influence not only what is learned but also how it is learned. This formative experiment research study is designed with that purpose in mind.

Qualitative Data

The qualitative data collected in this study included ten forms of data sources to explore the nature of teachers' decision-making processes and practice as they implemented *Walk Talk Words* and the effects of that intervention on students' vocabulary development. I used the data to compare and crosscheck consistencies emerging across the data sets, to added strength and credibility to research findings, and to triangulate data sources. Further, they offered a variety of ways to examine the factors that enhanced or inhibited meeting the goals of this study and make modification to the study based on those factors to better achieve the implementation of this study's intervention, *Walk Talk Words*.

Below I describe the qualitative data collected in this study. The data includes: (a) transcribed semi-structured audio-taped interviews; (b) written statements of each teacher's vocabulary goals; (c) transcribed focus group meeting videotapes; (d) teachers' daily written reflective journal entries and transcriptions of one teacher's audio reflections; (e) teachers' *Walk Talk Word* lesson plans; (f) 33 hours of videotapes capturing teachers implementing *Walk Talk*

Words lessons and activities, (g) observational field notes; (h) documentation in the forms of jot notes and e-mails of informal conversations; (i) photographs of books, word charts, and concrete props; and (j) other artifacts such as student work samples, newsletters, and copies of Digital Language Experience Approach class books.

 Interviews. I conducted interviews using a semi-structured interview guide (Dewalt & Dewalt, 2002). The interview guide (See Appendix A) included "a list of questions and prompts in order to increase the likelihood that all topics will be covered in each interview in more or less the same way." (Dewalt & Dewalt, 2002, p. 122). I prepared the guide drawing from recent vocabulary research (Berne, 2007) to understand each teacher's instructional beliefs, teaching background, vocabulary practice, and storybook read-aloud approach. I referred to guidelines drawn from technology research (Becker & Anderson, 2007) to construct baseline questions to understand the teacher's initial use of and beliefs about technology's potential to inform instruction. Questions and prompts were used to "capture how those being interviewed view their world, to learn their terminology and judgments, and to capture the complexities of their individual perceptions and experiences" (Patton, 2002, p. 348).

 I conducted interviews during Phase 1 of the study. Each interview lasted approximately one hour. I audiotaped using a Sony ICD-P20 Digital Audio Tape Player. After streamlining the audiotapes to my computer, I used Digital Voice Editor 3 (Sony Corporation, 2007) software to transcribe the tapes within one week of collection. Each tape was transcribed verbatim. I assigned the following pseudonyms for the participants, Bee, Adler, and used an R for myself the researcher.

 I conducted initial interviews to understand the teachers' instructional approaches, beliefs, and routines. The insights helped me to assist teachers individually during the

implementation of the intervention, to plan and conduct appropriate focus group meetings, and to provide individualized assistance when requested.

Pedagogical vocabulary goal statements. During Phase 1, both teachers prepared a statement that highlighted their personal pedagogical vocabulary goals. In an email sent to the teachers on September 7, 2007, I requested that they respond to the following questions: "What are your goals for implementing *Walk Talk Words*? Where would you like to be in 8 weeks in terms of accomplishments, understandings of vocabulary instruction, and class created and composed products?" I retyped the teachers' goals on my computer within one week after receiving them. I filed and stored hardcopies of original goal statements at home in a file folder labeled "Baseline Data, Teacher Goals" and kept a digital file on my computer.

The statements assisted me in understanding the teachers' vocabulary goals, attitudes, and beliefs about how *Walk Talk Words* as a vocabulary approach might help them achieve their goals. Throughout the study, I frequently reread the teachers' goal statements to assess whether the design of *Walk Talk Words* was enhancing or inhibiting the teachers' abilities to achieve their professional, pedagogical goals of this study.

Focus group meetings. Four focus group meetings occurred over the course of the study. I conducted the first two focus group meetings during Phase 1, the baseline phase of this study, and before teachers implemented the intervention. I conducted the third and fourth focus group meetings during Phase 2 of the study, the implementation phase of the study. Data collected during the baseline focus group meetings included jot notes (as cited in Dewalt & Dewalt, 2002) written in a spiral notebook. Jot notes "are the words, phrases, or sentences that are recorded during the course of a day's events primarily as aids to memory" (Dewalt & Dewalt, 2002, p.

144). I expanded the jot notes within two days of writing them and stored them on my home computer.

During the third and fourth focus group meetings, I videotaped the meetings using a Sony DCR-TRV 361 Digital HandyCam. I streamlined the video footage from the camera to my computer and used ATLAS.ti 5.2 (Scientific Software, 2002-2008), to view, store, and transcribe the data. I transcribed the videotapes verbatim at home within one week. On the transcripts, I indicated speakers with Bee, Adler, and a R for myself the researcher. I transcribed each interview audiotape within one week.

The first two focus group meetings served as a pre-intervention training to prepare the teachers to implement this study's vocabulary intervention. The objective of the first meeting was to provide an overview on the importance of improving first-grade students' vocabulary development, assist teachers in locating Tier Two words (Beck et al., 2002) in their classroom materials and use Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) methods. The objective of the second meeting was to provide an overview on ways to create Digital Language Experience Approach activities, import photographs to a laptop to display on an interactive whiteboard, and use SMART software. A hands-on approach, modeling, think-alouds, and role-playing allowed me to coach the teachers into locating and contextualizing Tier Two words for *Walk Talk Word* activities. Appendix B shows the PowerPoint and handout used in the first focus group meeting.

The objective of the third and fourth focus group meetings was to offer the teachers an opportunity to learn from one another. During the meetings, the teachers shared their decision-making processes and practices to implement the various components of *Walk Talk Words.* They shared stories and ideas, showcased student work samples and created Digital Language

Experience Approach activities, asked questions, problem-solved for answers, and brainstormed ways to enhance or modify the intervention to achieve the study's vocabulary goals.

Reflective journal entries. Each teacher wrote reflections daily in a spiral notebook to note their decision-making processes and instructional practices as they implemented, tweaked, and modified components of *Walk Talk Words.* The teachers were encouraged to document successful moments, frustrations, and/or confusions during the process of implementation. I collected the journal entries weekly and I entered them into my computer within a week. I stored teachers' lesson plans and reflections in folders marked as "Reflective Entries" including week number and teacher initial.

Beginning with weeks two until the end of implementing the intervention, Ms. Adler audiotaped her reflections instead of handwriting them. She traveled 50 minutes to school and chose this method to create reflective audio entries. I loaned her a Sony ICD-P520 Digital Audio Tape Player to record the entries. Three times a week I collected the audio player and streamlined the recordings to my computer. I used Digital Voice Editor 3 (Sony Corporation, 2007) software to transcribe the tapes. I transcribed each tape verbatim and within one week. I stored the transcripts and audio files on my computer.

The reflective journal entries provided an inside look at the teachers' decision-making processes and practices as they implemented the study's intervention. Statements written or audiotaped illuminated any factors enhancing or inhibiting how the teachers met the goals of the study and documented any unanticipated factors or changes to the classroom environment as a result of implementing the intervention.

Walk Talk Words lesson plans. Teachers received *Walk Talk Words* lesson plan templates (See Appendix C) during the first focus group meeting. Each teacher received 10 copies of the

lesson plan template to use during weeks 1-8 of Phase 2 of the study. Lesson plans included Text Talk Steps, a list of activities to complete with Digital Language Experience Approach activities, and a list of suggestions to recycle the words. I asked the teachers to circle the steps or activities they completed during the week. At the top of the plan, they listed the Tier Two words targeted for instruction; books used to develop the concepts, subject area, and stated a rationale for selecting the words. At the bottom of the plan, the teachers responded to the following questions and comments: Why selected (I asked for an explanation for selecting particular words.)? Describe successes. Describe difficulties. What needs modifying and tell why? Describe any pre or post assessments. I collected the lesson plans in a binder the teachers kept on their desk the week following implementation. I retyped lesson plans on my computer within one week. I stored hardcopies of lesson plans in folders marked "Lesson Plans", week number, and teacher initial. I used the lesson plans to chronicle the teachers' decision-making processes and practice as they refined components of *Walk Talk Words* and created assessments that documented student learning of Tier Two words.

Videotapes. Throughout the baseline and intervention phases of the study, I collected 19 videotapes of various instructional approaches the teachers used to implement *Walk Talk Words*. I viewed the tapes, parsed segments of the video footage to capture unique occasions the teachers and students engaged in vocabulary talk during storybook read-alouds and beyond storybook discussions to everyday conversations and hands-on activities. Appendix D demonstrates the process of parsing video segments and transcribing vocabulary talk in ATLIS.ti 5.2 (Scientific Software, 2002-2008). For example, a video box displays the tape. The box below the videotape captures quotations. The memo manager on the right side was used to transcribe the video segment.

I collected video footage using a Sony DCR-TRV 361 Digital HandyCam and a Sony DCR-HC32 HandyCam. The cameras enabled me to observe in both rooms when observation-scheduling conflicts occurred. When observing in one class, I used the second video camera to record the vocabulary lesson occurring in the second. I streamlined the videotapes to my Gateway MT6821 laptop, transcribed, and managed them using ATLAS.ti 5.2 (Scientific Software, 2002-2008), a visual qualitative data analysis and management software program.

I used a memo feature on ATLAS.ti 5.2 (Scientific Software, 2002-2008) to transcribe the video tapes. As I viewed the tapes, I included information from my observational field journal (e.g. facial expression, voice inflections, and my notes) to supplement the depiction of lesson events. I marked sections that were not audible on the videotapes as "not clear" on the transcript. I substituted student names with the word "student" to protect students' identities. Speakers are indicated on the transcripts as T for teacher, S for student or S1, S2, S3, etc. to indicate a change in student speakers, and Sts for several students speaking. Videotapes assisted me in understanding the teachers' vocabulary practice, teacher student interactions, the nuances of body language when teaching and learning Tier Two words during storybook read-alouds, Tier Two word chart instruction, Digital Language Experience Approach activities, hands-on and concrete explorations, and informal classroom conversations.

Observational field notes. As I observed in the classes during Phase 1 and 2 and during the first focus group meeting, I collected observational field notes in the form of jot notes (as cited in Dewalt & Dewalt, 2002) in a spiral notebook. My jot notes often included memos and analytic thoughts that I wrote in the margins of the notebook pages. I collected observation field notes following Emerson, Fretz, and Shaw's (1995) suggestions for collecting rich, informing field notes. I viewed the observation jot notes at home, extended them into complete sentences,

added contextual information pertaining to vocabulary activities, and clarified teacher and student responses as I typed and storied the notes on my computer within 24 hours.

Observational jot notes captured what I saw and heard occurring in the classroom community between the teacher, students, and vocabulary events. The jot notes documented my reflective thoughts and theories on the teachers' decision-making processes and practices and students' vocabulary development as I observed the process unfold in the classroom environment.

Informal conversations and emails. During each phase of the study, I used e-mail correspondences between the teachers and myself as a means to communicate ideas, state needs, ask questions, or reschedule planned observations. I read the emails and stored them in an American Online Manage Mail folder. I copied, dated, and added the emails to the bottom of a teacher's transcribed reflective entries that I stored on my computer once every three weeks.

Throughout the study, I collected informal conversations with the teachers by writing jot notes. During the study, I collected both jot notes and transcribed informal conversations captured on video footage. I expanded jot notes, transcribed video footage, and stored the information in a file on my computer that kept an ongoing collection of each teacher's weekly data.

E-mails and informal conversations provided additional insights into the teachers' decision-making processes and practice as they implemented the study's intervention. The data also provided an opportunity to understand any factors enhancing or inhibiting meeting the vocabulary goals of the study and any change to the classroom environment because of implementing the intervention.

Photographs of books, word charts, and concrete props. Throughout each phase of the study, I used a Sony Digital Cyber-Shot DSC-S75 Still Shot camera to photograph books used to teach *Walk Talk Words,* charts of weekly-targeted words posted in the room, concrete props, student writing activities, and pages of class created Digital Language Experience Approach class books that were used to develop and extend Tier Two concepts.

I imported the photographs that were stored on the camera's Sony Memory Stick to my computer. I organized digital photographs in a file folder, labeled the folder according to the name of the teacher and the week of the study, and imported all photographs to the laptop within one day. Photographs of books, charts, and concrete props were parts of the story that occurred during the week as the teachers implemented the intervention. The parts created a chronological perspective on teachers' implementation of *Walk Talk Words* over the course of a week and helped to connect the parts to construct a complete *Walk Talk Words* story across Phase 2 of the study.

Artifacts. Throughout the study, the teachers shared materials they created to reinforce, recycle, and extend Tier Two word activities. The artifacts included copies of weekly newsletters, homework-writing assignments, and class writing activity worksheets. I stored the artifacts in two file folders at home marked with B for Ms. Bee's classroom and A for Ms. Adler's.

The artifacts demonstrated the teacher's attempts to bridge family-home-school connections while implementing *Walk Talk Words*. The artifacts illuminated factors that enhanced achieving the vocabulary goals of the study. In addition, the artifacts provided evidence of progress in students' vocabulary development as informal and formal assessments measured students' word learning of instructed Tier Two words.

Qualitative data analysis. The qualitative data analysis process occurred during all phases of the study. I followed a modified version of Harry, Sturges, and Klinger's (2005) six level inductive analysis process (see Table 3.2) and constant comparative method (Glaser & Strauss, 1967) with all data sets to analyze the nature of each teacher's decision-making processes and practice as they integrated *Walk Talk Words* with existing classroom resources and curriculum materials. I made one modification to the Harry, Sturges, and Klinger inductive process by eliminating step six because it applies to forming a grounded theory based on Glaser and Strauss's (1967) analytic process. I designed this study specifically to test theory and not to generate new theory. To complete this analysis process across all data sets during Phase 1 and Phase 2 of the study, I used ATLIS.ti 5.2 (Scientific Software, 2002-2008), a visual qualitative data analysis and management software program. When using ATLIS.ti 5.2, a researcher imports raw data, referred to as primary documents, to name codes, generate categories, and name emerging themes. I also used the options in ATLIS.ti 5.2 to write ongoing memos, transcribe videotapes, and create visual maps to document emerging interrelationships between codes throughout data interpretation.

Table 3.2

Six Level Inductive Analysis Process

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Creating Open Codes	Conceptualizing Categories	Developing Themes	Testing Themes	Interrelating Explanations	Forming Theories

Level one: I entered data into ATLIS.ti 5.2 on my laptop. I assigned each teacher to a Hermeneutic Unit and weekly entered data. A Hermeneutic Unit is an electronic environment that contains a subject or participant's data such as video, pictures, jot notes, and retyped teacher

reflection entries and lesson plans. Analysis began when I entered data to a Hermeneutic unit. During this stage of analysis, I read each piece of data examining it for evidence of teacher decision-making and vocabulary practice as the teachers implemented *Walk Talk Words*. I open coded (Charmaz, 2006) points of interest following an incident-by-incident coding method (Charmaz, 2006). To use incident-by-incident coding, I first assigned phrases to mark key points in teachers' vocabulary decision-making and practices and effects of the intervention on students' vocabulary development. For instance, initially I assigned phrases like "a t uses prop for context" to document evidence on how a teacher used a chart and "modeling, t uses chart student transfer" to document a teacher's decision-making to understand why she used a chart. I read one teacher's unit and assigned phrases before reading across the second teacher's data. As data accumulated, I reread across both teachers units to compare coded incidents to one another. I then began to refine phrases to shorten them to a name. For example, "a t uses prop for context" I refined to "props". As I reread data, I also assigned new codes and renamed others. This form of analysis that continually goes back and forth between data sources throughout the data collection is characteristic of constant comparative method (Glaser & Strauss, 1967). I repeated level one each time I entered new data to an established Hermeneutic unit. Initially, I had over 300 incident-by-incident coded phrases before refining them to names. Appendix E is an example to show how I completed incident-by-incident coding in a Hermeneutic Unit using ATLIS.ti 5.2. Lines and phrases on the right side indicate incident-by-incident coding. The highlighted sentences on the left show the videotape transcript data I coded with "a t uses prop for context".

  Level two: Level two of analysis involved grouping codes into conceptual categories according to points of intersection or similar properties. To complete this process, I reread codes,

comparing and contrasting old and new codes to cluster them into a category. First, I reread

codes established in one teacher's unit before reading across both units to identify similarities

and differences among all codes. In ATLIS.ti 5.2 (Scientific Software, 2002-2008) this means I

clustered codes with similar properties to a family node and assigned a name to the node that

best identified the properties contained across all codes clustered in that node. For example, I

clustered codes like "ex peers using charts to spell", "t uses chart", "dm creating charts", and

"posting charts on wall" to the category "referencing and leaning tools". This process was

recursive in that I continually returned to the nodes to check for consistency, to make

adjustments, and to create new nodes. Family nodes then represented the range of information

continued across data sets. Appendix F illustrates how I created categories using family notes in

ATLIS.ti 5.2. The illustration shows 15 categories at the top (see Table 3.3. for a listing of all

refined categories and codes). The category or family node for "referencing learning" is

highlighted. The left side of the page lists the incident-by-incident codes included in that one

family node. The right side lists all the incident-by-incident codes assigned to and across all data

sets in both teachers' units. The number following the incident-by-incident code indicates how

often I had assigned that code across the units up to that point in time. To move a code to a

family node, I highlighted the code on the right and used the center bar to move the code to the

left. I continually tested family nodes for fit and made adjustments as necessary by using the

center bars to reposition recently created and older incident-by-incident codes to family nodes.

Appendix G is a code-mapping visual model to illustrate how I retrieved previously coded data

from a unit to examine its content. In this example, the family node for "referencing learning

tools" is in the center of the page. Codes clustered in that family node are positioned on the left. I

positioned one code on the right, "posting charts on wall" to examine its content, the data coded

with that name.

Table 3.3

Refined Categories and Codes

Categories	Codes
Active Participation	Dramatic discussions, hands-on experiences, illustration talks, sharing connections, hand gestures, intonation
Assessing Learning	Oral talk, Writing activities, Ten Super Sentences, photos of charts as word box, incidental talk, directed oral production, misconceptions, Thumbs-up, partner talk, transfer/home, transfer/oral/written, conversations
Hands-on Context	Props, concrete items, food items, puppets, toys, snacks, living things, camera
Home School Connections	Newsletter, Snack Time Talk, informal conversations with partner groups, sharing D-LEA/home, in-class parent volunteers
Integrating Skills	Thematic units, D-LEA, Team Time Target Time, Test Taking skills, essential question, content topics, conceptually related, metacogntive skills/guided reading/ fix-up strategies (D-LEA)
Model/Coaching	Guiding/enticing, abstract concepts, think-alouds, Text Talk, peer support, teacher enthusiasm, glancing at chart, sense of accomplishment, tracking with mouse, choral reading, chant reading
Prior Knowledge	Word-to-Photograph Connections, Word-to-Life Connections, word-to-word connections, Text-to-Self/World/Text connections, Familiarity with Characters, Tier two relevancy, developing concepts
Realities of Teaching	Curriculum requirements, yearly plans, yearly favorites, Team Time Target Time, blocked-instructional time, time constraints, test talking practice, assessments, federal mandates, district and state mandates, limited space, limited wall posting, reducing amount
Recycling	Tally marks, illustration talks, incidental talk, ownership, snack time talk, D-LEA activities
Reference Learning Tool	Charts, thematic charts, word wall, props, stickers, color-coded, spelling, sound-stretching, dolch-chart, photographs, spelling, signs, independent use Sound-stretching, spelling, pictures
Memory Aid	Stickers, color-coding, placement, wall location, icons
Scaffolding Student Need	partner talk, display reviews, illustration talk, template word banks, ZPD, ELL
Student Centered Learning	Cooperative groups, inquiry projects, relevancy to discussion, exchange of ideas, private speech moments
Task Management	behavior management, establish routines and procedures, establishing purpose, expectations
Motivation	Talk engagements, fun, excitement, connections, reading D-LEA class books, celebrating, ownership to D-LEA photo/text/books, sharing picture talking, partner reads, mystery items, sense of accomplishment, camera, SMART Board, digital equipment, photo discussions

Level three: Level three of analysis involved examining family nodes and examining across all family nodes in both teachers' Hermeneutic Units to search for themes embedded in and emerging from the categories or family nodes. As I reread across family nodes, I searched for the best argument to summarize the content of all data. For example, I read and reread across the nodes in search for the story emerging from the data that explained how the teachers' made decisions to implement *Walk Talk* and the effects of those decisions on students' vocabulary growth. In completing this level of analysis, I attempted to answer the study's research questions and address the third through six characteristics of a formative experiment as described in Chapter 1 of this study. This process continued throughout Phase 2 as I tested, retest, added, and refined codes, family nodes, and emerging themes.

Level four: Level four of analysis involved testing the consistency and content of the themes against incoming data. One particular test involved "member checking" (Patton, 2000) my interpretations of emerging themes against the participants' perspectives during focus group meetings. Several days before the meeting, I sent an email to the teachers requesting they come prepared to the meeting to share their success stories, "aha" moments, frustrations, work samples, and insights (see Appendix J). I used this request to focus the content of the discussions to include checking my interpretations. For instance, during the third focus group meeting, I asked Ms. Bee to share her decision making to include partner talk immediately following the instruction of a Tier Two word. Also, the teachers shared concerns such as not including enough Tier Two words in Digital Language Experience Approach class books (Observational jot notes, October 5, 2007). Focus group meetings then provided me an opportunity to clarify and member check my data interpretations. The second test involved returning to all data sets to apply

constant comparative methods (Glaser & Strauss, 1967) to test the consistency of my

interpretations, to refine, and to add new codes.

Level five: I completed level five during Phase 3 of the study after all data was collected.

This level of analysis is referred to as 'interrelating explanations" (Harry et. al., 2005). At this

level, I reexamined the interrelationships contained within themes by rereading the data (using

the options available with ATLIS.ti 5.2, Scientific Software, 2002-2008) and explanations

against the triangulation of data sources accumulated during the study to verify and conclude the

summary established in a theme. The two themes that emerged from the data that best

summarized the teachers' decision-making processes and practice when implementing *Walk Talk

Words* included two instructional cycles: Visualizing the Walk and Creating the Talk. In Chapter

4 of this study, I provide a detailed account of these findings.

Further, I followed the same procedure described above to answer and address the 3-6 six

characteristics of a formative experiment (Reinking & Watson, 2000) These characteristics

include, (a) identify factors enhancing or inhibiting the ability to achieve the pedagogical goal,

(b) modifying the intervention based on unanticipated factors, (c) noting how the intervention

changes the classroom environment, and (d) determining positive and negative unanticipated

effects of the intervention. I present a detailed explanation of the findings for the three

characteristics, a-c, in Chapter 4 of this study and a detailed explanation of the two

characteristics d and e in Chapter 5. Table 3.4 shows the alignment between the characteristic

and the identified factor.

Table 3.4

Factors Identified to Address Formative Experiment Characteristics

---

(a) Inhibiting factor: Time constraints

(b) Enhancing factor: Access to digital equipment in the classroom

(c) Modification factor: Struggling with students' use of Tier Two words during Digital
                            Language Experience Approach activities
(d) Change to classroom environment: Systematic Vocabulary Instruction

(e) Unanticipated effects of intervention: Attention from other school faculty

---

Quantitative Data and Analysis

In this section, I provide the quantitative data methods employed in the study to explore

for changes in teachers' vocabulary practice as a result of their implementation of *Walk Talk*

Words and change in students' vocabulary development. First, I describe collecting and

analyzing data for the Pre and Post Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4;

Dunn & Dunn, 2007). Second, I share the design, administration, and analysis of two teacher-

created informal Tier Two Word Knowledge Assessment Instruments. Lastly, I describe using

lesson plans and photographs to determine the number of Tier Two Words instructed each week

across the Phase 2 of the study.

*Peabody picture vocabulary test and analysis. T*he Peabody Picture Vocabulary Test,

Fourth Edition Form A (PPVT-4; Dunn & Dunn, 2007) was administered to 32 students who

returned participant consent forms during the third week of Phase 1 of the study. Form B of the

PPVT-4 was administered to 29 of the 32 students. Three students had withdrawn from the

school during Phase 2. I selected the PPVT-4, a receptive vocabulary instrument, to measure

students' vocabulary knowledge and growth as a result of participation in the study.

I used descriptive statistics to report the stanine scores of the PPVT-4. I selected stanine scores because they are normalized standard scores, used for normative test purposes, and represent a range of percentiles. In this study, I worked with the teachers to understand any change in their students' vocabulary development as a result of *Walk Talk Words*. Using stanine scores offered the teachers an opportunity to understand their students' entry vocabulary knowledge in relation to other assessments they administered following *An Observation Survey* by Marie M. Clay, where the teachers tracked student progress using stanine tables. Clay (1993) states, "Stanines allow one pupil's progress to be compared on several quite different types of observations" (p. 44).

I calculated stanines by converting student's age-based and grade-based standard scores following tables presented in the PPVT-4 manual. Stanine scores informed the study in three ways. First, the stanine scores indicated students' entering receptive vocabulary knowledge as below (e.g., stanines 1-3), on (e.g., 4-6), or above (e.g., 7-9). I separated student scores into three ability levels (below, on, and above) to understand if the intervention effected different ability levels of students' vocabulary development. Second, I used stanine scores to determine any change in students' receptive vocabulary growth due to participating in *Walk Talk Words* intervention. Third, I used the stanine groupings of students as below, on, or above to determine any difference in ability group performance scores on the teacher-created informal Tier Two Word Knowledge Assessment Instruments used to assess students' learning of instructed Tier Two words during the intervention phase of the study. Further, I also used standard scores to determine any change in students' receptive vocabulary growth as a result of students' participation in the intervention.

Tier two word knowledge assessment instruments and analysis. The teachers designed and administered Tier Two Word Knowledge Assessment Instruments during the fourth week of Phase 2 and during the ninth week of Phase 3 of the study. The assessment instruments contained the Tier Two words taught during those weeks of the study. All students in both classes took the assessment; however, I analyzed only the scores of the students participating in this study. Teachers did not introduce new Tier Two words during week four because morning schedules were rearranged to administer a district, annual standardized test. Teachers instead spent week four reviewing words and administering the Tier Two Word Knowledge Assessment Instrument for weeks 1-3.

The need to develop a Tier Two Word Knowledge Assessment Instrument resulted from a concern raised by the teachers during the third focus group meeting. The teachers wanted to have some measure of the impact of the time and approach to teaching Tier Two words on students' learning of the words. During weeks 1-3 of the intervention, scheduling curricular activities was flexible as students were still being reassigned to other classrooms to balance late enrollments and class size. During weeks 1-3, each teacher took different approaches to implement *Walk Talk Words.* For example, Ms. Bee introduced a word briefly after a lesson following Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003). She placed it on her Word Wall, casually reviewed the word during snack time talk, and occasionally assigned follow-up writing activities. Ms. Adler introduced words during lengthy discussions and conversations; daily reviewed thematic word charts (I discuss Word Wall and thematic word charts in Chapter 4 of this study.) and planned daily, extensive writing activities that included instructed Tier Two words. However, a change occurred during weeks 4-8 of the intervention phase of the study. With class enrollments complete, the principal requested that all primary

teachers' instructional schedules include test-taking practice (30 minutes a day), calendar activities (25 minutes a day), guided reading (minimum of 15 minutes spent with each student a day), and writer's workshop (minimum of 30 minutes a day). Meeting these curricular obligations minimized the time the teachers had to implement and integrate *Walk Talk Words* into curricular areas. An assessment instrument that included the instructed Tier Two words for weeks 1-3 would inform the teachers on how the time spent on the words and the type of activities created during weeks 1-3 affected students learning of the words. The teachers used the results from this assessment to inform their decision-making processes and practices on effective ways to implement *Walk Talk Words* during the weeks 5-8.

During the third focus group meeting, we brainstormed ways to create an assessment instrument that would contain the Tier Two words instructed in each classroom. We decided to use Clipart.com (JupiterImages, 2007) to create an assessment similar in design to the Peabody Picture Vocabulary Test. Because of the teachers' time constraints, I assisted the teachers in creating the instruments. Following the format of the PPVT-4, I prepared a test question for each Tier Two word instructed during weeks 1-3. Using the keyword search function on the Clip Art website, I typed in the word and selected a picture that most closely represented the word's meaning. For example, I typed in *glum* and selected the picture with an elephant character looking sad. Next, I selected three additional pictures that did not match the word's meaning. During our next meeting, we previewed the picture selections and agreed that the selections most represented how the words had been instructed. Assessment instruments were printed in color and each student received a copy. Teachers gave directions (e.g., Point to the picture that shows inspecting.), and the student placed an "x" on the picture most representing the meaning of the word. An example of Ms. Bee's Tier Two Assessment Weeks 1-3 questions is included in

Appendix H. Tier Two Assessment Weeks 5-8 was created and administered following the same procedure.

Teachers shared the Tier Two Assessment scores of the students participating in the study with me. I analyzed the scores for each assessment according to the following procedure. First, using prior data, I used the stanine scores from the PPVT-4 Form A to separate the students into below, on, or above ability levels. Second, I calculated a mean correct and percent score for groups of students in each ability level on the number of words answered correctly for words instructed but not included in Digital Language Experience Approach activities. I followed the same process to calculate scores for words instructed and included in Digital Language Experience Approach activities. Lastly, I calculated the mean correct score and percent score for each ability level on total Tier Two words instructed. I used descriptive statistics to report the results.

I shared the results with the teachers to inform their decision-making processes and practices when planning *Walk Talk Word* activities. I also used the scores to answer the second research question of this study: What effect does the intervention have on first-grade students' vocabulary development? I discuss these findings in Chapter 4 of this study.

Artifact analysis: Lesson plans, photographs, and digital language experience approach class books. Walk Talk Words lesson plans and photographs of Digital Language Experience Approach class books, Tier Two thematic word charts, and writing activities were used to keep track of the Tier Two words teachers selected for instruction, used in activities, and included Digital Language Experience Approach activities. Weekly, I compared the Tier Two words included on lesson plans to photographs of charts, activities, and Digital Language Experience Approach activities to verify the number of Tier Two words instructed per week and the number

of Tier Two words included in Digital Language Experience Approach activities. I report these

findings in Tables 4.3 and 4.4 in Chapter 4 and present ranges of Tier Two words used in Digital

Language Experience class books in the section titled Digital Language Experience Approach

and Tier Two word instruction in Chapter 4.

<div align="center">Procedures</div>

This formative experiment was completed over a 16-week period and in three phases.

Each phase of the study will be discussed. Phase 1 started before the school year began and

lasted for five weeks. During Phase 1, I met with teachers to discuss their roles during the study,

collect baseline data, and offered two focus group intervention-training sessions. Phase 2 was the

8-week implementation of the intervention, *Walk Talk Words.* Phase 3 occurred after the

intervention, lasted for three weeks, and included collecting post intervention data.

Phases 1: Baseline Data

Phase 1 started the first week of the school year. I met with the teachers to provide an

overview of the study, describe the length of the phases, and discuss our roles during each

phases. I overviewed the types of data that would be collected, answered questions, passed out

class consent forms, and arranged the first two weeks of Phase 1 observations. The first week of

school, the teachers passed out the consent forms to all students. By Friday, the forms were

returned. Ms. Bee had 17 of her 22 students retuning consent forms agreeing to participate. Ms.

Adler had 15 of her 20 students retuning consent forms agreeing to participate. During the end of

the first week, I started videotaping and collecting jot notes of the teachers' vocabulary talk and

practice as they completed storybook read-alouds. I collected two from Ms. Bee and one from

Ms. Adler. Videotaping occurred between 9:00 a.m.-9:30 a.m. Also during the end of the first

week, I conducted two interviews with the teachers in their classroom after school. The audiotape interviews lasted approximately 1 hour.

During the second week, I collected three videotapes of Ms. Adler's vocabulary talk and practice and two from Ms. Bee. I also started administering the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007) to the students who had returned consent forms to participate in the study. Because the classrooms were located across the hall from one another, I arranged two desks next to Ms. Bee's room and rotated students from both classrooms when it did not interfere with instruction or with the teachers giving beginning of the year assessments. I handed the students a copy of a script required by the Institutional Review Board (IRB) of the university (see Appendix H), read the script to them, and ask the students to sign the script if they understand and agreed to participate in the study and complete the testing. All students agreed and signed the script. I gave the PPVT-4 during three mornings between 9:00 a.m. and 11:30 a.m. I averaged four tests per hour and completed 29 of the 32 tests that week. I continued videotaping and collecting jot notes during the third week and fourth week of Phase 1. I videotaped Ms. Adler once and Ms. Bee two more times for four videotapes per teacher. During the fourth week, I gave the PPVT-4 to the remaining three students following the same procedure described above.

Two focus group training meetings were offered during the fifth week of Phase 1. The teachers and I met in Ms. Adler's room both days after school. During the first meeting, I provided a PowerPoint presentation overview of *Walk Talk Words.* The PowerPoint included the goals of *Walk Talk Words* and shared how it was supported in research. We viewed and discussed examples of Digital Language Experience Approach class books. Each teacher brought the books and activities they planned to instruct the following week and used these materials to

search for coordinating Tier Two words, concepts, or ideas to develop. Ms. Bee brought the books she wanted to focus on for a patriotism theme in social studies, and Ms. Adler brought her adventure thematic unit materials (See Tables 4.3 and 4.4 in Chapter 4 for a listing of books). Together we looked through the nonfiction books to generate a list of Tier Two words. Ms. Bee looked through *September 12th: We Knew Everything Would Be All Right* by Masteron Elementary Students, *The Flag We Love* by Pam Munoz Ryan, and *The Story of the Star-Spangled Banner: By the Dawn's Early Light* by Steven Kroll. After reading through *The Flag We Love*, she added *radiant* and *unfurl* to her Tier Two word list. Both words were used in the text of the book. However, she decided against selecting the Tier Two words *valiant*, *connotation*, *intentions*, and solemn also used in the text because they were too abstract for her students and based selection of Tier Two words on her students' needs. Because *September 12th: We Knew Everything Would Be All Right* did not contain Tier Two words, she decided to develop the concept *gaze* and *patriotic* using the illustrations from the book and decided to use the illustrations in *The Story of the Star-Spangled Banner: By the Dawn's Early Light* to introduce the concept illuminate. Ms. Bee selected words that would integrate across unit books and support her social study theme of patriotism.

Ms. Adler read her favorite *Stella* books to generate a list of Tier Two words to extend an adventure theme. She read *Stella Fairy of the Forest* and *Good Morning Sam* by Marie-Louise Gay. Ms. Adler noted that invisible was used in the text but she decided not to include it on her list because she wanted words representing being adventurous and she wanted to limit her list to six words. Continuing scanning through the book, she decided to develop the adventure concept using four Tier Two words *curious*, *reluctant, dangerous,* and *inquisitive* because Sam, a character in the series, is very inquisitive and curious, always asking Stella questions. For

example, Sam asks Stella about petting a prickly porcupine and picking up a snack. The teacher

thought this example would be relevant to the students to teach the Tier Two words reluctant and

inquisitive through the concept of being adventurous.

Next, we practiced following Text Talk (Beck & McKeown, 2001; Beck et al., 2002;

McKeown & Beck, 2003) methods to contextualize the words with the books, decided on a

student friendly definition, and practiced generating additional contexts that would be relevant to

the students. For example, after some practicing and laughing together, Ms. Bee held up

September 12th: We Knew Everything Would Be All Right (Masteron Elementary Students,

2002) and said, "Look at the students in this picture *gazing* at the classroom flag while saying the

Pledge of Allegiance. *Gaze* means looking at something. Say *gaze*."

Ms. Adler and I repeated the word, and Ms. Bee continued.

"I *gaze* at stars at night, and I *gaze* at the full moon. What is something you *gaze* at?"

We continued in this manner until the teachers said that they felt comfortable using Text

Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) with the words they

had selected to teach the following week. By the end of the meeting, Ms. Bee's goals for

implementing *Walk Talk Words* the following week would include reading the three patriotic

books and teaching the Tier Two words. She thought she would attempt to introduce 2-3 words

per day following Text Talk methods to the whole class and post the words on a bulletin board.

Her tentative goal was to teach 10-12 Tier Two words per week. She did not plan to reread any

of the books in order to read a new book each day because she had seven books on patriotism she

wanted to share with the class. However, she wanted to use the weekend to select additional Tier

Two words to coordinate with her thematic unit on patriotism and to decide a Digital Language

Experience approach activity.

Ms. Adler's goals to implement *Walk Talk Words* the following week included using only the two books and words listed above (*curious*, *reluctant*, *dangerous,* and *inquisitive*). She planned to reread each book at least twice or perhaps three times during the week. She was not sure how she would post the words because she did not have a bulletin board for a Word Wall. She would mull that over along with the possibility of integrating the adventure theme with a writing assignment that would involved the students in imagining a time they were adventurous on a nature walk. Her tentative goal was to teach 5-6 Tier Two words per week but she would make that decision as the thematic units and events of the weeks unfolded.

Both teachers contemplated several ways to integrate their topics with Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities but with so many possibilities, the decision would wait until the following week after observing the reaction and the engagement of their students with the thematic unit and Tier Two word selections. Before ending the first focus group meeting that lasted approximately one hour, we discussed the possibility of taking a few digital photographs the next day with students using the class digital camera. The teachers agreed and stated they would bring the camera, and provided me with a copy of their pedagogical vocabulary goal statements.

During the second focus group meeting held the next day, we again met in Ms. Adler's room. Ms. Bee rolled her SMART Board into the room and set up her projector. It was a hands-on meeting to acquaint the teacher with the SMART equipment and software, to learn ways to import photographs from the camera's memory stick to the laptop, and to create text for the pictures with different fonts, colors, and text boxes. Together we troubleshot procedures such as saving pictures to a file on the computer and relocating the photographs in a file to import to

SMART software. Because I was familiar with the toolbar options and gallery selections contained in the SMART software, I assisted the teachers in using the tools.

The meeting lasted longer than its intended hour as we enjoyed working on the equipment and sharing ideas. By the end of the meeting, the teachers were still not sure of the direction their Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities would take the following week. Both were comfortable with using their technology equipment to create D-LEA activities; however, because incorporating D-LEA into lessons was a new experience, the agreed to leave the direction of the activity uncharted in order for the week's thematic events to chart its direction. Before ending, the teachers suggested times for me to conduct observations and collect video footage in their classrooms the following week during the start of Phase 2 and implementation of *Walk Talk Words* in their classrooms. The second focus group lasted approximately 2½ hours.

Phase 2: Implementation of Walk Talk Words

Phase 2 was the implementation of the study's intervention and it lasted 8 weeks. During the first three weeks, I collected videotapes and jot notes 2-3 times a week in each teacher's classrooms. I rotated days between the classrooms and collected data between 9:00 a.m.-9:45 a.m. for *Walk Talk Word* lessons and between 11:00 a.m.-.11:30 a.m. to observe Digital Language Experience Approach activities. When scheduling conflicts occurred, I placed a video camera in a classroom while observing in the other. For example, I placed a small video camera on Ms. Bee's desk next to the door, focused it on her reading chair, let it run while observing in Ms. Adler's room, and returned to retrieve it after observing. In Ms. Adler's room, I placed the video camera on a back bookshelf on the side of the room. Videotaping became routine after the second week of the study as the students rarely glanced up as I observed or placed a video

camera in the room. To minimize disruptions when in the classrooms, the teachers placed *Walk Talk Words* lesson plans, reflective journal entries, work samples, and other artifacts in a binder that remained on a corner of their desk during the study. When questions arose or rescheduling times for observations was needed, we used email to communicate and schedule times. The assistant principal had requested that I not collect data in the classrooms during the fourth week of Phase 2 because of the district's annual standardized testing occurring in the school. The teachers used this week for a Tier Two word review and to administer the Tier Two Word Knowledge Assessment Instrument Weeks 1-3. During weeks 5-8, I collected jot notes when observing 2-3 times a week in the classrooms and collected one videotaping per week for each teacher.

The third focus group meeting occurred during the end of the third week of implementation. During this meeting, the teachers brought work samples to share, prepared questions to ask, and shared their "aha moments" of insight. The teachers used this meeting to share ideas and learn from one another. For example, Ms. Bee shared how she used Snack Time Talk to review instructed Tier Two words while Ms. Adler shared a homework template she was using that included a word box containing instructed Tier Two words. We also discussed and brainstormed additional ways to maximize student engagement and skills during Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities. For instance, the teachers wanted to include more Tier Two words in D-LEA products but struggled with getting students to recycle (Labbo, Love, & Ryan, 2007) words. Suggestions included using small groups, printing copies of the pictures for table discussions before having grand conversations to create text, and having students write punctuation marks or letter sounds on dry erase boards during the lessons to keep them active.

Ms. Bee also shared that she needed to scale down the number of skills focused on during a D-LEA activity. For instance, during her retelling of *The Three Little Pigs*, the skill focus to retell lost its purpose as she skipped to questions about punctuation marks and spelling. This discussion prompted concerns regarding time constraints. During the fourth week of Phase 2, the teacher's schedules were changing to lengthen Writer's Workshop, Guided Reading and Calendar Time. In addition, the grade level was starting Team Time Target Time where the first-grade students were rotated to different classrooms for remediation or enrichment lessons. Both teachers were concerned about having sufficient time to implement effectively *Walk Talk Words*. They estimated spending 30 minutes each morning before starting Guided Reading to introduce Tier Two words and estimated spending 30 minutes once a week to create D-LEA activities. Ms. Adler spent a considerable amount of time on Tier Two word discussions and writing extension activities compared to Ms. Bee. The teachers decided that a Tier Two Assessment that covered the words taught during weeks 1-3 would indicate how effective their word choice and lessons were for student learning. The teachers liked using clip art to represent recognizable words the students knew but could not read. The meeting was informative, video taped, and lasted approximately one hour. Sample questions from Ms. Bee's Tier Two Assessment Weeks 1-3 in Appendix I.

The final focus group meeting was held during the seventh week of implementation. We followed the same procedure as the third meeting. Teachers brought work samples, shared successes, and 'aha' moments. I asked them what portions of *Walk Talk Words* they would continue and what modifications they would make. The meeting was video taped and lasted approximately one hour. We schedule observations for the last week of the implementation phase, and PPVT-4 testing. The final focus group meeting agenda is included as Appendix J.

Phase 3: Post Intervention Data Collection

Phase 3 included administering Form B of the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007) to the students. During weeks 9-10 of the study, I gave the PPVT-4 to fourteen of Ms. Bee's students. Three had withdrawn from the school during the intervention phase of the study. All of Ms. Adler's students received the PPVT-4. Because scheduling was difficult due to midyear testing and curricular requirements, I started testing at 8:30 a.m. until 10:00 a.m. and finished the testing in six days. I tested students in an unused room next to the teachers' rooms. In addition, both teachers administered a Tier Two Assessment Weeks 5-8 during the nine week of the study. They shared results of the test, and I used the scores to determine any progress for achieving the vocabulary goal of this study to improve first-grade students' vocabulary development.

<div align="center">Summary</div>

In this chapter, I have offered an overview of a formative experiment methodology. I provided a description of the research setting and participants and shared the data collection and analysis methods. Lastly, I described the procedures for collecting data during each phase of the study. In the next chapter, I present the data findings on the nature of teachers' decision-making processes and practice as they implemented this study's intervention *Walk Talk Words* and the effect of that approach to improve first-grade students' vocabulary development.

CHAPTER 4

RESULTS

The purpose of this study was to use a formative experiment methodology to explore the

nature of teachers' decision-making processes and practices as they implemented, *Walk Talk*

Words, a vocabulary intervention designed to improve first-grade students' vocabulary

development. Additionally, the study examined the effect of the intervention on first-grade

students' vocabulary growth. In this chapter, first, I introduce the teachers and present their

instructional schedules. Second, I answer the first research question: What is the nature of

teachers' decision-making processes and practices as they implement *Walk Talk Words?* To

answer this question, I present two instructional cycles that emerged from the data as teachers

implemented *Walk Talk Words*. The cycles include visualizing the walk and creating the talk.

Third, I answer the second research question: What are the effects of *Walk Talk Words* on first-

grade students' vocabulary development? Lastly, I share data findings that address factors that

enhanced or inhibited achieving the pedagogical goal of this study and one modification made to

the intervention to better achieve the vocabulary goals of the study.

Introduction of Teachers

The two teacher participants selected for this study taught first-grade in the same school.

Both teachers used Guided Reading (Fountas & Pinnell, 1996) and Writer's Workshop (Calkins,

2003) as part of their Language Arts instructional program. However, each teacher had unique

beliefs about and approaches to literacy instruction. In this section, I draw from videotape

transcribed observations, audiotape transcribed interviews, field notes, teachers' pedagogical

vocabulary goal statements, teachers' written reflective journal entries, and teachers' *Walk Talk Word* lesson plans to introduce the teachers and offer a brief overview of their instructional schedules. To protect the identity of all participants, names used throughout the study are pseudonyms.

Ms. Adler and Lively Discussions

Ms. Adler whispered, "Don't you just love it all? I could do this all day long" (Observational jot notes, September 28, 2007). This was a common statement heard from Ms. Adler over the course of the intervention. In a lively, animated manner, Ms. Adler ignited students' interest in learning new words and learning in general. With a glimmer in her eye, a tilt of her head, and a warm touch on a shoulder, Ms. Adler's passion for teaching was infectious. Below she shares her beliefs about teaching (Audiotape transcribed interview, August 17, 2007):

> What's important to me is the webbing or integration of different skills of activities. For example, in my centers, I have a science center and a writing center because that is important to me that you have writing in not just one subject area but throughout all your subject areas. Sustained silent reading is important to me, writing workshop is important to me, and flexible grouping is important to me. The topics we write about vary from actual information whether it is science or social studies to personal narratives, [I use] a lot of integration. (Audiotape transcribed interview, August 17, 2007)

> Ms. Adler's classroom overflowed with storybook favorites that she brought to life through text connections. When asked about selecting books for storybook read-alouds, she responded (Audiotape transcribed interview, August 17, 2007):

> The stories [in the basal series] are good to teach skills, but they are not engaging enough so sometimes I choose my own stories to teach from. I'll have an author study one week

instead of using the story that comes from the series. It's those kind of priorities.

Sometimes you have favorites that teach well because you love them. So you pick stories,

know your skills, and then integrate them.

Further, she believes in her students' potential to learn. She states (Audiotape transcribed

interview, August 17, 2007):

I know I try to incorporate too many skills. I know it completely, but I keep doing it for

this reason: it's the way I push my students academically. I have a large group of higher

ability students that I knew will soak up what I am doing.

When asked about using technology with teaching, Ms. Adler replied, "Okay, well [I use

it] for grading programs, attendance program, word processing, creating slide shows. It's usually

just to record events and put them in the newsletters, a picture of something." For instruction, she

stated that she uses the computer lab and Success Maker (2005) because "…the data shows that

Success Maker correlates to higher achievement scores" (Audiotape transcribed interview,

August 17, 2007).

Ms. Adler's interest to implement *Walk Talk Words* stemmed from her students' low

vocabulary scores earned on subsections of yearly administered standardized tests. She felt that

she needed to learn new ways to provide vocabulary instruction that were more effective than the

ones she currently employed. Before the intervention training, she selected vocabulary from

"…the series and stories we are asked to focus on in Scott Foresman" (Audiotape transcribed

interview, August 17, 2007). She believed vocabulary learning occurred from immersion in the

language arts and interest in a topic. She stated (Audiotape transcribed interview, August 17,

2007):

Children learn vocabulary by reading, with repeated use, [and] hearing conversations with that vocabulary. It [vocabulary] comes with an interest in subject areas. Children that want to learn about spiders will learn the vocabulary that goes along with the book because they have the interest.

Her pedagogical vocabulary goals included (Pedagogical vocabulary goal statement, September 13, 2007):

I hope to learn new strategies for teaching vocabulary that are more in-depth than what I use now. I think my frustrations with not teaching vocabulary effectively in the past has caused me to not focus more on traditional, explicit vocabulary instruction. Based on testing data from multiple years of administering the IOWA Test and state criterion referenced test, vocabulary instruction is apparently an area of weakness in my instruction. My goals aren't all directed towards simply improving testing data, but the data is further evidence that my vocabulary instruction needs to change.

Ms. Bee and Cooperative Groups

Across the hall from Ms. Adler is Ms. Bee's classroom. Students in her room move about in collaborative groups exploring and discussing topics of study. Ms. Bee rotates from group to group conferencing and guiding student inquiry. "I use teachable moments, especially with read-alouds, and themes that have good activities." She "…pulls and picks [stories] from the basal series and uses their themes" to interweave with content area topics. For instance, during an animal lesson in science she integrated literacy with gardening. "We talked about ladybugs and what they eat, and we actually put lady bugs in our garden" (Audiotape transcribed interview, August 16, 2007).

Ms. Bee scaffolds learning with "…a lot of modeling and sharing of expectations." She believes students learn best when instruction builds on students' "…background [knowledge] and things they will be able to draw from." When asked about using technology with teaching, she responded, "I am pretty good with technology. I know where to find my resources. Pulling them into the classroom though is going to take some time" (Audiotape transcribed interview, August 16, 2007).

Ms. Bee continually hones her craft to teach literacy effectively. Her interest to participate in the study ensued from her desire to learn vocabulary techniques that would foster word awareness in her classroom community. She elaborates (Pedagogical vocabulary goal statement, September 13, 2007):

Being a teacher for 11 plus years, I have not had many teaching experiences or training that deals with teaching children vocabulary or assessing vocabulary. By implementing *Walk Talk Words*, I hope to gain an overall knowledge of teaching vocabulary. I want to learn new activities and strategies that will help my students expand their word knowledge. I feel that it is important for students to be able know the meaning of words, but also to be able to use them in their daily writing and daily conversations. I want to attain a better grasp of how to teach vocabulary an appropriate ways to assess my first grade student. I want to gain a deep understanding of how these strategies work and if they help my students' vocabulary.

Before the intervention training, she struggled responding to an interview question that asked her to elaborate on how she selected vocabulary to instruct. She stated (Audiotape transcribed interview, August 16, 2007):

That's a hard question because sometimes I will pull from books. I am trying to think, it

depends on what we are reading for. If we are reading for meaning, then I'll stop them

[students] throughout the book and we will talk and discuss the pictures.

Ms. Bee focused on and drew attention to interesting words discovered in the content

areas and used a Word Wall to display the words. She involved students in the process as they

nominated words to place on the wall. She states (Audiotape transcribed interview, August 16,

2007):

Last year when we were learning about fractions, I put numerator and denominator on the

board. In social studies, well to me helpers would be up there or types of community

helpers. With my read-alouds, like in second grade when we were reading *George's*

Marvelous Medicine [Roald, 1997], we picked out some of the words in the book to put

on our Word Wall because they have some crazy words in there.

Her vocabulary instructional practice included, "I'll have them substitute the word so if I

say marvelous [I ask] can you find or think of another word that means the same thing?" She

found displaying words important because "…students use their Word Wall all the time when

they are writing" (Audiotape transcribed interview, August 16, 2007).

In sum, both teachers recognized the importance of teaching vocabulary and bringing

word awareness into their classroom communities. However, they both felt a need to hone their

craft of vocabulary instruction to improve students' interests in words and vocabulary

development.

Instructional Schedules of Teachers

Mornings in Ms. Bee and Ms. Adler's classrooms included a lengthy Language Arts

block. The teachers greeted their students between 8:25 a.m. and 8:50 a.m. During this time,

students read independently from self-selected books, played math games, and completed work in progress. The morning announcements started at 8:55 a.m. Teachers collected lunch money, took attendance counts, and checked for parent notes left in the students' daily folders and wrote responses if necessary. Around 9:05 a.m., students cleaned-up their morning materials before they gathered on a carpeted area in front of a special reading chair for whole group storybook read-aloud and discussion. Each teacher selected personal storybook favorites and used curriculum series books to integrate various skills through a thematic approach. For instance, Ms. Adler started the year integrating science, math, writing, and reading using a Back-to-School Adventure theme. She read *Diary of a Worm* by Doreen Cronin, *Beatrice Doesn't Want To* by Laura Numeroff, and *The Kissing Hand* by Audrey Penn. Ms. Bee started her year off by integrating social studies, writing, and reading through a Communities theme. She selected and read *A House for Hermit Crab* by Eric Carle, *Franklin's Neighborhood* by Paulette Bourgeois, and *The Big Green Pocketbook* by Candice Ransom. Discussions surrounding the stories occurred before, during, and after the reading of the books.

At 9:30 a.m., Ms. Bee started whole group reading lessons using a commercial basal series and from 10:00 a.m. to 11:00 a.m. conducted Guided Reading groups (Fountas & Pinnell, 1996) and literacy centers (Fountas & Pinnell, 1996). Ms. Adler extended her read-aloud discussions and used a follow-up writing extension activity until 10:00 a.m. when she then started Guided Reading (Fountas & Pinnell) and literacy centers (Fountas & Pinnell, 1996). Both teachers conducted daily Writer's Workshop (Calkins, 2003) between 11:00 a.m. and 11:30 a.m. before going to the cafeteria for lunch. The teachers' classrooms were located across the hall from one another.

During the fourth week of Phase 2 (the ninth week of the school year), the five first grade

teachers in the school started rotating students three times a week for Team Time Target Time

between 9:30 a.m. and 10:00 a.m. for literacy lessons. During this time, Ms. Bee and Ms. Adler

worked with a group of first-grade students based on their performance scores earned on a

benchmark assessment. Benchmark assessments evaluated the student's proficiency levels on a

particular comprehension, phonics, or Language Arts skill. During Team Time Target Time,

students received either enrichment or remedial lessons.

Afternoons included a daily rotation of art, music, library, and P.E. Each teacher

completed 60 minutes of math and spent 30 minutes outside for recess. Social studies and

science occurred during the last 30 minutes of the day. This time was often shared with

completing morning work, math, and preparing for home. Table 4.1 shows the organization of

the teachers Language Arts block and when they incorporated *Walk Talk Words* into their

morning routines.

Table 4.1

Language Arts Block and Walk Talk Words

Time	Component
8:35 a.m. - 8:55 a.m.	Independent reading/D-LEA book sharing/Math games
8:55 a.m. - 9:10 a.m.	Announcements, Lunch, Attendance
9:10 a.m. - 9:30 a.m.	Storybook Read-alouds and *Walk Talk Words* lessons
9:30 a.m. - 10:00 a.m.	Team Time Target Time
10:00 a.m. - 11:00 a.m.	Guided Reading/Literacy Center/Writing Response
11:00 a.m. - 11:30 a.m.	Writer's Workshop and D-LEA activities

In sum, both teachers believed that integration of skills and thematic activities was

important. Both used a range of reading materials from commercial programs, higher-level trade

books, and book favorites for storybook read-alouds. Ms. Bee found teachable moments

engaging for student learning. Ms. Adler integrated writing activities through all subject areas. In

the following sections, the data evidence illustrates how these teachers' characteristics informed their decision-making processes and practice as they implemented and integrated this study's intervention, *Walk Talk Words,* into their existing curriculum lessons, materials, and thematic units.

<div align="center">Instructional Cycles of *Walk Talk Words*</div>

In this section, I answer the first research question: What is the nature of teachers' decision-making processes and practice as they implement *Walk Talk Words* to improve first-grade students' vocabulary development? Through data analysis described earlier in Chapter 3 of this study, I identified two cycles of instruction the teachers utilized weekly to implement the intervention, *Walk Talk Words*. As I present each cycle, I answer the first research question in three ways. First, I use categories that emerged from the data to anchor and provide a rationale for the teachers' decision-making processes to create and use particular vocabulary activities when instructing Tier Two words. Second, I draw from data excerpts to contextualize and illustrate how the teachers implemented the vocabulary activities to enhance students' Tier Two word learning. The two cycles or themes discussed in this section include, Visualizing the Walk and Creating the Talk. Adhering to the inductive analysis process detailed in Chapter 3 of this study, all data excerpts included in this chapter were coded, conceptually categorized, and retrieved from family nodes in ATLIS.ti 5.2 (Scientific Software, 2002-2008). Table 4.2 documents the cycle, Visualizing the Walk, its categories, and codes. Lastly, I offer an overview on how the teachers used Digital Language Experience Approach and Tier Two Instruction across the 8-week intervention phase of the study.

Visualizing the Walk with Words

Visualizing the Walk involves the teachers in conceptualizing, planning, and orchestrating activities to teach Tier Two words. Three categories that emerged from the data that best summarizes why the teachers made particular decisions to target Tier Two words, create visual displays, and integrate skills through the content areas. These categories include: (a) integrating skills, (b) creating reference, learning tool, and memory aids, and (c) engaging with hands-on context. The examples provided in each category in this section (see Table 4.2) illustrate how the teachers applied these decision-making points to instructional practices to target Tier Two words with available classroom resources and materials to enrich students' vocabulary development.

Table 4.2

Cycle One: Visualizing the Walk, Categories, and Codes

Categories	*Codes*
Integrating Skills	Thematic units, D-LEA, Team Time Target Time, test taking skills, essential question, related concepts, content topics, conceptually related, metacogntive skills/guided reading/ fix-up strategies (D-LEA), individual/class needs
Using Reference, Learning Tools, and Memory Aids	Charts, thematic charts, word wall, props, stickers, color-coded, spelling, sound-stretching, dolch-chart, photographs, spelling, signs, independent use sound-stretching, spelling, stickers, color-coding, placement, wall location, pictorial icons, multi-symbolic, pictures
Engaging with Hands-on Context	Props, concrete items, food items, puppets, toys, snacks, living things, camera

Integrating skills: Yearly*,* Ms. Adler and Ms. Bee utilized *thematic units* to integrate and teach first-grade skills across curricular areas and found including Tier Two words with thematic topics a natural fit. Thematic units consisted of fiction and nonfiction storybooks, hands-on application, and an integration of first-grade literacy skills through the content areas. For example, during an apples thematic unit, students graphed and sorted *delicious* apples according

to color in math; taste tested *edible* and *scrumptious* apple *morsels* in science, and *devoured* apple juice after recess. Ms. Adler's students even brought in an apple from home to create an apple statue of someone they admire to display in the class apple museum during social studies.

In Visualizing the Walk with Tier Two words, each teacher previewed thematic unit materials to select Tier Two words that were conceptually related to the units' focus or theme. For example, the teachers previewed the Apples Thematic Unit's nonfiction books: *Who was John Chapman?* by Patsy Becvar, *Apples* by Gail Gibbons, *An Apple a Day* by Melvin Berger, and *How Do Apples Grow* by Betsy Maestro to select Tier Two words. Both teachers selected *scrumptious* and *delicious* included in the text of the books and added the words to their *Walk Talk Words* lesson plans. Next, they decided to extend the concept of eating *scrumptious* and *delicious* apples with the addition of the Tier Two words *morsel*, *devour*, and *edible*. Ms. Adler continued her list with three Tier Two words *admire*, *dedicated*, and *persistent* to integrate them with her Johnny Appleseed storybook discussions and daily writing activities. Ms. Bee added three Tier Two words *cooperative*, *crisp*, and *nibble* to her list because she believed that they complemented her thematic direction. Below, Ms. Adler shares her excitement for using an apple thematic unit with her first-grade students as a way to integrate skills (Reflective journal entry, September 24, 2007):

> It's apple week! It's one of my favorite weeks of lessons, centered around Johnny Appleseed's birthday. I integrate Language Arts, science, and math lessons. I sent home a note on Friday for everyone to bring an apple on Monday.

Often, the teachers found the need to supplement words and themes contained in the books with additional Tier Two words that were not included in the books. For instance, Ms. Bee found that across the five versions of *The Three Little Pigs* (see Table 4.3 for a listing of books)

used in her fairy tales thematic unit, *convince* and *dash* were the only two Tier Two words stated in the text of the books. After previewing the books, Ms. Bee added to her list, *cunning*, *toppled*, *clever*, and *entice* for a total of six Tier Two words. Below, Ms. Bee explains this decision-making process (Reflective journal entry, September 27, 2008):

> I decided to use the *Three Little Pigs*. I chose this story because students are familiar with the story. I can add in other concepts (setting, characters, point of view, etc.) I only found a few words that were actually in the text. I had to draw them out by the wolf's actions or actions in the book. For example, the straw house *toppled* over. Or, the wolf tried to *entice* the pigs to come out of their house.

Ms. Adler often selected Tier Two words that were conceptually related based on the needs of her classroom community. She explains (Reflective journal entry, October 5, 2007):

> This week is directed towards character development. I have a small group of children who are temperamental, argumentative, and very negative. I'm directing this week's activities toward creating a trend of positivity and encouragement. I have one child who is the best "encourager" I've ever met in 1st grade! He is my inspiration for this week. This week I have a strong purpose because I want to try to change those dynamics. I read *Alexander and the Terrible No Good Very Bad Day* [Viorst, 1987] to show *frustrated*, *discouraged*, and a *glum* child. I read S*tand Tall Molly Leu Melon* [Lovell, 2001] to show a child that was encouraged to receive advice from her grandmother when she had something that might *frustrate* her. She was very *gleeful* and *triumphant* and those are some of the targeted words. A third book that I read was about *Enrico Starts School* [Middleton, 2004]. Enrico was a new student to a school couldn't make friends and in the end in the book he finally did. He had a lot of *frustrations* at his school but in the end he

figured out that he received some advice from his brother and if he was just being himself

he found a friend. When I read the book *Enrico Starts School* we made a list on the board

of situations that could frustrate children at school and that was to get them prepared to

complete the template for the [DLEA] book. So I really set it up strong through out the

week about *encouraging* others and giving *advice* and trying to help instead of being

negative and fussy.

As Ms. Adler stated above, she intentionally targeted Tier Two words that were prompted

by student need and intermingled them into her designed character development thematic unit.

She selected six Tier Two words, *discourage*, *encourage*, *frustration*, *gleeful*, *glum*, and

triumphant to scaffold and develop her students' positive self-identities and interactions with one

another. She then selected storybooks and used classroom context to instruct and reinforce the

Tier Two words.

Ms. Bee and Ms. Adler averaged introducing 1-3 words per day after the reading of a

storybook. Storybook readings occurred between 9:10 a.m. and 9:30 a.m., Monday through

Thursday. Depending on the unit and scheduled school events, the number of books read per

week to instruct Tier Two words ranged from 1 to 6 books. For instance, during Ms. Adler's

soaring verbs thematic focus, she only used and reread *Caramba* (Gay, 2005) because it was a

four-day week, and time was limited due to administering literacy assessments. Table 4.3 and

Table 4.4 highlight each teacher's six thematic units, weeks instructed, Tier Two words selected,

and books used to reinforce and teach word concepts in Ms. Bee's and Ms. Adler's classrooms

respectively. Tier Two words in bold were also included in Digital Language Experience

Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) class books.

Table 4.3

Ms. Bee's Thematic Units, Weeks Instructed, Tier Two Words, and Books

Theme Tier Two Words	Book Illustration Walk
Patriotism (week 1) admire, ambitious, courageous, **gaze,** glum **illuminate, patriotic** radiant, **unfurl**	• *The Flag We Love* by P. M. Ryan • *September 12th: We Knew Everything Would Be All Right* by First-Grade Students of H. Bryon Masterson Elementary in Kennett, MO • *The Story of the Star-Spangled Banner: By the Dawn's Early Light* by S. Kroll
Fairy Tales (week 2) clever, **convince,** cunning **dash**, entice, toppled	• *Disney's Three Little Pigs* by B. Brenner • *The Three Little Pigs* by M. Hillert • *The True Story of the Three Little Pigs* by J. Scieszka • *The Three Pigs* by D. Wiesner • *The Three Little Pigs* by G. Bishop • Ladybird Easy Reading Book *The Three Little Pigs* (http://math-www.uni-paderborn.de/~odenbach/pigs/pigs.html)
Weather (week 3) avoid, **dangerous,** frigid gloomy, humid, inadequate soggy, **vigorous, whirl**	• *Flash, Crash, Rumble, and Roll* by F. Branley • *Oh say can you say what's the weather today: All about weather* by T. Rabe • *Weather* by G. Jeunesse & P. Bourgoing
Apples (week 5) **scrumptious** morsel edible, nibble, cooperative crisp, **devour, delicious**	• *Apples* by G. Gibbons • *How Do Apples Grow?* by B. Maestro • *Apples* by K. Robbins • *Busy as a Bee* by G. B. Riley • *An Apple a Day* by M. Berger • *Who was John Chapman?* by P. Becvar
Emotions (week 6) **gleeful, frustrated,** reluctant, miserable, insisted delighted, forlorn, envious	• *A Pocket for Corduroy* by D. Freeman • *The Popcorn Dragon* by J. Thayer • *Harriets' Horrible Hair Day* by D. L. Stewart
Pumpkins (weeks 7-8) **Hoist, sprouts**, disappointed patient, appear, harvest plump, enormous,	• *The Big, Big Pumpkin* by J. Lexau • *Big Pumpkin* by E. Silverman • *The Pumpkin Patch Parable* by L. C. Higgs • *The Pumpkin Patch* by E. King • *The Pumpkin Book* by G. Gibbons • *The Tiny Seed* by E. Carle

Tier Two words in bold were also included in Digital Language Experience

Table 4.4

Ms. Adler's Thematic Units, Weeks Instructed, Tier Two Words, and Books

Theme Tier Two Words	Books
Adventure (week 1) adventurous, brave, curious. daring, fearless, hesitant. inquisitive, reluctant	• *Stella, Star of the Sea* by M.-L. Gay • *Good Morning Sam* by M.-L. Gay
Apples (week 2) admire, dedicated, **delicious, devour, morsel**, persistent, edible, **scrumptious**	• *Apples* by G. Gibbons • *How Do Apples Grow?* by B. Maestro • *Apples* by K. Robbins • *Busy as a Bee* by M. Berger • *Who was John Chapman?* by P. Becvar
Character Development (week 3) discourage, **discouraged**, discouraging, **encourage**, **encouraging, encouraged**, frustration, **frustrated**, **frustrating,** gleeful, glum, **triumphant**	• *Beatrice Doesn't Want To* by L. Numeroff • *Caramba* by M.-L. Gay • *Stand Tall Molly Lou* Melon by P. Lovell • *Alexander and the Terrible, Horrible, No Good, Very Bad Day* by J. Viorst • *Enrico Starts School* by C. Middleton
Soaring Verbs (week 5) soar, soared **soaring,** swoop, **swooping**, swooped, float, **floating,** glide, **gliding**, hover, **hovering**	• *Caramba* by M. Gay
Bats (week 6) **clutch, clutched, clutching, clutches, grab, grabbing, grasp, grasped, grasping, grasps, grip, gripped, gripping, grips, hold, holds**	• *Stellaluna* by J. Cannon • *Zipping, Zapping, Zooming Bats* by A. Earle
Pumpkins (weeks 7-8) appear, **astonished,** curious, **delight, despise,** disappoint, **disgust,** gasp, **incredible**, **inspect,** observe, **patience**, patient scrutinize, soggy, sprout, **yank**	• *The Big, Big Pumpkin* by J. Lexau • *Big Pumpkin* by E. Silverman • *The Pumpkin Patch Parable* by L. C. Higgs • *The Pumpkin Patch* by E. King • *The Pumpkin Book* by G. Gibbons • *The Big Seed* by E. Howard • *The Tiny Seed* by E. Carle • *How a seed grows* by H. Jordan • *Seeds Grow Into Plants* by M. Lucca

Tier Two words in bold were also included in Digital Language Experience

Thus, across the eight weeks of implementing *Walk Talk Words*, Ms. Bee taught an average of seven Tier Two words per week ranging from 1-2 words per day, while Ms. Adler exceeded her goal of teaching 5-6 words. When including word endings, she often averaged 13 words per week. Both teachers used available classroom fiction and nonfiction books to enrich, extend, and reinforce thematic related Tier Two words across the content areas.

Reference, learning tool, and memory aid. Both teachers created several occasions to enhance students' learning of Tier Two words through visual displays. Displays served as learning tools and reference points to support and assist students' learning and production of targeted Tier Two words during class discussions, recycling activities, and Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities. Immediately after instructing a Tier Two word, the teachers wrote it on a sticky sentence strip then placed the strip on a visual display. Both teachers created different ways to display the words.

Ms. Bee used a class bulletin board as a Word Wall to display instructed Tier Two words. The words were arranged in alphabetical order and the wall continually grew throughout the eight weeks intervention phase of the study to include all instructed Tier Two words. She used the Word Wall to encourage students' independent use of the words during writing activities and in conversations. When a word was used, she often placed a tally mark on the word's sentence strip located on the Word Wall. Below, Ms. Bee shares her decision-making for using tally marks (Reflective journal entry, September 26, 2007):

> I think that we need to practice our words more. I am going to add more time to explore our words that are already on our Word Wall. I need to try and slide them in during the day as much as I can. Today I showed a short video on the story of *The Three Little Pigs*.

The students went wild over it. After the story, we discussed the words *toppled* (the straw

house toppled over) and *clever*. We talked about how the pigs were *clever* and out tricked

the wolf. The students really understood toppled. Many of the students stated in class that

they tripped or were pushed and *toppled* over. The word clever was a little more difficult

for them. They brought up how they were *clever* when playing soccer. They are starting

to get it. Each time a student used a word, I placed a tally mark on the word [Instructed

Tier Two words displayed on Word Wall].

Ms. Adler created multi-symbolic, movable thematic charts to display weekly

conceptually related Tier Two words. The chart was multi-symbolic because it connected Tier

Two words and concepts to recognizable pictorial icons and symbols placed on color-

coordinated backgrounds. For example, she placed a picture of a bat on brown construction paper

during the bat theme; a white cloud on sky blue construction paper for the soaring verbs theme;

and a red heart with a zigzagged line down the center to list positive and negative emotion words

during her character development unit. In addition, she often placed icon stickers next to words

to assist students' selection of words when referencing the charts for spelling and oral production

during discussions. For instance, she placed a smiley face sticker next to the word delighted, a

surprised face next to astonished, and a sad face next to disappointed. She states, "That's just

another little clue in case they can use that" (Videotape transcript, November 5, 2007). The chart

remained in the front of the room next to her reading chair and the carpeted area used for whole

group discussions throughout the week. When a new thematic unit started, the chart was

relocated to a back wall that housed an ongoing collection of Tier Two word charts.

Daily, Ms. Adler directed students' attention to a thematic chart to revisit instructed Tier

Two words. The transcript excerpt below demonstrates how Ms. Adler used the chart to scaffold

students' mapping of sounds to letter symbols during a whole group *Walk Talk Words* lesson. In this chapter, I indicate a change in speaker by using a T for teacher and an S with a number to indicate different students. For example, S1 indicates one student speaker and S2 indicates that a new student is speaking. Sts indicates a whole class response. Text placed in italics is used to clarify teacher and student gestures, intonation, and nonverbal task management behaviors and procedures.

T: Daniel what word do you want to read?
S1:   Uhm, the one, the one with the a.
T: The one that has the a.
S1:   Ah, aaaa dddd…..
T: *Adventurous*
S1:   I knew that.
T: Everybody say *adventurous*
Sts: *Adventurous*
T: Great! Let's do another one.
S2:   I want the one with the f.
T: F?
S2:   *Fearless*
T: Great! Everybody say *fearless*.
Sts: *Fearless*
S3:   I chose the r.
T: What word is that?
S3:   rrrrrrrrrrrrr. . . eeeeeeee. . . relief. Re. . . luc. . . tant
T: Very good. Everybody say *reluctant*.
Sts: *Reluctant*
T: Another word?
S4:   *Dared*
T: Close. Look at that last chunk, the ing.
S4:   Dare
T: Try again.
T: Let's help her.
Sts: *Daring*
T: *Daring*. Oh, I love it. Thank you. Let's clap for us.
(Videotape transcript, September 20, 2007)

Reference, learning tool, and memory aids also supported students' word choices during the co-construction of Digital Language Experience Approach text to narrate photographs. For example, in the observation jot note below, dated October 1, 2007, I noted how Ms. Adler works

in an English Language Learner's zone of proximal development to scaffold his oral production of a previously instructed Tier Two word.

> Student forgets what word he wants to use. Ms. Adler pauses the whole activity (D-LEA), gets up, and walks over to help him choose the word from the chart he is looking at. "Is this the word that you were thinking about?" She points to and says *curious*. Student nods his head in agreement. She goes through the whole chart review process again, "Let's say the words, and refresh our memories. Say with me *curious*. . ." She points to the words as they read them to refresh their memories and to get the words in the forefront [of their memories] then moves back to the SMART Board to continue the activity. (Jot note, October 1, 2007)

On another occasion, I observed how students referenced the charts to scaffold one another's use of Tier Two words during independent writing activities. I documented the following learning event: (Observational jot notes, dated November 1, 2007:

> Ms. Adler refers students to the charts when students ask her how to spell words. Student wants to spell observe. A peer leaves his desk walks to the chart and points to observe to assist the student. The student then takes his paper and sits on the floor next to the chart to copy the spelling of the word. Two students standing in front of the pumpkin chart discuss which word is *patient* and which is *patience*. They use their fingers to point to the ending letters. Another student joins the two, points to the last letter of *patient*, and says, "/t/" /t/ *patient*. The students then lean on the dry erase board to spell the word.

Figure 4.1 illustrates Ms. Bee's Word Wall, and Figure 4.2 illustrates Ms. Alder's thematic word charts.

Figure 4.1. Ms. Bee's word wall.

Figure 4.2. Ms. Adler's thematic word chart displays.

Hands-on context. Other researchers and educators have noted how effective the use of props and hands-on materials are in fostering students' engagements with content, concepts, and words (Dodd, 1999; Rasinski, 1983; Schwanenflugel, et al., 2005; Wasik & Bond, 2001). In this study, teachers used concrete items and props as a way to demonstrate Tier Two word meanings, to introduce words, to provide immediate hands-on connections to instructed Tier Two word meanings, and to contextualize students' associations to the words.

On many occasions, Ms. Adler used concrete props as a tool to teach Tier Two words. For example, during her bat unit, she hung a stuffed toy bat from her loft and staged students to dramatically *grab*, *grip*, and *grasp* the bat as it fell from its branch. During her apple unit,

students brought in an apple from home to design an apple statue of someone *admirable*.

Students created a pedestal for the statue and attached a sign that contained an adjective to

describe the statue such as *gorgeous*, *dazzling*, *stunning*, *elegant*, *handsome*, *heroic*, *courageous*,

fearless, inspiring, intelligent, intellectual, or *incredible*. The apple statues remained on the

students' desks throughout the week. Below, I share a memo jotted in my observational field

notes. It states:

> Students refer to the signs attached to the apple statues to spell words. One student copied
>
> the word written on his neighbor's sign to include the word *heroic* in his writing activity.
>
> Signs scaffold and support students' use and spelling of Tier Two words during the
>
> writing activity. (Observational field notes, September 27, 2007)

Similarly, Ms. Bee also brought in artifacts and concrete objects to support vocabulary

instruction. For example, during a patriotism unit, students worked in teams to *unfurl* a flag and

gaze at the flag in the front of the school. Both teachers used a pumpkin to scaffold students'

sensory perceptions of Tier Two words. For example, Ms. Adler's students *yanked* seeds from a

disgusting, smelly pumpkin, and placed seeds on a *soggy* paper towel to *scrutinize* their

appearance. During another unit, she used pinecone seeds called 'helicopter seeds' to

demonstrate *whirling*. Students tossed the seeds into the air and watched them *whirl* to the floor.

This concrete experience provided immediate mediation to assist students in understanding the

differences between *whirl*, *float*, and *glide* during a thematic unit titled soaring verbs. Figure 4.3

provides examples of some of the props used throughout the study to extend and enrich students'

learning of Tier Two words.

In sum, the first cycle to Visualizing the Walk highlights why and how the teachers create

vocabulary activities to implement *Walk Talk Words.* Both teachers used thematic units to target

and teach conceptually related Tier Two words to enhance a thematic focus. In addition, both

teachers presented words visually using charts or a Word Wall. When available, they provided

concrete objects and props to strengthen, support, and mediate students' cognitive connections to

the words. In this section, I have shared why and how the teachers used hands-on context,

integrated skills, and used reference, learning tools, and memory aids to instruct Tier Two words.

In closing this section, I share Ms. Adler's beliefs on the importance of including Visualizing the

Walk with *Walk Talk Words* instruction. She states (Videotape transcript, November 5, 2007):

> But it's also you have to have it [Tier Two word charts] as a daily method for using a
>
> reference tool. It has to be apart of your classroom like the sight word list (points to a
>
> sight word list displayed on her loft.) is there, and it's in their desk. There are many
>
> factors making it concrete. Not just the icon on the chart, but *yank* and *despise* —
>
> those came from opening the pumpkin and pulling the seeds out. That is about as
>
> concrete as you can get them using the words that day in the pumpkin seed journal.

Figure 4.3. Props used to mediate Tier Two words and concepts during thematic units.

Creating the Talk with Words

Creating the Talk involves instructing targeted Tier Two words and then releasing the production of Tier Two words to students through multifaceted activities to allow students to *use* what they are *learning*. The visual representations created and used during the Visualizing the Walk cycle now converge with phonological representations as students engage in receptive and expressive activities to discover, learn, and produce Tier Two Words. Creating the Talk encompasses eight categories that emerged from the data to explain why the teachers made particular decisions to instruct Tier Two words. The cycle includes: (a) active participation, (b) prior knowledge, (c) student centered learning, (d) modeling and coaching, (e) recycling and assessing, (f) motivation, (g) task management, and (h) home-school connections. Examples included in the discussion of each category illustrate how the teachers applied their decision-making process to the practice of instructing Tier Two words during *Walk Talk Words* lessons. Table 4.5 lists the cycle of Creating the Talk, its categories, and codes.

Active participation. Active participation involved planning vocabulary activities that allowed the students to immediately interact with Tier Two words following explicit instruction of the words. Both teachers embraced and followed Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) steps to instruct Tier Two words. Text Talk, as a vocabulary method, engages students in learning words through an explicit approach. For example, after targeting a word for instruction, the teacher restated the word in the context of the book, offered a child friendly definition, requested that the students repeat the word to develop a phonological representation, used the word in different contexts familiar to the students, and engaged the students in immediately connecting to the word through student generated examples and receptive activities such as playing thumbs-up or down.

Table 4.5

Cycle Two: Creating the Talk, Categories, and Codes

Categories	Codes
Active Participation	Dramatic discussions, hands-on experiences, illustration talks, sharing connections, hand gestures, intonation
Prior Knowledge	Word-to-Photograph Connections, Word-to-Life Connections, word-to-word connections, Text-to-Self/World/Text connections, Familiarity with Characters, tier two relevancy, developing concepts
Student Centered Learning	Cooperative groups, inquiry projects, relevancy to discussion, exchange of ideas, private speech moments
Model/Coaching	Guiding/enticing, abstract concepts, think-alouds, Text Talk, peer support, teacher enthusiasm, glancing at chart, sense of accomplishment, tracking with mouse, choral reading, chant reading, reproductions
Recycling /Assessing Learning	Oral talk, Writing activities, Ten Super Sentences, photos of charts as word box, incidental talk, directed oral production, misconceptions, Thumbs-up, partner talk, transfer/home, transfer/oral/written, conversations, tally marks, illustration talks, incidental talk, ownership, snack time talk, D-LEA activities
Motivation	Talk engagements, fun, excitement, connections, reading D-LEA class books, celebrating, ownership to D-LEA photo/text/books, sharing picture talking, partner reads, mystery items, sense of accomplishment, camera, SMART Board, digital equipment, photo discussions
Task Management	Behavior management, establish routines and procedures, establishing purpose, expectations
Home School Connections	Newsletter, Snack Time Talk, informal conversations with partner groups, sharing D-LEA/home, in-class parent volunteers

The data excerpt presented below illustrates how Ms. Bee used active participation and

Text Talk to instruct the Tier Two word *avoid* during her weather unit. In the excerpt, Ms. Bee

has finished reading, *Flash, Crash, Rumble and Roar* by Franklyn Branley, and is introducing

the Tier Two word *avoid* to the whole group.

1   T: All right, in the story the author tells you to *avoid* being out in a thunderstorm.
2   T: *Avoid* means to stay away.
3   T: Say *avoid*.
4   Sts: *Avoid*.
5   T: Someone might want to *avoid* a mud puddle because it will make your shoes

dirty.

6   T: Tell about something you would *avoid*. Start by saying I would *avoid* blank because [and tell] why? Tell me, tell your neighbor real quick. [Say] I would *avoid* blank because.

7   Sts: I would *avoid* [not clear].

Students speak quiet. I overhear avoid mentioned eight times.

8   T: Terrell what would you *avoid*?

9   S1   (Not clear)

9   T: So, I would *avoid* my brother because?

She walks around to assist students' oral production of avoid.

10:    T: Justin, what would you *avoid*?
            Because, you would what? You would *avoid* what?

11   T: Gracie what would you *avoid*?

12   T: All right, boys and girls a few of you had some good ones. Terrell, tell the group what you would *avoid*.

13   T: I would *avoid*. . .

14   T: Say I would *avoid*, say the whole sentence.

15   S1:   I would *avoid* my brother Mathew.

16   S2:   I would *avoid* a boy (not clear) and he starting kicking me (not clear) and I was trying to hit him back.

17   T: Allison, what did you come up with?

18   S3:   I would *avoid* hot water because it is very hot.

19   T: That's a good one.

20   S4:   I would *avoid* bears because they eat (not clear).

21   T: Not all the time just during certain seasons. I think they eat berries in the spring and summer.

22   S5:   I would *avoid* staying away from the windows because I am so scared of lightening.

23   S6:   I would *avoid* staying away from my baby brother because he is mean to me.

24   S7:   I would *avoid* staying away from mud riding my bike because my shoes would get dirty.

25   T: What is the word that means stay away from?

26   Sts: *Avoid*.

27   T: Awesome. We will work on the word more.

(Videotape transcript, dated October 1, 2007)

The example above demonstrates how Ms. Bee used Text Talk to instruct Tier Two words. For instance, she referenced the word *avoid* in the context of the story (Line 1), explicitly defines *avoid* (Line 2), and request that the students say the word aloud to develop a phonological link to the word (Lines 3-4). She offered a student friendly context to enrich the learning of the word (Line 5) and offered the students the opportunity to orally produce the word

in their own sentences (Lines 6-24). Noteworthy, she uses this time to assess and support students' developing understandings of the word *avoid* (Line 8-9) and to scaffold students' oral production of the word in complete sentences when sharing an experience using the word (Lines 6; 9-10; 13-15). This vocabulary talk exchange ends with the students saying the word aloud again (Line 26) and with Ms. Bee reinforcing the importance of knowing the word when she states, "We will work on the word more" (Line 27).

Similarly, Ms. Adler also taught Tier Two words using active participation strategies following Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) methods. Below, I use a video transcript excerpt, date September 27, 2007, to illustrate her vocabulary instruction after the reading of *Who was John Chapman?* by Patsy Becvar. In the example, Ms Adler is following Text Talk steps to teach the Tier Two word *admire* during an apples thematic unit. The data illustrates how she intentionally targeted the Tier Two word, provided a child-friendly definition for the word, and offered multiple occasions for students to contextualize the word in relevant experiences.

1   T: Boys and girls in that story about John Chapman we have some reasons to
            admire him and reasons why they made a book about him.
She writes the word admire on a sticky note that's resting on her lap while sitting in her rocking chair. Students sit in front of her on the carpet. She places the book on the easel next to her chair.
2   T: Reasons to *admire* Johnny Appleseed. Hum, can you say the word *admire*?
3   Sts: *Admire*
4   T: One more time.
She holds the word up for the students to see.
5   Sts: *Admire*
She stands up and places the word on the apple chart next to four other Tier Two words.
6   T: *Admire*. *Admire* means that we appreciate him and his efforts. *Admire* him.
            What did he do that we *admire*?
7   S1:   He grow apples so we can have apple juice, applesauce, apple pie.
8   T: Are you excited about that having all those apple products?
9   Sts: Yeah
10   T: Do you enjoy those apple products?
11   Sts: Yes

12   S1: And apple juice

13   T: Let's see if in the book, thinking about the book, is there another reason from what you have heard in the book that we should *admire* Johnny Appleseed?

14   Sts: (no response)

15   T: Think. Another reason?

16   S2: We are thankful because those apples are *delicious*.

17   T: They are and that is what Vaniegh was describing.

18   T: Is there another reason that we can admire Johnny Appleseed or John Chapman?

19   S3: He did hard work just to make apples all around the country.

20   T: He did hard, hard work.

21   S4: If he worked hard like us he would probably get five stickers.

The above example, demonstrates how Ms. Adler used Text Talk after reading a storybook aloud. For example, she referred to the book's text and pictures to develop the concept of *admire* (Line 1). She requested the students to say the word to create a phonological representation of the word (Lines 1-4). She provided a definition for the word (Line 5). She used a questioning technique to guide student responses and connections to the word (Lines 6-7; 8-12; 13-16; 18-19). Additionally, she referred to the book's pictures to contextualize students' connections to Johnny Appleseed and apple products students consumed during hands-on application (Lines 7-12).

Further, the teachers used active participation with book illustrations to target Tier Two words and to engage students in using Tier Two words during discussions. Both teachers found that illustrations enhanced students' visual connections to targeted Tier Two words. During her first thematic unit, Ms. Adler observed that students lost interest in repeated readings of the same storybook. She stated, "On the third day, I could sense that they were getting tired of me repeating that book so instead of reading and they knew the whole book by then so I did the pictures instead of reading it" (Reflective journal entry, September 21, 2007).

Below, I share an example to demonstrate how Ms. Adler used illustrations to actively engage students in learning the three Tier Two words *fearless*, *brave*, and *daring* during the third

reading of *Stella Fairy of the Forest* by Marie-Louise Gay. Notably, Ms. Adler used the occasion

as a teachable moment to also sprinkle in the Tier Two word *treacherous* into the discussion.

> T: I know you are very familiar with the events of the story. I am not going to read all
>   the text this morning. But I want you with your eyes to analyze the illustrations. And
>   when you see Stella being *fearless*, *brave*, or *daring*. . .
> *She opens the book and shows the first illustration.*
> Sts: Thumbs up
> T: Tell me why you think she is being *brave*, *daring*, and *fearless*?
> S1: Cause she is walking on a wall.
> T: Ah. . . because she is walking on rock wall.
> S2: I love walking on a rock wall.
> T: That can be very *treacherous*. I am not sure if I would attempt that.
> Sts: I would. I done that before.
> T: You've been *daring*?
> S3: Once I was walking on a rock wall.
> T: Are you *fearless*?
> S3: I'm just *brave* sometimes.
> T: Oh, you're *brave* sometimes. That's awesome.
> Videotape transcript, September 20, 2007)

Lastly, the use of illustrations as a visual scaffold became an important ingredient for

weekly instruction as the teachers observed how it supported students' learning of Tier Two

words. Below, Ms. Bee reflects on how the students transferred a previous illustration talk during

a patriotism unit to the next week's guided reading lesson. In the example, the students are

transferring the previously instructed Tier Two words *glum*, *illuminate* and *radiant* to an

illustration in the group's leveled reader. Ms. Bee reflects on the experience (Observational jot

note, September 25, 2007):

> So I brought out a book and it's about weather and it had all these cool pictures in it. It
>
> had one picture of a stormy sky. So I said how does that picture make you feel? "Ah,
>
> *glum*" and they started telling me about how the sun and rainbow are *illuminating* the
>
> sky, and how the sun is *radiant*.
>
> *Prior Knowledge*. To support students' connections and learning of Tier Two word

concepts, both Ms. Adler and Ms. Bee designed vocabulary activities that drew on students'

prior knowledge to extend word learning experiences. Ms. Adler's explains, "…making

connections is important. To make that connection, [you need] to think aloud, [and] show them

those processes" (Transcribe audiotaped interview, August 17, 2007). To illustrate, the example

below demonstrates how Ms. Adler combines a hands-on experience, prior knowledge, and

innovations on Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003)

to move beyond storybook read-alouds to use concrete objects with an everyday experience (e.g.,

snack time) to develop the meaning of the Tier Two word *devour*. The following *Walk Talk

Words* lesson occurred during her apples thematic unit. Ms. Adler brought a apple pie baked

from home to connect student's understanding of the known concept 'to eat' to the new word

devour. The dialogue begins as Ms. Adler removes the pie from a cooler resting next to her

rocking chair.

1   T: Do you think you might like to *devour* this apple pie?
2   Sts: (Screaming and very loud)
3   T: Sh, sh, sh. It's still warm!
4   S1: We are going to eat it.
5   T: That's exactly right. Everybody say *devour*.
She writes the word on a sticky sentence strip while the students say the word.
6   Sts: *Devour*
7   T: You even say it with some excitement in your voice, *devour*.
8   S2: Because we want it.
She hands the sticky tape to a student to place on the apple chart posted on the dry erase board.
9   T: *Devour* means you want to eat every bit of this.
10   Sts: (Laughing)
11   T: Every, teeny, tiny *morsel* you want to have in your mouth. Is that kind of true?
12   Sts: Yeah.
13   T: If you have teeny, tiny *morsels* on your plate do you think you might *devour* them as well?
She holds up the sticky sentence strip with the word devour.
14   Sts: Yes
15   T: We can't start to *devour* it until you are all on your bottoms. I want you to put your thumbs up if I use this word correctly and if I don't I want you to put your thumbs down.

She gestures with her own thumbs when saying the words up or down.
16 T: Listen closely. I saw somebody at lunch mixing the ketchup and chocolate milk together. They *devoured* it, I'm sure.
She says devoured using lots of expression.
17 Sts: Ooooo (Lot of thumbs go down.)
18 T: I think that you are ready for some *delicious* apple pie. I think you are about to *devour* your apple pie.
19 T: I'm going to call you by tables to come pick up your piece of apple pie that you are about to *devour*. When we start to *devour* things in this room, who knows the rule about *devouring* things in this room?
20 S3: Don't leave crumbs and don't make a mess.
She points to devour placed on the chart.
21 T: Are you ready to
22 Sts: Eat; taste
23 T: Taste and eat and
She points again to the word on the apple chart.
24 Sts: *Devour*
25 T: *Devour* it?
26 S4: When are we going to eat? I want to eat.
27 T: You may return to your desks to *devour* your apple pie. *Devour*.
(Videotape transcript, September 25, 2007)

The example above demonstrates how Ms. Adler's orchestrated her vocabulary practice when using a classroom event such as eating an apple pie during snack time to teach the meaning of the Tier Two word *devour*. She used the framework of Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) to contextualize the learning of the word. Instead of a book, she used a hands-on context of eating an apple pie to engage students in using the concept of 'to eat' to learn the word *devour*. For instance, she held up an apple pie before snack time and said, "Do you think you might like to *devour* this apple pie?" (Line 1). A student quickly responded, "We are going to eat it" (Line 4). She draws on students' prior knowledge when saying. "Because we want it" (Line 8). She followed Text Talk when having the students repeat the word (Lines 5-6); she defined the word (Line 9), and implicitly refined the definition to include, "eat everything" to establish connections to the second targeted Tier Two word *morsel*. She stated, "Every, teeny, tiny *morsel* you want to have in your mouth. Is that kind of

true?" (Line 11). Next, she stated, " If you have teeny, tiny *morsels* on your plate do you think you might *devour* them as well?" (Line 13). She builds interest, extends connections, and actively involved students in a quick round of thumbs up and down using a child friendly context (Lines 15-17). Before ending, Ms. Adler contextualized and modeled the use of *devour* four additional times when reviewing rules and procedures for eating in the classroom (Lines 18-20).

Lastly, the example below further demonstrates how Ms. Bee's draws on students' understanding and prior experiences to monitor students' learning of the Tier Two word, *whirl* during the weather thematic unit.

> T: What would you *whirl*?
> S1:   My brother.
> *Everyone laughs.*
> T: You would *whirl* your brother? Why?
> S1:   Because he hold on to my leg.
> S2:   I would *whirl* a top.
> T: You would *whirl* a top, awesome.
> S3:   I would *whirl* a snake like a tornado.
> S4:   I would *whirl* myself.
> T: Do you know what you call that when you *whirl* yourself?
> S4:   Dizzy
> (Videotape transcript, October 2, 2007)

Student centered learning. Many of the vocabulary activities the teachers created were student centered. Meaning, the teachers acted as a facilitator while students shared leadership roles to collaborative on thematic projects. As students shared and discussed thematic topics and tasks in table groupings the teacher monitored learning when conferencing with the groups. Below, Ms. Bee shares below her decision-making process to orchestrate student centered learning activities using Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003).

> D-LEA was very new to me. I really enjoyed it, to hear my students put together the
> story. I tried to stay out of the text construction because I wanted it to be more of their

story than my story. At the beginning, I really had to guide them because they didn't know what they were doing. The hardest part was getting them all involved and getting them to share. At first, they were all off task, and not as focused but at the end it was so much better. With modeling and guiding them on where to go. Having them work in groups during the Weather Quiz, went well. Creating the emotion book in small groups was hard. I ended up printing off their picture. They had to write [what they wanted to say] then they came to me to tell me what to write. Keyboard was very frustrating [letting them use the keyboard to type text] because they worked on too many skills [hunting and pecking for letters, backspacing to correct spelling errors]. I think that is the most rewarding [creating D-LEA activities] because that is where I am seeing them use it [instructed Tier Two words]. (Videotape transcript, November 5 2007)

To orchestrate student centered learning engagements, Ms. Bee used table arrangements of 5-7 students with various ability levels and assigned group a thematic task. For example, during the weather thematic unit, groups collaborated to create a Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) class weather quiz book. Immediately following the instruction of the Tier Two words *vigorous*, *avoid*, and *whirl*, using Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) framework, Ms. Bee explained the quiz project to the students. Below, Ms. Bee's describes the process:

This week we are doing a quiz on weather. I will divide students into groups and have them draw a picture and come up with clues for a type of weather. I will then scan their drawings and add text later during Digital Language Experience Approach. (Reflective journal entry, dated October 5, 2007)

Later in the week, she clarified the process and reflected on its success in her reflective journal entry:

Today, I took my students to the computer lab. We did a web first. Students took their web to the computer to help write their clues. This was a great way for students to recycle their words. The students really jumped in and made their clues about weather. I had to coach some of them about how to work in a group or how to do something on the computer. I thought that overall, it went well. Next time I would let them play around with the word processing software and I would give them all jobs. (Reflective journal entry, October 4, 2007)

I observed the process of students co-constructing the text portion of their quiz page in the computer lab and jotted in my observational field notes, dated October 4, 2007:

The groups are mixed abilities, 3-4 students per group for a total of six groups. Groups are assigned one of the following: tornado, ice, rain, hurricane, thunder, or snowy. The tornado group composed seven sentences with no Tier Two words. The ice group constructed two sentences using no Tier Two words. The rain group included the Tier Two words *vigorous* and *whirl* in complete sentences. The hurricane group wrote five sentences and used the Tier Two words *whirl*, *dangerous* and *vigorous*.

Back in the classroom, Ms. Bee then worked with the groups to construct the final version. Table groups read their final drafts to her and she typed the group's words to a word document. Next, Ms. Bee scanned the group's illustration using the class printer to another word document page to complete the thematic unit's Digital Language Experience Approach Weather Quiz class book. Figure 4.4 shares the text created by the hurricane table group in the computer lab and the group's finished product.
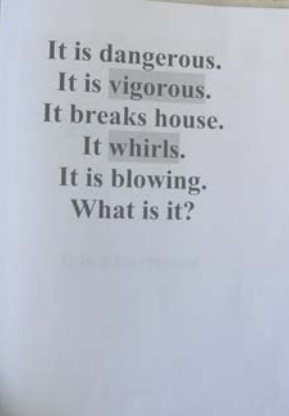
In Computer Lab Draft	D-LEA Quiz Page	D-LEA Quiz Answer and Drawing
It is dagrish It is vigorous Its bracing housc It is wroling It is bolling	It is dangerous. It is vigorous. It breaks house. It whirls. It is blowing. What is it?	It is a hurricane.

Figure 4.4. Table group weather quiz pages.

Ms. Bee found student centered learning an effective and efficient way to guide and scaffold students' oral production of Tier Two words during Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities. For example, Ms. Bee printed copies of the photographs taken during the week and assigned one per table grouping. Students collaborated about the content of the pictures then decided on text to describe the event. While groups collaborated, Ms. Bee held conferences with the groups to scaffold and extend their oral and text productions. After approximately 10 minutes, the class reassembled as a whole class to digitize the text for the book. As a group shares, the others view the photograph projected on the SMART Board and Ms. Bee quickly typed comments below the projected photograph. Students watched as their oral production has instantaneously appeared as text on the board. After a few pages, Ms. Bee and the class reread the text. Students confirm or make suggestions to modify the text.

The example below demonstrates how Ms. Bee used student centered learning during the co-constructed of a D-LEA activity. In this excerpt, the class is composing text for the final pages of the D-LEA class book, *How Pumpkins Grow*. In the example, the table group included

two previously instructed Tier Two words, *gazing* and *hoisted*. Figure 4.5 offers the completed

page created for the *How Pumpkins Grow* D-LEA class book.

> T: Okay now over here. What would your group like to say?
> S1:   Our friends were *gazing* in the pumpkin.
> *One student contributes the sentence from the partner talk group.*
> T: Okay
> *She types the words as stated. Students take turns reading from the paper.*
> S2:   And they are *hoisted* the top of the pumpkin.
> *She type sentence as stated. .*
> T: Okay. Good. What else?
> S3:   One day in our class, we got some of the pulp out of the pumpkin.
> *She types the sentence as read.*
> T: Does that tell about that picture? Is that what we did?
> Sts: Yes
> T: Could we name the class?
> Sts: Yes
> T: What should we say?
> S4:   Ms. Bee's class.
> T: Okay should I put it right here?
> *She uses the cursor to indicate the area to type the words, uses backspace to remove*
> *class and types the words Ms. Bee.*
> T: Okay, are you happy with that?
> Sts: Yes
> T: Okay, which group is next?
> (Videotape transcript, November 9, 2007)

Figure 4.5. How pumpkins grow D-LEA page.

Likewise, Ms. Adler also embraced student centered learning as an effective and efficient way to co-construct text for Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) class pages. However, Ms. Adler class constructed text as a whole group. Below, she describes her decision-making and co-construction of text for the apples thematic D-LEA culminating class books. She explains (Reflective journal entry, September 28, 2007):

> After I served the pie, we discussed how *scrumptious* it was, how we were going to *devour* it and not leave a *morsel*, etc. I took photos of the children, the pie, and the book. Our target skill for the week is retelling. I decided our D-LEA activity would be a book about apple week, describing the activities for each day. So, on Tuesday the students helped me add text to one page on which I had already inserted six pictures of the pie and the students eating/clearing up. I guided the students in beginning the text "On Monday. . ." and they chimed "we ate pie!" Then I glanced toward the words on the board and many of the students shouted, "It was *scrumptious*!" We proceeded to tell about cleaning-up, and my ELL student who has the lowest reading skills shouted, "We cleaned all the *morsels*!" It was great to see him so engaged. On Friday, we added text to the Apple Week book we've created. I set up the book to reflect each day's activities. I tied this into our target skill of retelling. I did not finish the book Friday afternoon as I had hoped because I ran out of time. We had a taste test for Friday's activities. We will complete that today. I exposed the children to a large amount of words. Each day's lesson seemed to call for it. Apple Pie day: words about eating, Honoring John Chapman Apple Statues/apple museum, words about character Apple Graph, more of a math discussion didn't really target extra words. Apple Taste Test: more descriptive adjectives.

The excerpt below documents how she used student centered learning to create text for the photograph of the students' engaged in an apple taste test. Noteworthy, it illustrates how Ms. Adler glanced at visual display (Lines 18-24) posted next to the SMART Board to entice students' use of the instructed Tier Two word *scrumptious*.

1	T:	Let's add some text to this page quickly so we can describe these activities for anybody that is reading the book. You all know exactly what this page is all about. All right, who is going to help with the sentences? Who is going to get us started? Look at the picture. What can we say about this day?
2	T:	What day was it?
3	S1:	Friday
4	T:	Do we want to start on Friday?
5	Sts:	Yes
6	T:	On Friday
7	S2:	On Friday
8	T:	Tell me the whole sentence.
9	S2:	We .
10	S3:	You need a space.

She forgot to type a space between the words on and Friday.

11	T:	Thank you. I am glad you noticed that.
12	S2:	We. . . we did. . . we had. . . a. . . apple test.

She types we had.

13	T:	Apple. . . what kind of
14	S4:	Taste test
15	T:	An apple taste test

She types 'an apple taste test' as the students say the words.

16	S4:	An apple taste test (Student is softly rereading the sentence.)
17	T:	Okay, next sentence.
18	S5:	They tasted good.
19	T:	Did they all taste good to you?

She glances up at the apple thematic chart after typing they tasted.

20	Sts:	Yes
22	S6:	The apples taste *scrumptious*.
23	T:	They all tasted?
24	Sts:	*Scrumptious*

She adds scrumptious to complete the sentence.
(Videotape transcript, October 2, 2007)

In the example above, Ms. Adler asked the students to view the photograph to jog their memories and retrieve language generated during the depicted event (Line 1). She thinks-aloud to share her thought process on ways to construct text to sequentially retell the events

surrounding the photograph (Line 2-7). She encouraged students to respond in complete sentences (Line 8). She scaffolded a student's response to clarify that the 'apple test' was an 'apple taste test' (Lines 12-16). She used a student's response of 'good' as a teachable moment to replace that known concept with a previously instructed Tier Two word *scrumptious* (Lines 18-24). To cognitively connect students to the new word and draw attention to the skill of writing with precision, she paused after a student said good (Line 18). She then glanced at the apples' thematic chart (Line 19) to guide students' replacement of good with *scrumptious* (Lines 19-24).

Lastly, Ms. Adler also offers a glimpse into her conception of *Stellaluna is Falling* D-LEA class book. She states (Reflective journal entry, October 25, 2007):

I came up with the idea about putting the branch of Stellaluna up on the loft and taking the pictures of the children trying to grasp, clutch, or hold Stellaluna that just came to me over night and in the morning so. I loved it. Taking the pictures went quicker then I thought. I am so glad I got those taken because I just spent the afternoon creating the book, putting the photographs in a book, and adding the text to it. I am adding all the text without the children's' help: one because of the time, two as you'll see the book tomorrow I am just trying to integrate so many skills, and I wanted to guide the text in this book.

Modeling and coaching. Modeling Tier Two words became a powerful instructional practice to mediate students use of instructed Tier Two words. Both teachers embraced various forms of modeling to assist their students in learning and using targeted words. For example, Ms. Bee became keenly aware of the power of modeling Tier Two words during her first week of tossing Tier Two words into classroom discussions. The example below demonstrates an

incidentally use of glum after the reading of a trade book during snack time to described a

character feeling happy.

> T: Right now at this moment do you think she is *glum*? Give me a thumbs up?
> T: Remember that *glum* means. . .
> S1: Sad
> T: Is she sad right now?
> *She shakes her head no.*
> S2: No
> T: I don't think so and we will stop there.
> T: I am *glum* on rainy days.
> *She closes the book and walks back to desk.*
> S3: I am not glum on rainy days because I getta watch movies.
> S4: I am glum. I can't play with my bike.
> (Videotape transcript, dated September 20, 2007)

After overhearing this exchange, Ms. Bee began to sprinkle instructed Tier Two words

into discussions routinely. She shared her decision-making during the third focus group meeting

(Videotape transcript, dated October 5, 2007):

> Actually, at first I had trouble with that [tossing words into conversations]. I didn't know
>
> how. I just notice that at first, I didn't do it as much and of course the kids didn't pick up
>
> [use the words] and then as I started to the students started relating experiences to
>
> themselves.

Ms. Adler found modeling and coaching an important ingredient to foster students

reproductions of Tier Two words during Digital Language Experience Approach (D-LEA; Labbo

et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities. In the excerpt below, students

are viewing a photograph of five class members pointing to a tree. The class captured the

photograph during a nature walk after recess during the adventurous thematic unit. Next to the

photograph, the teacher placed Smart Notebook Gallery (1995-2007) icons of a girl and boy to

portray the characters Sam and Stella from *Stella Fairy of the Forest* [Gay, 2006] and scaffold

students' photo-to-text connections. Ms. Adler guides responses through various questions and

quickly types students responses below the photograph projected on the SMART Board.

1   T: Should we start here?
She uses the cursor to point to the photograph and then to the left side of an empty text box..
2   Sts: Yes
3   T: How are we going to start? Let's think.
4   S1:   One day
5   T: Oh, oh [student], has a good start. She is saying one day. What were we doing?
She types one day.
6   S2:   One day we saw a caterpillar and a butterfly on the plants
She types we saw a caterpillar and a butterfly on the plants. When finished she uses the cursor to track the text while saying the typed words aloud.
7   T: One day. . .
8   S3:   One day kids. . . (Student counts the number of students in the photograph) ah four. . . five kids saw a butterfly and a caterpillar.
9   S4:   Sam talks [Sam and Stella are characters in *Stella Fairy of the Forest* (Gay, 2006].
Teacher pauses to give student time to think of a response.
10   T: Sam talked? Or what do they usually say in the books?
11   T: Sam said, what would Sam say?
She types Sam said.
12   T: He's being very *inquisitive*. He's being very *curious*. What would he say? What would he say?
13   S5:   What's that.
14   T: He would say, what's that?
15   Sts: No. Yeah (Disagreement is heard among student responses).
16   T: He could.
17   T: Sam said, "What's that?"
She says the words 'what's that' as she types them after the words Sam said.
18   S6:   Comma (A student notices the comma Ms. Adler has added after the word said.)
19   T: Would else would he say? Anything else?
20   S7:   What's, what's that Stella?
21   T: What's that Stella?
She types Stella.
22   S8:   Stella said, "It's a fairy."
23   T: Oh, it's a fairy. We found a fairy. Do you want to say it's a fairy?
24   Sts: Yeah
She types, Stella said "It's a fairy."
25   T: Oh, I love that. Stella said. What kind of voice would she say it in?
26   Sts: It's a fairy. (Students raise voices when saying fairy.)
27   T: It's a fairy. (She says with lots of exaggerated enthusiasm.)

28   T: Is that good for our first page?
29   Sts: Yeah
30   S10:   Can we read it over?
31   T: All right, let's read.
Students read the text as the teacher uses the mouse to track it. She doesn't read along with them. Students use lots of expression when reading the character parts placed in quotations.
32   T: Ah, love it! Is that a great first page? (She starts to applaud and the students join in clapping.)
33   Sts: Yes
34   T: Well, let's see what's next.
(Videotape transcript, September 20, 2007)

In the example above, Ms. Adler used the Tier Two words *inquisitive* and *curious* (Line 12), to model correct usage of the words and to elicit rich character analysis and discussion. One student made an association to the Tier Two words and the storybook character's inquisitive behavior by stating that the character might say, "What's that?" (Line 13). Ms. Adler confirmed the student's response by restating and typing it (Line 14). She again repeated her initial question to generate and continue the discussion (Line 19). Another student added "Stella" to make the description more precise (Line 20). As Ms. Adler confirmed the student's response (Line 21), it prompted another student to add, "It's a fairy" (Line 22). Ms. Adler requested clarity and acknowledged students' contributions as she quickly typed responses below the photograph projected to a SMART Board. During the process, she showed enthusiasm in students' contributions (Lines 25; 27; 32), modeled expressive reading behaviors (Lines 25-27) and modeled reading fluently when having students choral read completed text. Figure 4.6 shows this completed page for *Sam and Stella's Friends in the Woods* D-LEA class book.

One day we saw a butterfly and a
caterpillar on the plants. Sam said,
"What's that, Stella?"
Stella said, "It's a fairy!"

*Figure 4.6. S*am and Stella's friends in the woods D-LEA page.

Recycling and assessing learning. Ms. Bee began to use recycling as a way to encourage,

support, and assess students' use and learning of instructed Tier Two words during various

classroom activities. For example, after completing a Text Talk (Beck & McKeown, 2001; Beck

et al., 2002; McKeown & Beck, 2003) lesson with entice during her fairy tales unit, she

immediately offered the students an opportunity to share an experience using *entice*. She stated,

"Think about a time that you have experienced this and turn to a partner and share"

(Observational jot notes, September 24, 2007). As she listened to their responses, she quickly

assessed which students understood the concept and who needed more support. To provide the

support and to assist students in stating a complete sentence, she repeated this text pattern: "Say,

I would ____ because_____." She shared her beliefs about using partner talk to Ms. Adler

during the next focus group meeting. She stated (Videotape transcript, October 5, 2007):

I give them an example and then I get them to talk; that is a huge key in getting them to

learn the words. I realized this when I introduced the word convinced and we were doing

turn to a partner and share. They were like, "I *convinced* my mom that I could spend the

night at my friend's house." And so they really started to get it. And then I thought, my

concern is that they were not recycling these words.

Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et

al., 2000; Turbill, 2003) class books became a way to recycle (Labbo, Love, & Ryan, 2007)

previously instructed Tier Two words. Teachers sent the books home weekly and placed them in

class libraries. Students shared the books in whole group, in small group, with partners, and

individually. Ms. Bee kept each story in a separate notebook and displayed them on a shelf. Ms.

Adler used five three-ring binders to store a collection of ongoing stories. Figure 4.7 shows Ms.

Adler and Ms. Bee's unique ways to display class created D-LEA books.

Ms. Adler's Thematic Binder   **Ms. Bee's Notebook**
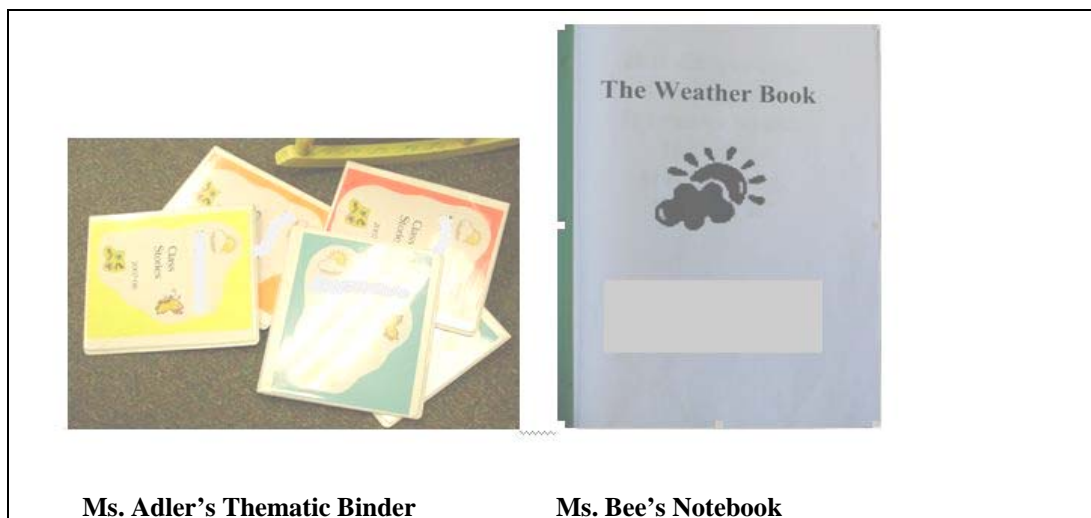
Figure 4.7. Ms. Adler's D-LEA notebooks and Ms. Bee's individual D-LEA binders.

Lastly, as I observed students working in small groups reading co-constructed Digital

Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000;

Turbill, 2003) pages, I note students' excitement in seeing and reading Tier Two words created

as text in D-LEA pages. Observation jot note, dated October 4, 2007, documented the following

D-LEA talk exchange between Ms. Adler and her students. Figure 4.8 contains the D-LEA page

students are reading.

> *Students are sitting on the floor huddled around a D-LEA notebook, rereading past*
> *Stella and the new apple week story. Ms. Adler is sitting in her rocking chair listening*
> *to students reading. She responds to the students as they notice Tier Two words.*
> S1: There's *devoured*!
> T: Right. *Devoured*.
> S2: I see *scrumptious*. It was *scrumptious*!

In this example, students are reading and responding to the text they created in the

Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al.,

2000; Turbill, 2003) class book similar to an aesthetic stance (Rosenblatt, 1982). The stance is

driven by the students' personal connection and ownership to the lived and documented

experience. Aesthetically, students are drawn to their co-construction of text, their involvement

in the photograph taking moment, and their viewing of themselves and peers in the photographs.

Further, students' personal investments in and familiarity with the co-construction of D-LEA text

helps to scaffold attempts to read words semantically, graphophonetically, and syntactically.

Further, these experiences support students' attempts to identify and reread instructed Tier Two

words embedded in the stories.

Motivation. Ms. Adler provided unique occasions to present Tier Two words using lively,

dramatic discussions. She found the practice of dramatizing Tier Two words a natural way to

engage students in the process of learning the words. Often, I heard exchanges similar to the

following in her classroom.

> T: Is it time for you to be brave and *daring* young adventurers.
> Sts: Yes
> T   Are you ready?
> Sts: Yes (Shouting loudly and excitedly)
> *She lifts her arms in the air and flexes her muscles.*
> Sts: YES!
> *She gazes at a pumpkin resting on her desk.*

T: Are you *curious* about the pumpkin?
T: We are going to *YANK* the seeds out of the pumpkin. Just *yank* them right out.
She exaggerates pulling seeds from the pumpkin. Her face is red and scrunched.
S: My dad *yanks* my teeth.
(Videotape transcript, October 29, 2007)

On Monday we ate a delicious apple pie!
It was scrumptious! Everyone devoured their pie.
Then we threw our plates away. We didn't leave
a single morsel on our desks.

Figure 4.8. Digital Language Experience Approach (D-LEA) page.

Below is an example that demonstrates how she motivated students in learning the Tier

Two words *glide* and *hover* during her soaring verbs thematic unit.

With her hand in the air, she pretends to throw an airplane while saying shoo.
T: What *glided*?
S1:   Hum, the paper airplane.
T: And the plane just *glided*, *glided*.
She lifts her arms in the air to demonstrate gliding.
S2:   I've got one [paper airplane].
T: We have an h word and I want to remind you of this word, *hover*. Isn't that crazy to have a word that describes flying still.
She pretends to glide with her arms stretch out then quickly lifts her palms with fingers spread apart to indicate becoming still.
T: Flying still
She repeats the motion with her arms moving then stops abruptly saying hover in a choppy voice.
T: *Hovering* usually means that something is staying in one place
She shakes her fist in the air.
S3:   But still flying.

T: Yes, but still flying.
S4: Flapping.
T: A machine that you might be very familiar with is a helicopter.
Sts: Yeah, yes
T: A helicopter is great at *hovering*.
S5: I've seen one.
She uses her index finger and starts to move it in circles.
T: That makes me think of another word.
T: Boys and girls, turn your eyes towards your favorite word up there
She encloses her fingers around her eyes like binoculars, turns, and looks at the chart.
T: It doesn't have to be the same as yesterday. My word changes like today I like to think about balloons. So my favorite word today would be *floating*.
S6: That was mine.
T: And *hovering* is so interesting to me because it means flying still
She again demonstrates with hands moving then stopping abruptly.
T: That is just a word that interests me.
T: Put your eyes on your favorite word for today
Students look at the chart. Some have their fingers around their eyes as though they are looking through binoculars.
T: Now turn and tell a neighbor what your choice is.
Students are heard saying mine is. . . let's see I like, I like, mine is, and .hovering.
T: Now, if you would carefully float to your desk. Are you going to *float* carefully?
Sts: Yes
Students start moving to their desks. Some students have arms stretched out pretending to float or fly.
T: Are you *floating* to your desk?
S1: Weeee
S2: I am flying.
S3: I went fast.
Students share with one another, describing how they went to their desk.
(Videotape transcripts, October 19, 2007).

Task management talk. Using Tier Two words as a review during task management talk also became a unique and natural routine in Ms. Adler's classroom. Vocabulary exchanges similar to the following were used to shift students to different subject topics and regroup them to other areas of the room. The following exchange occurred during the adventurous thematic unit and instruction of the two Tier Two words *reluctant* and *curious*.

T: Be very *cautious* coming down from the loft. I appreciate that Tom.
T: Look at Ben being so *cautious*.
T: Were you a little *reluctant* to come down [from the loft] because it looked a little scary? Are you okay?

(Videotape transcript, October 24, 2007)

Ms. Adler reflected on her first attempt to call students to the carpeted area after offering minimal instruction and exposure to the Tier Two words *reluctant* and *curious* during the adventurous thematic unit. She learned from the experience and adjusted how she included Tier Two words in future task management talks. She explains her decision-making (Reflective journal entry, September 18, 2007):

> To get them to the rocking chair area, I first asked students who were *curious* on the way to school to stand up. I wanted them to tell what they were *curious* about as a review of the words from yesterday. Asking them cold after one introduction to the words wasn't successful. Many children had difficulty and some began to confuse the concept with reluctant. I won't do that again until they become stronger with the words.

Drawing from this experience, Ms. Adler adapted Tier Two word task management talk to scaffold students' literacy learning. For example, during the apple thematic unit as she called students to the floor by the descriptive words written on their *admirable* apple statue signs, she observed an English Language Learner pondering over his Tier Two word. She used task management talk as a teachable moment to scaffold the student's growing understanding of sound letter associations. The following exchange demonstrates her process.

> T: *Fearless*. Do we have *fearless* apples?
> *She looks around the room at the students still left standing.*
> T: *Courageous*.
> *She watches a student look at the sign on his apple statue.*
> S1: Student looks at his sign and says, "I have *courageous*" (says softly to himself).
> T: What word have I not said? Stunning.
> S1: I have *courageous*.
> T: I believe you were *courageous*. Can you spell it for me? What did you write?
>   Student removes the sign from his apple. Holds it up to his face and reads the
>   letters, c. . .o. . .u. . .r. . .a. . .g. . . g. . .e. . .o. . .u. . .s.
> T: Let's see which word is that? It started with a c.
> S1: *Courageous*

T: *Courageous*! I think you have *courageous*.
Student smiles, puts the sign back into the apple, and joins the class sitting on the carpet.(Videotape transcript, October 28, 2007)

Lastly, the following task management talk exchange shows the effectiveness of integrating Tier Two words with task management routines. In the example below, the task management occasion provided several students with an opportunity to interact with and produce the Tier Two word soggy during the pumpkin thematic unit. In a matter of seconds, students produced 10 oral productions of the word.

T: If your feet are a little bit *soggy* you can come to the carpet area please.
S1: Ah, they are real *soggy*.
T: If your hair is a little bit *soggy* you may go to the carpeted area.
S2: Mine's *soggy*. It's wet that means it is *soggy*.
T: If you are not *soggy*, you may come to the carpet.
S3: Yes, I am not *soggy*.
S4: Nothing is *soggy*.
S5: If we are not *soggy*, come to the carpet.
S6: If you are not *soggy*.
S7: *Soggy*
S8: You are never *soggy* (Student says in an exaggerated, singsong voice).
(Videotape transcript, November 6, 2007)

Home school connections. Lastly, both teachers included targeted Tier Two words in weekly Newsletters sent home to parents. Ms. Bee shares her decision-making:

I put them [instructed Tier Two words] in my newsletter. I encourage them [students] to

go home and tell their parents. I tell the students, "You learned this word today, go home,

and tell your parents. They will think you are so smart if you use it.' (Focus group

videotape transcript, October 5, 2007):

The following example demonstrates how she created occasions to share the home-school experiences during snack time to strengthen students' understandings, build connections, and broaden their experiences with previously instructed Tier Two words.

T: Have any of you used your interesting words at home?

T: What did you use?
S1:   *Glum*
T: Did you explain it to mom and dad? What did they say?
S1:   They said what are you talking about?
She points to another student.
T: What did you use?
S2:   *Illuminate*. I was talking to my daddy about it was too bright in the kitchen because almost all the lights were on.
S3:   I used glum and she didn't know the word so I told her it meant sad.
(Videotape transcript, October 1, 2007).

Additionally, Ms. Adler created writing homework activities to extend home-school family connections. She explains (Reflection journal entry, October 4, 2007):

I'm going to try to use photograph of the word charts and creating a page that I can send home in their homework folder. I am not sure if I'll get it ready for next week but I want to make that family connection and get the family to use the words also to involve some writing and sentences but that will come later.

In sum, in this section I used categories that emerged from the qualitative data analysis to document why both teachers made particular decisions to create and use vocabulary activities. I also provided data to illustrate how the teachers implemented these decisions with the students when implementing *Walk Talk Words*. The teachers' decision-making processes and practices addressed in this section included active participation, prior knowledge, student centered learning, modeling and coaching, recycling and assessing, motivation, task management, and home-school connections.

Digital language experience approach and tier two instruction

This is Adler. It is Friday night, and I am driving to a football game. I wanted to let you know that we finished adding text to the pumpkin journals on the SMART Board, and I was just laughing. You will just have to go back and read it. I asked the children to go back and add a few sentences, and we didn't have time so I didn't go back and read the

list of Tier Two words on the board or review them. So we went to the pages where the children first discovered that the stems were growing. We added that, and they added sentences about being astonished and surprised. Then we got to the page with the picture of [student] showing his excitement with his mouth dropped open and his eyes popped open, and we described that. Then I said what would you like to add? A student said, "Holy sweet biscuits just like that to show his surprise". And I said, "Well, maybe holy isn't the best word to put in the book so how about just sweet biscuits. Then he shouted sweet biscuits when he saw his plants growing later in the day. (Reflective journal entry, November 9, 2007)

In this section, I provide and overview on how the teachers created Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) class books during the eight-week intervention phase of the study to culminate weekly thematic units. Below, first, I describe how the teachers utilized digital cameras to photograph and document Tier Two word events. Second, I share how the teachers used D-LEA as a culminating thematic activity and the types of D-LEA class books created across the 8-week intervention phase of the study.

Digital cameras to photograph and document tier two word events. Both teachers kept digital cameras on their desks during the day to capture students' engagements with thematic activities. All photographs in both classes were taken inside the classroom with the exception of the first thematic units. During Ms. Bee's first thematic unit on patriotism, she and the class strolled around the school to photograph areas the school community showed patriotism. For example, they photographed themselves *gazing* at the flag on the flagpole. During Ms. Adler's adventure thematic unit, the class took an adventurous nature walk around the school. She

positioned props such as two stuffed bears, a caterpillar, and a butterfly in bushes and trees. She

states, "After recess we rushed to various areas around the school taking pictures. I placed

students near a creature as if we discovered it on our nature walk." (Ms. Adler reflective journal

entry, dated September 18, 2007). Figure 4.9 highlights D-LEA photographing events.

Figure 4. 9. D-LEA photographing events.

During the apples and pumpkin thematic weeks, both teachers used digital cameras to

capture hands-on events such as eating apples, graphing apples by colors, or inspecting pumpkin

seeds for sprouts. During Ms. Adler's character development and Ms. Bee's emotions thematic

units, both teachers used cooperative groups comprised of 4-6 students to capture students

dramatizing instructed Tier Two words. For instance, the students' selected one scenario to tell

about a time they felt frustrated or discouraged at school, and also tell how they received

encouragement to overcome the frustration. Appendix K shows the steps the teachers followed to

complete a Digital Language Experience Approach pages for the emotions and character

development thematic units. Ms. Bee declined to follow the template; instead, she allowed her

students the freedom to create their own text on a sheet of paper.

Both teacher and students shared the responsibility of taking photographs with the class camera. Photo taking became a class routine that was quick and fast. The only routine established was asking the class who was interested in taking a picture. Parent volunteers working in the room often grabbed the camera and snapped pictures of the students and teachers engaged in a literacy event. Before or after school, the teachers imported the photographs from the camera's memory stick to a document page, sized, and cropped 1-6 photographs to a page. The number of photographs imported to a page varied weekly due to the nature of the thematic unit, activity, time constraints, and other complexities and realities of teaching.

Photographs taken during the emotions and character development thematic units were the only photo walk occasions used to create Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) class books that intentionally requested that the students focus on and reproduce instructed Tier Two words. For example, Ms. Adler provided the students with a template to scaffold students' oral production of the Tier Two words *frustrated*, *encouragement*, *advice*, and *discouraged*. All other photographed thematic events documented students' engagements in various activities and did not require immediate reproductions of Tier Two words.

D-LEA as a culminating thematic activity and books created. Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities served as the culminating event for weekly thematic units used to instruct Tier Two words. Both teachers projected photographs to the SMART Board as students sat in their desks facing the board. Fridays between 11:00 a.m.-11:30 a.m. during Writer's Workshop, the class created text for D-LEA activities. The class averaged co-constructing text for 2-4 D-LEA pages each Friday. Throughout the study and for each D-LEA book, the teachers typed students'

dictated responses to a word document page. Often, the teachers used extra time during the week to project class books to the SMART Board to complete unfinished D-LEA pages and to revisit completed D-LEA class books.

Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) culminating activities averaged one per week with the exception of week four that was used for standardized testing and week seven, which extended to week eight to accommodate all the pumpkin activities and festivities occurring before Thanksgiving. Each teacher created a total of six D-LEA class books during the intervention phase of the study that included fiction and nonfiction topics.

Ms. Adler and her class co-constructed the text as a whole class for all six books. Books ranged from two fiction to four nonfiction books. For nonfiction titles, photographs served as memory aids to document and retell hands-on thematic events. Nonfiction titles included, *Apples Week*, *Our Pumpkin Seed Journal*, *Stellaluna is Falling*, and *Words of Encouragement* and the fiction book title was *Sam and Stella's Friends in the Woods.* One fiction D-LEA class book contained students' illustrations and descriptions of themselves soaring and gliding, and was titled, *We're Soaring, Swooping, Gliding, Hovering, Whirling and Floating*! For this book, Ms. Adler scanned the student's writing activity using her printer, imported the work to a Microsoft Word (2002) document, printed the pages, and added them to the ongoing D-LEA class book. *Stellaluna is Falling* is the only class book that Ms. Adler created text for the photographs without the assistance of the students.

Five of Ms. Adler's Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) books were created using Smart Notebook software, and one was created using Microsoft Word PowerPoint (2003). The books ranged in length from

5-11 pages with an average of eight pages per book. Words per story ranged from 99-221 and included 0-20 Tier Two instructed words. Across the text created in the six class books, 8% were Tier Two instructed words. Figure 4.10 offers an example of a pumpkin page from the class book titled, *Our Pumpkin Seed Journal D-LEA class book*. Appendix L contains the text and Tier Two words used in D-LEA class books created by Ms. Adler's class across the 8 weeks of the intervention phase of the study.

Figure 4.10. Pumpkin seed journal D-LEA page.

Ms. Bee's class also created six thematic Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) class books. The following two were created with the whole class: *Red, White, and Blue: We are Patriotic* and *The Three Little Pigs* retold. However, as described in the *talk* with words section of this chapter, Ms. Bee often relied on partner talk to create D-LEA class book pages such as with the books: *The Weather Book*, *I Wonder How we Feel, How Pumpkins Grow*, and *Apple Week*. Four of her six class books were completed as nonfiction books that used photographs to retell and document the week's thematic hands-on events. One D-LEA class book was created as a retelling of a favorite

fairy tale and used illustrations downloaded from Ladybird Easy Reading Book *The Three Little Pigs* (http://math-www.uni-paderborn.de/~odenbach/pigs/pigs.html) website. Four of the D-LEA class books were created using Smart Notebook software (, and two were created using Microsoft Word PowerPoint (2003). The pages in the books ranged from 6-25 pages and averaged 11 pages per book. Words per book ranged from 150-537 and included 2-7 instructed Tier Two words. Across the text used to create the six D-LEA class books, 2% were Tier Two instructed words. Appendix M contains the text for the D-LEA class books created by Ms. Bee's class across the 8 weeks of the intervention phase of the study.

In sum, over the course of the eight-week *Walk Talk Words* intervention, each teacher completed six thematic units with Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) class books. They each taught 49 Tier Two words (not including word endings) and created various *Walk Talk Words* activities to enhance and assess student's production of Tier Two words.

I close this section sharing Ms. Adler's beliefs about the effects of creating and using Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) books with *Walk Talk Words* to improve first-grade students' vocabulary development. Ms. Adler states (Videotape transcript, November 5, 2007):

> The books we create are giving them a background that they don't have when they pick up any other book. It's a strong connection to the class book. It's a visual. It's about remembering how we created the book and the words that we used. It's a stronger connection because it is the background. Students have the whole experience in their minds. This gets their mind set in ways other books just do not do. That is a part of the picture. It's a different and stronger background connection.

Progress in Improving First-Grade Students' Vocabulary Development

In this section, I answer the second research question: What are the effects of *Walk Talk Words* on first grade students' vocabulary development? Through data analysis described earlier in Chapter 3 of this study, I identified activities that documented students' learning of instructed Tier Two words. First, I provide data that illustrates students' learning and use of instructed Tier Two words in written productions. Second, I share data that illustrations students' oral productions of Tier Two words during incidental talk occasions. Third, I discuss the results of the Peabody Picture Vocabulary Test Fourth Edition (PPVT-4) before and after intervention scores. Lastly, I share the results of the teacher designed and administered Tier Two Word Knowledge Assessment Instrument.

Written Productions

Ms. Bee and Ms. Adler created and offered occasions for their students to immediately use instructed Tier Two words in writing activities throughout the intervention phase of the study. The teachers also used the activities as a way to assess and monitor students' understanding and growing associations to newly instructed Tier Two concepts. In this section, I present data to document several of the activities that illustrate students' transfer of instructed Tier Two words to independent tasks. First, I present Ms. Adler's unique writing activities such as writer's workshop activities, literacy center, and homework templates before presenting Ms. Bee's writing engagements.

Ms. Adler's writers workshop activities. Ms. Adler fostered learning of Tier Two words *daily* through writing activities. She incorporated the words into Writers Workshop (Calkins, 2003), created literacy center activities, and uniquely designed homework templates using photographs of thematic charts to reinforce the learning of instructed words outside of school.

Further, she often supported students' use of Tier Two words posted on thematic charts by placing a tally mark next to the word to indicate and celebrate that it had been used in a writing assignment. Below, Ms. Adler states her decision-making to use a tallying strategy to encourage students' use of instructed Tier Two words. She states (Reflective journal entry, November 2, 2007):

> One strategy that I am using is to read the journals nightly and count the number of times certain words are used and then I come back with that report to the class the next today. That inspires them to include those words in the next day's writing and they were excited about the large number of times I see the words. Oh goodness, what were their favorite words. I can't remember if it was despised. I'll have to look at my numbers and then tallying them on the word chart as an inspiration to the children. I think the monotonous of using the word inspected or observed everyday was getting to them so when I return on Monday the words we will focus on will be to reflect the changes in the seeds. I am going to use astonished and I had to stop and think about the words I am going to use. I am going to use *astonished*, *incredible*, *gasp*, and a few more and the reason behind that is because of the purpose. I want them to use the words *astonished* and *gasp* and maybe *amazed* might be one but. At the same time, I will integrate Lucy Calkin's [2003] strategy to use the inside story to describe what a person looks like when their amazed and astonished instead of actually using those words. So, I have to combine the Lucy Calkin strategy with using the vocabulary.

Additionally, Ms. Adler integrated Lucy Calkin's (2003) inside story with a pumpkin thematic unit. After the weekend, the students had returned to school and found that the pumpkin seeds they had *yanked* from the pumpkin had *sprouted*. Ms. Adler used this occasion to move

beyond storybooks to teach five Tier Two words *astonish*, *gasp*, *incredible*, *inspected*, and *delighted*. Students viewed their *astonished* reflection in a mirror or had a neighbor describe their face as they *inspected* the seed's *enormous* growth. Figure 4.11 shows the pumpkin seeds *sprouting* roots and a writing sample that shows a student's use of the Tier Two word *astonished*.
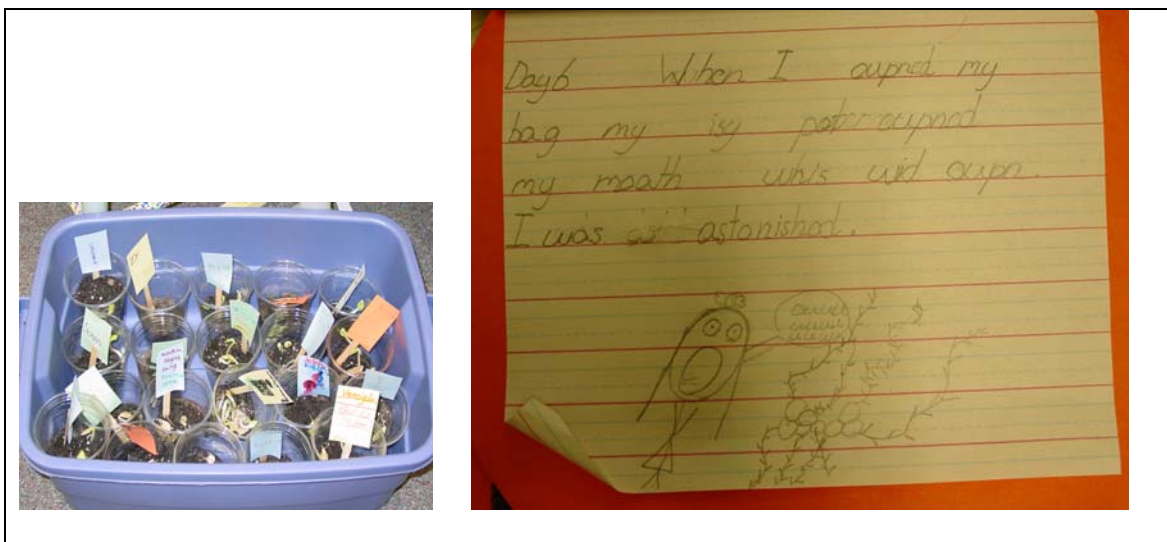

Figure 4.11. Pumpkin seeds sprouting roots and writing sample.

Literacy center writing activities. Weekly, Ms. Adler used Ten Super Sentences as a literacy center activity to reinforce and assess students' production of instructed Tier Two words. She posted the thematic unit's Tier Two words on a literacy center bulletin board and placed a small copy of the words in the students' center folders. Students were encouraged to use the Tier Two words in complete sentences with correct punctuation. Figure 4.12 is an example of Ten Super Sentences posted in the literacy center and an example of a student's written response. The student has included the three instructed Tier Two words *scrumptious*, *devour*, and *morsel*.

Homework templates. Creatively, Ms. Adler used photographs to create independent writing and homework activities. Figure 4.13 represents a sample of the type of photographs Ms. Adler used to extend writing activities. The writing assignment on the left includes a photograph of a student's *admirable* apple statue created during the apples thematic unit. An English

Language Learner used the photo as a visual aid to reproduce the Tier Two word *brave*. The

student's dictated sentences to the teacher are written below the students. The second example on

the right demonstrates how Ms. Adler used photographs taken of thematic Tier Two word charts

to create unique homework activities. This example shows the emotions word chart on the left, a

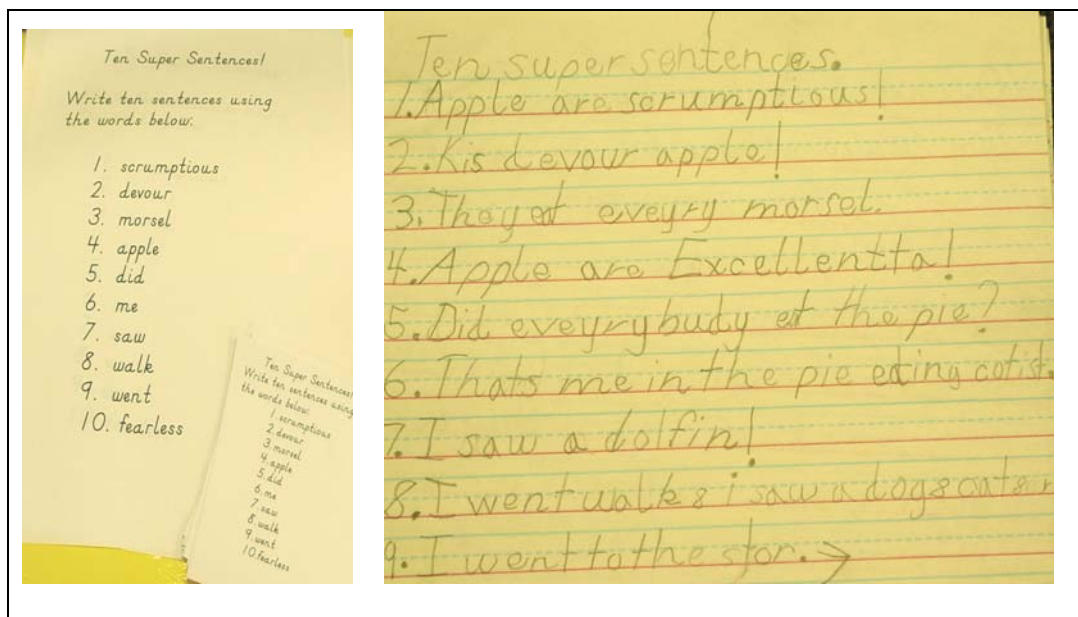space for a student illustration on the right, and lines below for composing sentences.

Figure 4.12. Ten super sentences and student written response.
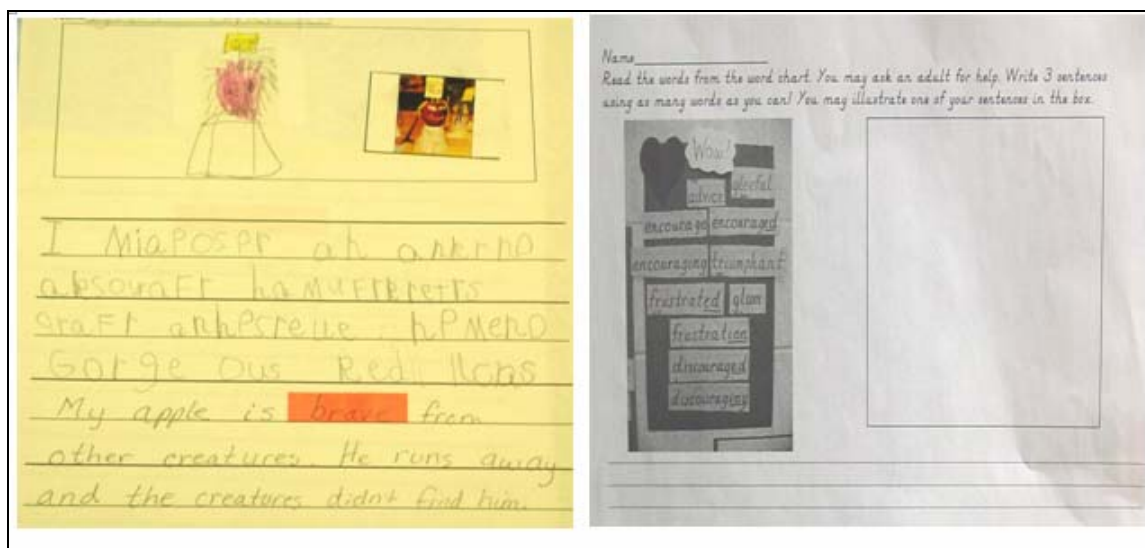
Figure 4.13 Photographs used to extend writing activities.

Ms. Bee's writing engagements. Bee offered two writing activities per week to encourage students' written production of instructed Tier Two words. These writing activities varied by week and were included in literacy centers, writer's workshop, and as extension activities across the content areas. For example, to support students' learning and use of the Tier Two words instructed during the weather unit, she created a writing template that included a Tier Two Word bank. Students referenced the word bank to select Tier Two words to describe a weather experience. During the pumpkin unit and for other writing activities, students referenced the class Tier Two Word Wall to include and spell correctly previously instructed Tier Two words. Figure 4.14 offers an example of the types of writing activities offered in Ms. Bee's class. The figure shows the weather template and the student's use of the five instructed Tier Two words *gaze*, *gloomy*, *illuminates*, *soggy*, and *frigid*. It also shows a page from a different student's pumpkin writing journal, and the student's use of the Tier Two word plump to describe his pumpkin seed.
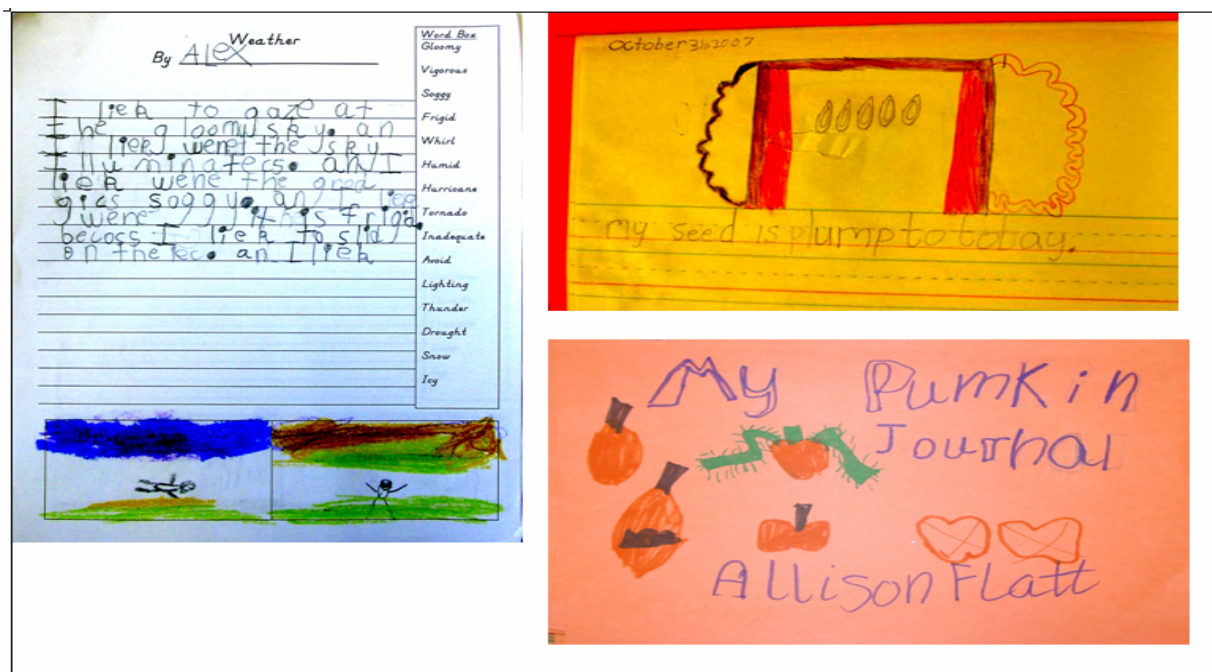

Figure 4.14. Weather template and pumpkin writing journal.

Incidental Talk

As the intervention progressed, both teachers documented several occasion that the students were using instructed Tier Two words beyond *Walk Talk Words* lessons. In this section, I share some of those moments.

The following data demonstrates how Ms. Adler used incidental vocabulary talk to engage students' oral productions of Tier Two words with everyday events. After recess, the following conversation occurred back in the classroom as students were settling down at their desks. Ms. Adler had instructed the Tier Two word *swoop* during the soaring verb thematic unit

T: Did you see some birds *soar* out on the playground? They *soared* a lot.
T: Then there was a s w o o p, *swoop*.
S1:   *Swoop*
A few students are making whistling sounds while adding hand movements.
T: *Swoop* means there's some additional movement.
She lifts her arm to demonstrate the movement.
T: Usually that looks like a bird going down and then back up. Or it
        could be an airplane.
Ms. Adler demonstrates gain the swooping motion to the students. Several students move in the same way mimicking how her arms lifted and dropped in the air. Two students get on their knees and demonstrate a swooping motion. Many students are making swishing air noises with their mouths.
S2:   My mom is going to New York.
T: Is she going to *swoop*?
S2:   Yep, and in a plane!
T: She is going to *soar* in a plane?
S3:   I'm going to *soar* on a plane.
T: You are going to *soar*? Where are you going?
S3:   California.
T: California, uh?
(Videotape transcript, October 18, 2007)

Ms. Adler reflects on her excitement when hearing a student spontaneously produces a Tier Two word during an informal conversation when telling about a personal moment.

When I started the lesson this morning, I went to the illustrations of *Stellaluna* [Cannon,

1993] because I wanted to set up the [writing] activity. I was delightfully surprised when

they started giving various examples of what they would *clutch* and hold. Vanna said, I

will *clutch* my mom when I hug her. Another student said, my mom *clutches* me when I

hug her. I enjoyed hearing their examples. They did really well with that. (Reflective

journal entry, October 25, 2007)

Further, the example below documents a student's attempt to use a Tier Two word during

a book discussion to describe a story character.

Today, we talked about how *Caramba* [Gay, 2005] was triumphant and in the middle of

that a student who loves to use our targeted words especially the word *gleeful* he used

that so many times in the past week made up a new word. He wanted to say that

Caramba was *gleeful* when he was triumphant but he said yeah, "*Caramba* was glumful."

He put glum and gleeful together and came up with glumful. It was a fun moment. I

looked at him and he quickly realized that he said the wrong thing and laughed at himself

and changed it to *gleeful*. It was just really a nice moment. Glumful! (Reflective journal

entry, October 4, 2007)

The final reflection involves the class in volunteering previously instructed Tier Two

words during a guidance counselor's lesson on empathy.

Today the counselor was in the room doing her lesson on How do I Show Empathy. I had

to return to the room for some materials. This week I had read, *Alexander and the*

Terrible Horrible No Good Day [Viorst, 1987] and I was contrasting that with *Stand Tall*

Molly Lou Brown [Lovell, 2001]. Molly is so confident and *gleeful* and Alexander is so

glum, *frustrated*, and *discouraged*. We had up on the board, Molly Lou-*encouraged* by

her grandmother who had given her some advice. She was *gleeful* and all that. Alexander

had *discouraged* and *frustrated* and *glum*. So the counselor holds up these pictures of

these girls, one was very *gleeful* and the other one was very *glum*. One child started

describing them. Somebody said she looks very *frustrated*. He looks very *discouraged*.

And the counselor just went WOW those are really juicy words. And they all just started

holding up their hands saying that one can be very *glum*. They just started using all the

words and even used others that just came up from a previous week like ecstatic from *A*

Dear Diary of a Worm [Cronin, 2003]. (Reflective journal entry, dated, October 5, 2007)

Ms. Bee also observed incidental talk moments. The following are two occasions when she heard

students using instructed Tier Two words during unstructured classroom time.

We graphed our favorite kind [type of apple] on the SMART Board. This was a great

activity. We discussed if students were going to *nibble* or *devour* their apples. I could

really hear the students talk to each other about how they were going to eat theirs. One

said that they were going to *nibble* like a rabbit. One said that they were going to *devour*

theirs because they loved apples. Another said asked something about "no *morsels*?"

(Reflective journal entry, October 17, 2007)

Lastly, the following example documents Ms. Bee's conversations with students and the students

recycling of the previously instructed Tier Two words *avoid* and *illuminate*. She shares:

Today, we were headed to the buses and a student said that we need to *avoid* the puddles.

Another said that the puddles *illuminate*. I told him I wasn't sure what he meant. He said

that the sun lights them up. (Videotape transcript, November 5, 2007)

Peabody Picture Vocabulary Test Before Intervention and After Intervention Scores

In this study, students were group according to the stanine scores earned on the Peabody

Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007). I arranged students

according to these scores to understand if any change occurred in vocabulary knowledge after

participating in the intervention. I grouped students with stanine scores of 1-3 as performing below ability level, students earning stanine scores of 4-6 as performing on ability level, and students earning stanine scores of 7-9 as performing above ability level.

Students' pre intervention stanine scores indicated that both classes were approximately equal in the number of students performing below, on, and above on entry-level vocabulary knowledge. Posttest intervention stanine scores indicated that Ms. Bee had 43% of her students move up one stanine. Two of these students were English Language Learners initially performing below ability level as indicated by stanine scores on the PPVT-4 pretest. One of the English Language Learners showed an increase of two stanines. Fifty percent of the students remained the same, and one student dropped one stanine. This increase in stanine scores is notable due to the short duration of the eight-week intervention. Labbo, Love, and Ryan (2007) reported impressive gains on Peabody Picture Vocabulary Test III stanine scores after K-2 students received a four-month vocabulary intervention. In this study, students' before intervention PPVT-III stanine scores indicated that only 13% of the students were performing on or above the 5th stanine before the vocabulary intervention. However, after intervention scores showed that 39% of the students moved to or above the 5th stanine, indicating a gain of 26% in receptive vocabulary growth.

According to ability levels, Ms. Bee had 14% of her students performing below ability level before the intervention and 0% performing below ability level after the intervention. Fifty percent of the students were performing on ability level before the intervention and 64% after the intervention. Lastly, 36% of the students were performing above entry vocabulary levels before intervention and 36% after the intervention.

In Ms. Adler's class, after intervention scores indicate that 47% of the students moved up a stanine. Three of these students were English Language Learners performing below ability level as indicated by the PPVT-4 pretest. One of the English Language Learners moved up two stanines. Forty-seven percent of the students remained the same and one student dropped a stanine. According to ability level, 20% of Ms. Adler's students were performing below entry vocabulary ability levels before the intervention and 6% after the intervention. Forty-seven percent of the students were performing on ability level before intervention with 47% performing on ability after the intervention. Thirty-three percent of the students were performing above ability level with 47% performing above ability level after the intervention. Table 4.6 presents the mean standard scores on the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007) before and after the *Walk Talk Words* intervention for Ms. Adler and Ms. Bee's students.

Table 4.6

Mean PPVT-4 Standard Scores Before and After Intervention

Characteristic	Before			After		
Ms. Adler PPVT-4	Below	On	Above	Below	On	Above
Mean Standard Score	82.66	101.85	119	83	98.71	120
(SD)	(5.50)	(6.03)	(6)	(6.80)	(6.12)	(6.14)
(Boys, girls)	(1,2)	(1,6)	(3,2)	(0,1)	(2,5)	(3,4)
N=15						
Ms. Bee PPVT-4						
Mean Standard Score	82	102.14	118.2	(0)	101.55	122
(SD)	(7.07)	(7.88)	(5.40)	(0)	(8.80)	(5.43)
(Boys, girls)	(1,1)	(3,4)	(2,3)	(0)	(4,5)	(2,3)
N=14						

Teacher Created Tier Two Word Knowledge Assessment Instrument Results

Both teachers administered two teacher created Tier Two word knowledge assessment instruments during the intervention phase of the study to understand the effects of their instruction on students' learning of instructed Tier Two words.

The results of the Tier Two Word Knowledge Assessment Instruments indicate that the first-grader students in Ms. Adler's class learned 81% of the instructed Tier Two words taught across the eight weeks of the intervention phase of the study. The students in Ms. Bee' class learned 74% of the instructed Tier Two words. Students seemed to demonstrate learning more Tier Two words when the words were included in Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities. For instance, Ms. Adler's students learned 90% of Tier Two words when the words were included in D-LEA activities and learned 72% of the words when instructed but not included in D-LEA activities. In Ms. Bee's class, the student learned 82% of the instructed Tier Two words when the words were included in D-LEA activities and learned 65% of the words when instructed but not included in D-LEA activities. Table 4.7 shows the mean scores for the two Tier Two Word Knowledge Assessment Instruments administered to the students by each teacher during the intervention phase of the study. The table shows scores according to total words assessed, total words used in D-LEA activities, and total words instructed but not used in D-LEA activities.

Table 4.7

Mean Scores for Tier Two Word Knowledge Assessment Instrument

	Total Words Instructed D-LEA	Total Words Instructed No D-LEA	Total Words Instructed
Ms. Adler	90%	72%	81%
Ms. Bee	82%	65%	74%

There were differences between the two classes in the number of Tier Two words students learned. Ms. Adler's students showed a 7% increase in total Tier Two words learned over Ms. Bee's students. Further, Ms. Adler's students showed a 7% increase in Tier Two words taught but not included in Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities over Ms. Bee's students and an 8% increase in Tier Two words presented in D-LEA activities over Ms. Bee's students.

Undoubtedly, there was some variation in number of Tier Two words learned by the students' in the two different classes. Data evidence collected from the teachers' *Walk Talk Words* lesson plans, reflective journal entries, and observational field notes revealed that Ms. Adler included 59% of her instructed Tier Two words in Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities while Ms. Bee's included only 35% of her instructed Tier Two words. This difference of 24% may be influential in students' acquisition of Tier Two words in at least two ways. First, Ms. Adler questioning technique and referencing to the Tier Two word charts seemed to guided students' oral production of Tier Two words during their co-construction of D-LEA text. Second, D-LEA class books were printed and placed in the classroom libraries and sent home to share with parents. Thus, students in Ms. Adler's class were likely to receive additional exposure to the extra inclusion of Tier Two words in D-LEA activities. This exposure seemed to enhance the students' receptive and expressive productions and learning of the words. Further, the students in Ms. Adler's class received more instruction per word compared to instruction offered per word in Ms. Bee class. For instance, Ms. Adler's students completed daily Tier Two thematic chart reviews, daily writing extension activities, occasional Tier Two word homework assignments,

and weekly completed a Ten Super Sentences literacy center activities that included instructed Tier Two words.

Table 4.8 shows student performance scores by stanine levels on the teacher created Tier Two Word Knowledge Assessment Instruments according to the total number of instructed Tier Two words included in Digital Language Experience Approach activities (D-LEA) and total number of Tier Two words instructed but not included in D-LEA activities (No D-LEA) across the 8 weeks of the intervention phase of the study. In both classes, the data indicates that the students performing on ability level demonstrated learning more instructed Tier Two words when words were presented in D-LEA activities. A closer examination of the data reveals no clear evidence to explain the difference. One noteworthy difference exists between the two classes in the two groups performing below ability level; Ms. Adler's below ability group outperformed Ms. Bee's below ability group by a considerable margin on the number of Tier Two words presented in D-LEA activities over the course of the intervention. Yet, Ms. Bee's below ability students moved to an on ability level after the intervention phase of the study as demonstrated on their PPVT-4 posttest stanine scores.

In sum, with direct instruction of Tier Two words through various *walk* and *talk* activities that included recycling and multiple exposure to instructed Tier Two words, students acquired and demonstrated learning a large percentage of the instructed Tier Two words across the 8 weeks of the intervention phase of the study. However, students demonstrated learning more words when the words were used in D-LEA class activities and books.

Table 4.8

Results of Ms. Adler and Ms. Bee's Tier Two Word Knowledge Assessment
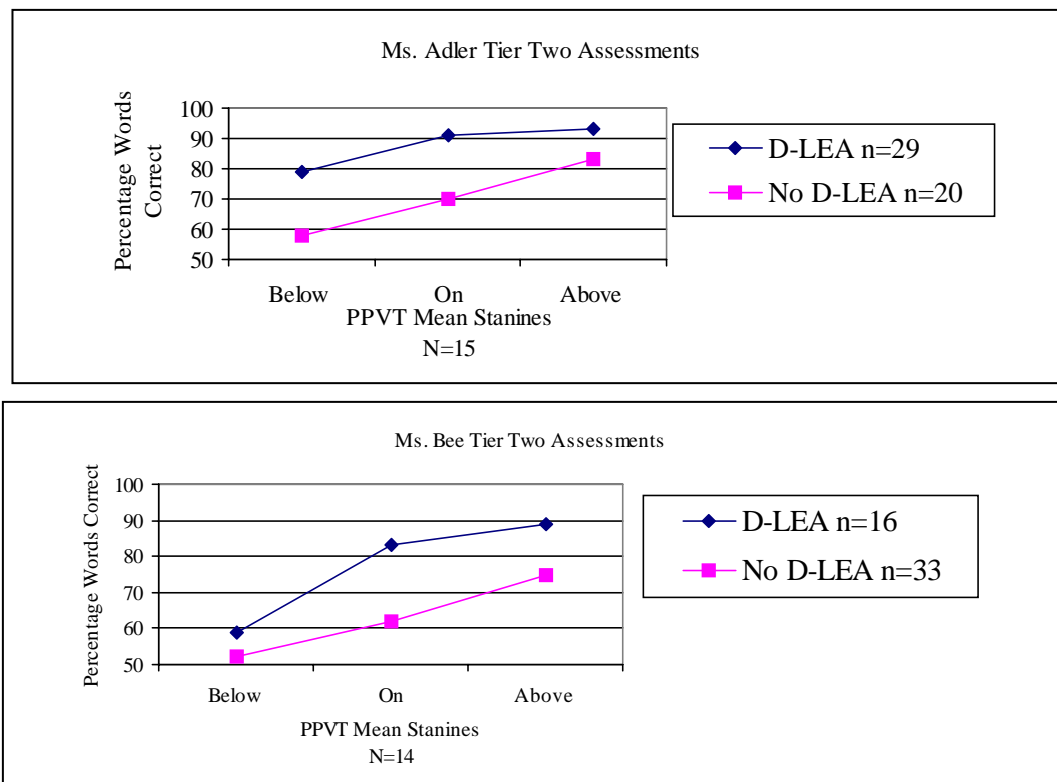
Inhibiting, Enhancing, and Modifying Factors

Six characteristics are unique to the design, conducting, and reporting a formative experiment (Reinking &Watson, 2000). The six characteristics include (a) establishing a pedagogical goal based in theory, (b) implementing an intervention to achieve the pedagogical goal, (c) collecting data to identify factors enhancing or inhibiting the ability to achieve the pedagogical goal, (d) modifying the intervention based on unanticipated factors, (e) noting how the intervention changes the classroom environment, and (f) determining positive and negative unanticipated effects of the intervention. In this section, I draw from data findings following the

inductive analysis process explained in Chapter 3 of this study to address the following two characteristics:

1. Identify factors enhancing or inhibiting the ability to achieve the pedagogical goal.

2. Modifying the intervention based on unanticipated factors.

Below, I present data that documents one factor, time constraints that inhibited meeting the goal of the study. Second, I address one modification, students' oral production of Tier Two words during Digital Language Experience Approach activities, that was made to the intervention to better achieve the pedagogical goal of the study. Lastly, I share one factor, access to digital equipment, which enhanced meeting the goal of the study to improve first-grade students' vocabulary development.

Inhibiting Factors

As the intervention progressed, time constraints due to county and state requirements affected and limited teachers' original notion of the amount of time needed to implement the *Walk Talk Words* intervention. When the intervention started a few weeks into a new school year, teachers spent their mornings administering beginning of the year assessments. Adhering to a classroom schedule was flexible as the administration continually reassigned students to different rooms to balance enrollment. By the end of the third week of implementation, the year was in full swing. The math coach monitored the teachers' scheduling of calendar time each day for 30 minutes. The literacy coach strongly recommended that teachers suspend snack time and morning bathroom breaks to lengthen Writer's Workshop (Calkins, 2003). Administration required the teachers to meet with each student for 15 minutes a day for guided reading instruction (Fountas & Pinnell, 1996). While the teachers had 50 minutes in the afternoon

everyday for planning, one day a week the teachers met with the literacy coach and on another day, they met with a math coach.

Further, complicating the matter, Team Time Target Time had started between 9:30 a.m.-10:00 a.m. three mornings a week. During this time period, students rotated to different teachers to receive enrichment or reinforcement literacy lessons based on weekly benchmark assessments. By this time, the teachers had spent two full weeks implementing *Walk Talk Words*, making adjustments to integrate it with their plans and schedules. Ms. Adler notes her frustration (Reflective journal entry, October 22, 2007):

> This week it will be even more difficult [implementing Walk Talk Words] because we're officially starting team time as a grade level and right now I have scheduled between 9:00 a.m. and 9:30 a.m. to do my *Walk Talk Words*. But I am also suppose to be finishing calendar and getting my lunch count in so that is going to be a little bit of a stressor. I could incorporate it during writing workshop but I am frustrated because I also haven't used a lot of the Lucy Calkin [2003] strategies to develop small moments for the students to be writing their own personal narratives so that is a little bit of a concern with me.

Ms. Adler wrote later in the week (Reflective journal entry, dated October 25, 2007):

> It turned out to be just a four-day week, and I only have really less then 30 minutes a day to do this. So I decided to go with the synonyms and I really, I can't remember what I talked about on the last taping where you heard my frustration about the time, but I want you to know that my frustration about time is not with my *Walk Talk Words* activities. I am frustrated because I am required to, the other mandates are just getting in the way of the activities that I want to do with *Walk Talk Words* and hum. . . the vocabulary I wish I

could do them all day long, and I would just continue to try to perfect, not perfect but try

to make it more effective.

Both teachers struggled with balancing time constraints especially when teachable moments

arose. Ms. Adler shared her concerns in a reflective journal entry (Reflective journal entry,

October 26, 2007):

I had intended to target so many more words in regards to flying from the *Caramba* [Gay,

2005] book, and I just off hand, while the students were doing their silent reading in the

morning just said look for illustrations of *soaring*. I've used that book search in recent

years so many times, and I have never had the response I had yesterday to illustrations

about soaring. When I called the students to the carpet, I expected about 5 or 6 children to

have something to show. Every child walked to the carpet area with a book. Some of

them had multiple examples of the word soaring to show. I had truly was just looking at

them coming to the carpet going "oh my gash." I let every child share. I now know if I

want it to be more efficient with my time I could have used that strategy to turn to your

partner to show what you found but I loved every minute of hearing them share. What

was frustrating about the lesson is just the time involved. I think these are absolutely

important lessons. I am trying my best to be very efficient with my instruction. With that

said, children need time to work on their creations. To work on their illustration and put

more details in their work to their writings and I am just truly feeling the time pressure.

During an informal conversation we had later in the week, Ms. Adler stated,

I want to do this all day long [extending time to enrich *Walk Talk Words* learning

activities] but I can't. Students need practice and drill on testing taking skills. I try to

integrate [the words] but they need test talking practice (Observational, jot note, October 29, 2007).

Time constraints inhibited how Ms. Bee recycled her instructed Tier Two words. During the second week of implementing the intervention, she realized that recycling of the words was key and shared her decision-making process to modify the number of Tier Two words instructed to have more time for students to recycle previously instructed words. Previously, researchers make note of the importance of supporting students' abilities to recycle targeted vocabulary words (Labbo, Love, & Ryan, 2007). In a reflective journal entry, Ms. Bee states her concerns (Reflective journal entry, September 2, 2007):

I think that we need to practice our words more. I am having a hard time finding the time to recycle the words. I know that the words I have picked our more difficult to recycle. Recycling is the key I feel to making sure the students understand the words and that they learn them. To solve my problem, I am going to reduce the amount of words I introduce a week and add in more time to explore our words that are already on our Word Wall. I need to try and slide them in during the day as much as I can. That is a big challenge.

Ms. Bee consistently struggled to recycle the words and creatively adjusted other curricular areas to accomplish this goal. In a reflective journal entry dated, October 5, 2007, she writes, "I am still finding it difficult to find time to recycle words that I have introduced. I have had to be more creative and add them to my reading groups and discuss them during snack time." However, she struggled with sacrificing Snack Time Talk to meet other obligations. In her reflective journal entry, dated October 22, 2007, she writes:

I still see that recycling words is still an issue. When do you have time to fit it in? I used to sneak it in during snack time, but I changed my schedule so that I have a bigger

writing time. I am having a difficult time finding time to bring these words back into our

conversations. I might try to use the time before recess to talk about them. We will see.

Ms. Adler weekly demonstrated her frustration with time constraints. She enjoyed

teaching and recognized the importance in moving slowly with children when teaching so

students learned. She states (Reflective journal entry, November 2, 2007):

I could do that all day long because there are so many skills that you incorporate when

you do conferencing during their writing. I am trying my best to be very efficient with

my instruction. With that said, children need time to work on their creations. To work on

their illustration and put more details in their work to their writings and I am just feeling

time pressure.

Time constraints limited her plans for creating D-LEA activities. She elaborates (Reflective

journal entry, October 15, 2007):

I did not finish the D-LEA from last week. I took photographs of their writings on Friday

and hoped to compile them into a book this weekend but didn't get to do that. I am

thinking quickly dump all those pictures into a PowerPoint and maybe I can print it there.

It would be easier than doing one by one into SMART Book pages. Maybe I can get a

book printed that way.

To save time, Ms. Adler created the text for the *Stellaluna is Falling* D-LEA class book,

but felt the lack of student participation diminished the positive learning effects of the experience

for the students. Time constraints prevented her from investigating this hunch further. She states

(Reflective journal entry, October 23, 2007):

I want to assemble guided reading groups and listen to them read the books we have

made and see how that goes. We didn't have time, I didn't have to observe them reading

the stories at length and to see their reactions. I am not sure that, I really need to sit down with them because I am not sure about I want to see if their connection to the story [D-LEA *Stellaluna* class story] is meaningful and strong because they didn't create the text all they did was participate in the pictures so that will be interesting to see.

Lastly, Ms. Adler found the lack of modeling impaired the process and students' products. Meaning, to prepare for Parent Teacher Conference, she eliminated modeling and having the students produce other contexts with Tier Two words. The results were noticeable in the students' written work that day in comparison to days when she took the time to discuss Tier Two words. Ms. Adler was disappointed, frustrated, and now needed to use precious time to reteach the Tier Two word *despise*. She states (Reflective journal entry, September 24, 2007):

Today, I started the pumpkin seed journals. I know this sounds like a broken record but I am frustrated because of the timing problem and here's the timing problem. I wasn't as prepared for that lesson as I wanted to be and it didn't flow as I wanted it to flow. I If I didn't have to stop at 10:00 to start Guided Reading which is doing running records as preparation for parent conferences, I would have continued with a better segment on sentence writing using those words. I know I didn't do it properly today. I am really understanding the value of modeling sentences, and I remember how at the beginning of this we looked at the sentence structure on the 10 Super Sentences. The sentence structure was so much more complex. If I model complex sentences using the vocabulary words, I believe the students do use that type of sentence structure after they hear it from me. But it is after I have done it a few times with the words. So I wish I had done that with despise that would have been the word to focus on. But, I was just sliding it in their backwards actually. I looked through the pumpkin journals this afternoon. The sentences

are terrible. The pages are terrible. I get a few that I was pleased with but even their

handwriting is not neat. So not watching over them over the process was I think

contributing to that. So tomorrow, I may have to back it up and ask them to do that page

over again and redo Text Talk with despise again.

In sum, both teachers recognized the value of student-directed lessons and the importance

of time and hands-on participation for student learning to occur. However, the realities of

teaching do exist and they are complex. As the data evidence above indicates, the teachers

balanced planning, assessments, meeting parents, literacy coaches, math coaches, and district

mandates such as Team Time Target Time to prepare students to meet Adequate Yearly Progress

benchmarks as mandated by No Child Left Behind. In the realities of today's classrooms, any

additional instructional requests will become an add-on to a busy day, taking limited and

valuable time from something else. Both teachers added the implementation of *Walk Talk Words*

to a heavy instructional load, yet orchestrated numerous ways to integrate it through thematic

units. Some weeks they limited the number of Tier Two words instructed, took less photographs,

and incorporated less pages into a Digital Language Experience Approach Class book. In the

section "change to classroom environment" in Chapter 5, I share ways the teachers planned to

integrate *Walk Talk Words* into curricular areas beyond participation in this study.

Modifications to the Intervention

One direct and unresolved modification continued throughout the intervention. The

teachers grappled with ways to maximize students' oral production of Tier Two words during

Digital Language Experience Approach (D-LEA) co-construction of text. Initially, Ms. Adler

grappled with the number of Tier Two words to incorporate in Digital Language Experience

Approach activities. She states (Reflective journal entry, September 18, 2007:

But how and how many words and concepts will be incorporated in out D-LEA? I've changed my "vision" of m D-LEA every day that I think about it. I don't have it clear in my head how the children will incorporate the words I've targeted into the text of our story. I'll have to guide them on that tomorrow morning, but it will be interesting to see if they incorporate them on their own.

To overcome time constraint so she could meet all curricular requirements and because visuals projected on the class SMART Board naturally engaged and captured all students' attention, Ms. Adler choose to co-constructing text for photographs with the whole class. To accomplish this, she limited the number of photographs per Digital Language Experience Approach class book page. However, she grappled with ways to guide student's production of Tier Two words to narrate the photographs. Ms. Adler explains (Reflective journal entry, September 21, 2007):

As we started the process of adding text, I tried to guide them to tell the story using an appropriate beginning - ending but their writing workshop skills are at various levels. I pushed through adding text to all four pages. But the combination of off-task behaviors from students who weren't participating and the excitement from those who eagerly shouted out their contributions made it a noisy, messy experience, somewhat. We didn't incorporate other targeted concepts: *reluctant*, *daring*, *fearless*. How could I change that? I could have guided the students to switch to a new concept for each page. Ex: on this page, how can we show Sam is *reluctant*?

Her grappling continued the following week. On her *Walk Talk Words* lesson plan, dated September 28, 2007, she writes, "What needs modifying and tell why? Time and adding text to

book. I'm not sure if this is handled best as a whole group activity. Perhaps I should do this in small groups."

Ms. Bee found she incorporated too many skills and used too many pages when creating Digital Language Experience Approach activities class books. The focus on the initial purpose for the thematic unit became lost. She stated (Videotape transcript, October 5, 2007):

I know with *The Three Little Pigs*, I did a long book. It was just so very hard because we had to go through so much and 'what's the spelling of that'. I had to say okay that's it. I am cutting my losses. But I thought maybe with a shorter book, and I thought about maybe pulling small groups because that is a reading activity. You are reading and stepping them though it.

Ms. Adler contributed later in the conversation stating (Videotape transcript, October 5, 2007):

Maybe we can have them turn to partner, that is engaging for them. Maybe, we could show them a picture and say turn to your table group, and I want you to talk about these pictures. Then use the pictures to think about using all the *Walk Talk Words*. We could make a think sheet and get them to contribute.

As a modification to attempt to solve the problem, Ms. Bee did print the photographs and passed them to table groups. The groups collaborated and suggested text to describe and narrate a photograph. While she found this practice effective, the students still did not naturally produce the instructed Tier Two words. However, both teachers found incorporating Tier Two words used with hands-on thematic units such as the pumpkin and apples units much easier for guiding student's production of Tier Two words during Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities. During the Fourth

Focus Group Meeting, dated November 5, 2007, Ms. Bee stated, "…because we are capturing

the actual experience and they have ownership to it to and it makes it a stronger link for them."

Over the course of the implementation phase of the study, Ms. Adler found success in

glancing at a thematic chart when she wanted the students to produce a particular Tier Two

word. She decreased the number of pages created on one day and found this more manageable.

Ms. Bee enjoyed observing her students discussing thematic photographs and planned her Digital

Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000;

Turbill, 2003) activities accordingly. At the end of the study, both teachers continued to grapple

with ways to include more Tier Two words in the co-construction of D-LEA text.

Enhancing Factors

One identifiable factor that enhanced teachers' implementation of the intervention was

having digital equipment accessible in the room. Teachers and students casually and naturally

learned to use the classroom's digital camera to photograph thematic activities. Cameras sat on

the teachers' desk throughout the day to ease retrieval. Further, moving the Sony memory stick

from the camera to one of the printer's memory stick slot or using the camera's USB cable to the

laptop provided immediate access to the photographs. For instance, the teachers most often

imported pictures after school while grading and planning for an upcoming day. Over the course

of the eight-week intervention phase of the study, the only frustration in using the equipment was

when the school's Internet server went down. Neither of the teachers had difficulty using or

navigating the various pieces of digital equipment. During the fourth focus group meeting, Ms.

Bee shared how she enjoyed having the equipment in her room. She stated (Videotape transcript,

November 5, 2007):

My computer is slow so the wait time was a problem when I wanted to access Internet
sites. I had minimal if any difficulties with the SMART Board. Navigating, well, I never
a problem. It was easy. I enjoyed scanning in pictures [to the printer]. Weather was my
favorite unit. I enjoyed scanning in their pictures that they drew. It was their ownership. I
have always loved technology and will always find ways to bring it into my classroom. If
I lost my SMART Board, I would be devastated. I can bring anything up on it. If my
students are getting tired, I can bring a clock up there, and we can work on it. I do the
same thing with writing. I put some examples up there and we put in our periods. I can
use it for anything and everything

After the second intervention focus group meeting that provided hands-on training with
the Smart Notebook software (1995-2007), the teachers began to use the SMART Board the
following day. The teachers relied on Smart Notebook software and Microsoft Word Power
Point (2003) to create Digital Language Experience Approach activities, class pages, and books.

After the third week of implementation, Ms. Adler stated in her reflective journal entry
that the success of *Walk Talk Words* depended on having equipment in the classroom. She states
(Reflective journal entry, October 4, 2007):

One recurring thought I've had since we started, is that the success of *Walk Talk Words* is
dependent on using the SMART Board. In our room, we add text to our D-LEA projects
using the boards. If we didn't have the SMART Boards, we would be limited to using the
computer labs or media center. The SMART Board in our room makes the program
easier to conduct and more effective in being able to immediately create the project. We
edit without limitation of being on someone else's schedule and in someone else's
environment.

During the fourth focus group meeting, dated November 5, 2007, the teachers shared

their thoughts on the benefits of using and having immediate access to the equipment to

implement *Walk Talk Words*. The teachers stated:

Bee: Well, I am just thinking, with the SMART Board that has made it a lot easier because you can write together and it's up there. I mean you can write on a piece of paper but it is not the same.

Adler: It's such a visual.

Bee: Yeah

Adler: It's emotional. It ties into the emotions.

Bee: But you are also showing real pictures and that's real life. And they are able to pull from that.

Adler: Yeah, like we were talking about [student] one day reading one of those books [D-LEA class book]. That is creating the background that they don't have when they pick up another storybook. Now, they have the background at least for the D-LEA story. Plus, they have the process of the story and what's involved in it. That is so powerful.

Bee: Plus the cooperation of working in groups. To me that is very powerful. Like today, I mean, I was proud of my little kids. Just talking with each other and discussing and having a real conversation about what to put on the SMART Board.

Adler: I was trying to think, last year, you know previous years when I have these units or these activities, I did incorporate different skills but the D-LEA just made it stronger and more focused on the skills.
(Videotape transcript, November 5, 2007).

Thus, the success of *Walk Talk Words* for the teachers and students was significantly

increased with the availability of having equipment in the classrooms. Digital cameras captured

and enhanced students' background experiences with Tier Two words during the cycles of

Visualizing the Walk and Creating the Talk. As stated above in the transcript excerpt having

access to digital equipment in the classroom deepened the word learning experience for both the

students and teachers in emotional and powerful ways.

<div style="text-align:center">Summary</div>

In this chapter, I have introduced the teachers, shared their pedagogical vocabulary goals,

and instructional schedules. I reported the results of the data by organizing the findings in two

cycles that represent the teachers' decision-making processes and practice as they implemented *Walk Talk Words:* Visualizing the Walk and Creating the Talk. I presented data evidence of progress to improve first-grade students' vocabulary development. Lastly, I reported the factors that enhanced and inhibited the implementation of the intervention and one modification made to the intervention. In Chapter 5, I will summarize and discuss the results of the findings, address how the intervention changed the classroom environment, and present unanticipated effects of the intervention. I also address implications for future research and classroom practice, reflect on how using a formative experiment methodology aligned with the Principles of Effective Professional Development, and offer limitations of the study.

CHAPTER 5

SUMMARY, DISCUSSION, and IMPLICATIONS

In this chapter, I summarize and discuss the findings presented in Chapter 4. Second, I address two characteristics unique to designing, conducting, and reporting a formative experiment (Reinking & Watson, 2000) as presented in Chapter 1. The six characteristics unique to a formative experiment methodology include: (a) establishing a pedagogical goal based in theory, (b) implementing an intervention to achieve the pedagogical goal, (c) collecting data to identify factors enhancing or inhibiting the ability to achieve the pedagogical goal, (d) modifying the intervention based on unanticipated factors, (e) noting how the intervention changes the classroom environment, and (f) determining positive and negative unanticipated effects of the intervention. In this chapter, I focus on the following two characteristics:

1. Noting how the intervention changes the classroom environment.

2. Determining positive and negative unanticipated effects of the intervention.

Third, I state the significance of findings and offer suggestions for future research and practice. Fourth, I reflect on how a formative experiment used in this study aligned with the Principles of Effective Professional Development as shared and discussed in Chapter 2. Lastly, I present limitations of the study and offer a final word.

Summary and Discussion of Finding

The purpose of this study was to use a formative experiment methodology to investigate teachers' instructional decision-making processes and practice as they implement *Walk Talk Words*, a vocabulary intervention that I have designed, and the effects of that intervention on

students' vocabulary growth. *Walk Talk Words* is an intervention that integrates several essential ingredients of successful vocabulary instruction. These ingredients include the following: (a) the notion of Tier Words (Beck & McKeown, 1985), (b) the Text Talk approach, (Beck & McKeown, 2001; Beck, McKeown, & Kucan, 2002), and (c) the Digital Language Experience Approach (D-LEA), (Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003). The study utilized a formative experiment to offer participants flexibility in integrating and modifying components of *Walk Talk Words* to match their curricular needs, classroom resources, pedagogical vocabulary goals, and teaching beliefs within the naturalistic context of their classroom.

Specifically, the following two research questions were explored:

1. What is the nature of teachers' decision-making processes and practice as they implement *Walk Talk Words* to improve first grade students' vocabulary development?

2. What are the effects of *Walk Talk Words* on first grade students' vocabulary development?

Data analysis suggests that both of the teachers who participated in the study implemented *Walk Talk Words* through weekly thematic units and used two instructional cycles during the implementation stage of the study to engage students in learning targeted Tier Two words. These instructional cycles, which I discuss in a following section, included visualizing the walk, and creating the talk. Further, data indicated a change in students' vocabulary development as identified by writing work samples, incidental talk, before intervention and after intervention scores on the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007), and on teachers' designed Tier Two Word Knowledge Assessment instrument. However,

teachers identified time constraints as a factor inhibiting their implementation of *Walk Talk Words*. The need to foster students' use of Tier Two words was identified as one ongoing concern for modification. Access to digital equipment was identified as an enhancing factor to the teachers' implementation of the intervention *Walk Talk Words*. Below, I offer a discussion for each of these findings.

Cycle One: Visualizing the Walk

Visualizing the Walk involved the teachers in the first decision-making process as they previewed thematic materials to select Tier Two words. Tier Two words had to meet two criteria. First, they had to be conceptually related to a thematic focus. Second, they had to be considered important for students' vocabulary development. Thematic unit materials consisted of fiction and nonfiction books, concrete objects, props, charts, and Word Walls. These materials offered students hands-on experiences and visualization tools that extended their background knowledge and supported their cognitive connections to the meanings of words. These psychological tools or external stimuli (Vygotsky, 1978) fostered students' fast mapping (Carey, 1978) that strengthened their associations to new concepts. Fast mapping means that students used a word's syntactic clue to make a quick association to the word's meaning. For instance, Ms. Adler provided an apple pie during snack time to teach two Tier Two words *devour* and *morsel*, an activity which offered students a hands-on experience and occasions to conceptualize the words. Similarly, Ms. Bee engaged her students in *unfurling* a flag during a Patriotism Unit.

Further, thematic units and word displays supported Nagy and Scott's (2000) notion that children learn words through various stages. The five stages include: (1) (a) *incrementality*, learning words in small steps and stages; (b) *polysemy*, the multiple meanings associated with words; (c) *multidimensionality*, knowing a word according to its various functions, contexts, and

uses in order to select a word for precision to clarify meaning when speaking or when writing; (d) *interrelatedness*, knowing how words are semantically linked to other known words; and (e) *heterogeneity*, knowing word categories and types of words. Thus, teachers supported and developed students' word learning through a heterogeneity stage as they selected Tier Two words that shared a similar attribute or specific trait. For example, Ms. Adler selected Tier Two words, hovering, floating, and gliding, because they conceptually related to how things move through the air. This attention to word selections seems beneficial and follows observations made by other researchers and educators who have noted how effective the use of themes, props, and hands-on materials are in fostering students' engagement with new vocabulary (Dodd, 1999; Guthrie, et al., 1999; Rasinski, 1983; Schwanenflugel, et al., 2005; Wasik & Bond, 2001).

Importantly, thematic topics and words displayed on charts seemed to facilitate and strengthen students' cognitive connections to Tier Two words and new concepts. Word displays guided students' first associations to a word as they listened to the word stated aloud by the teacher, viewed it written on a sentence strip, and observed its placement on a display board. During independent work, students referenced the word displays to include a particular word in a written task.

Both teachers selected Tier Two words for each unit that they felt were new, challenging, and important for their students' vocabulary development. Beck, McKeown, and Kucan (2002, p. 19) state:

> The notion of tiers of words is not a precise one, and the lines between tiers are not clear-cut, so your selection may not match ours. Thinking in terms of tiers is just a starting point-a way of framing the task of choosing candidate words for instruction.

Further, Beck McKeown, and Kucan suggest:

Teachers should feel free to use their best judgment, based on an understanding of their

students' needs, in selecting words to teach. Tier Two words are not only words that are

important for students to know, they are also words that can be worked with in a varieties

of ways so that students have opportunities to build rich representations of them and of

their connections to other words and concepts. (p. 20)

Overall, during the intervention phase of the study, each teacher exposed their first-grade

students to 7-8 Tier Two words per week for a total of 49 words across the eight-week

intervention phase of this study. They introduced and reinforced words through various thematic

unit materials, hands-on experiences, word displays, and storybooks. Estimates indicate that six-

year-old children know approximately 8,000 words (Senechal & Cornell, 1993), the number of

words learned per year ranges from 1,000 to 5,000 words per year, with an average number at

3,000 words (Nagy & Anderson, 1984; White et al., 1990). In this study, first-grade students

received numerous exposures to Tier Two words and their concepts through various cycles of

word learning activities that contributed to the number of words estimated students know and

learn per year.

Cycle Two: Creating the Talk

Creating the Talk with words involved selecting and creating vocabulary activities that

were designed to engage students in rich, thematic talk that included the targeted words.

Specifically, the teachers created and weekly orchestrated Creating the Talk activities that

included (a) active participation, (b) prior knowledge, (c) student centered learning, (d) modeling

and coaching, (e) assessing and recycling, (f) task management, (g) motivation, and (h) home-

school connections.

Over the course of the eight-week *Walk Talk Words* intervention, each teacher integrated talk with word vocabulary strategies and activities through six thematic units. More specifically, both teachers used Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) methods to instruct Tier Two words using fiction and nonfiction book discussions. In adherence to the intervention, Ms. Adler innovated on Text Talk to move beyond storybooks to hands-on experiences and conversations to teach Tier Two words. For example, students learned the Tier Two words inspect and yank when they inspected seeds yanked from inside a pumpkin.

Teachers' Visualizing the Walk and Creating the Talk with Tier Two word cycles, strategies and activities are underpinned from a sociocognitive perspective (Vygotasky, 1962; 1978). Meaning, students experienced word learning through social interactions on an interpersonal level that was scaffolded by a more capable adult (Vygotsky, 1962; 1978) or peers. Data suggests that the teachers' decision-making processes to orchestrate *Walk Talk Words* activities were designed for students to *use* what they were experiencing to *learn* (Vygotsky, 1978). For instance, the cycle of Visualizing the Walk mediated students' cognitive developments as the students used signs (logographs) such as thematic word displays to learn and use targeted Tier Two words. Further, Creating the Talk scaffolded students' cognitive development and learning of the new words through the various activities designed to involve students in socially interacting with others. For example, both teachers used student center learning, which was infused with numerous collaborative activities to engage students in the process of constructing knowledge on an interpersonal plane (Vygotsky, 1962;1978). Through the instructional cycles, the teachers monitored, assessed, and scaffolded students' learning of instructed Tier Two words through the students' zone of proximal development (Vygotsky, 1978). Indeed, Creating the Talk activities offered the teachers insights into the cognitive

associations students were establishing for Tier Two words. For instance, teachers monitored students' immediate understanding of words when students placed a thumb-up or thumb-down to indicate the word's correct usage in a sentence. Notably, these talk activities offered teachers opportunities to assess students' *polysemy* stage of word learning (Nagy & Scott, 2000). Polysemy refers to the multiple meanings associated with words. Thus, as teachers listened to students' contextualizing of Tier Two words in their own meaningful examples they informally assessed how the students were making connections to new concepts.

Furthermore, data revealed that both Ms. Adler and Ms. Bee's vocabulary practice after the intervention training exhibited a change in pedagogy from an implicit approach to an explicit and direct vocabulary approach as recommended by the National Reading Panel (2000). Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) provided the framework to assist teachers in understanding the how's and why's of teaching and contextualizing word learning through experiences that were meaningful and relevant to their students. Importantly, the *Walk Talk Words* cycles and the instructional components the teachers created embedded explicit instruction and multifaceted learning occasions to facilitate students' use to produce targeted words immediately. Clearly, the cycles and their components were rich with listening, speaking, reading, and writing activities. For instance, the following transcript excerpt (Videotape transcript, October 2, 2007) revealed how the teachers naturally embedded a form of *Motherese* (Hart & Risley, 1995), a form of repeating what students orally produce to scaffold their oral productions. For example, the following exchange occurred during Ms. Bee's weather unit as she reviewed the Tier Two word *whirl*. She stated, "What would you *whirl*?" A student responded, "My brother." Ms. Bee responded, "You would *whirl* your brother? Why?" This approach often supported students' oral production of Tier Two words.

Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities offered the class opportunities to compose books that recycled and enriched students learning of instructed Tier Two words. Students engaged in taking photographs during thematic activities that captured and visually documented their interactions with Tier Two words and related concepts. Creating pages for the class books involved discussions surrounding the retelling of the photographs to co-construction text to document students' engagements in thematic events. Across the 8 weeks of the intervention phase of the study, each class created six Digital Language Experience Approach class books that highlighted the week's thematic focus.

Indeed, Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities offered multiple occasions for students to recycle previously instructed Tier Two words. Photographs served as a visual representation and cognitive links to students' personal connections to thematic content. As students viewed a photograph, they recalled the experience and thought analytically about it's content. Consequently, D-LEA engagements included a simultaneous interweaving of listening, speaking, reading, and writing while students viewed and narrated photographs. For example, teachers quickly used the keyboard to type students' dictated narrations that instantaneously transformed oral speech to words. It is worth noting that, instruction on the SMART Board extended students vocabulary acquisition through the *multidimensionality* stage of word learning (Nagy & Scott, 2000). Meaning, data indicated that during D-LEA discussion students experienced selecting words that added precision to the description of a photographed moment. For example, Ms. Adler glanced at a chart to guide students' replacement of good with the Tier Two word *scrumptious*. Essentially, D-LEA class books provided students with numerous occasions to

extend, enrich, and recycle (Labbo, Love, & Ryan, 2007) word learning experiences as students read and reread Tier Two words that were contextualized in meaningful experiences.

Taking a Generative Theory of Multimedia Learning perspective (Mayer, 1997) helps us understand the cognitive processes that may be occurring as students encounter Tier Two words that are presented on a SMART Board. For instance, both the visual and verbal information-processing channels could be activated during a Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activity. The visual channel is likely activated as students viewed photographs on the SMART Board and focused on particular elements they considered to be important. Then during photograph discussions, the verbal channel became activated as the teacher guided students' reproduction of words as they recalled the experience. Consequently, these two information-processing systems integrated the verbal with the visual to enrich how students acquired, learned, and contextualized newly instructed Tier Two concepts through a series of memorable learning events.

Evidence of Progress in Learning Tier Two words

Data analysis indicates that students learned Tier Two words that were presented through the two cycles of *Walk Talk Words*. More specifically, the teachers' constructed Tier Two Word Knowledge Assessment Instrument indicated that students learned more words when they encountered them in the Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities. Furthermore, according to Peabody Picture Vocabulary Test, Fourth Edition (Dunn & Dunn, 2007) before intervention and after intervention scores, 43% of the students in Ms. Bee's class and 47% of the students in Ms. Adler's class moved up one stanine after the eight-week intervention phase of the study.

Other researchers (Brett et al.,1996; Elley, 1989; Hargrave & Senechal, 2000; Penno et al., 2002; Robbins & Ehri, 1994) have found that young children learn vocabulary incidentally through verbal context (Elley, 1989; Hart & Risley, 1995; Nagy, Anderson, & Herman, 1987; Robbins & Ehri, 1994; Senechal & Cornell, 1993; Senechal, Thomas, & Monker, 1995), through direct instruction with word meanings (Brett et al.,1996; Elley, 1989; Hargrave & Senechal, 2000; Penno et al., 2002; Robbins & Ehri, 1994), and through interactive engagements (Carey, 1978; Dickson & Smith, 1994; Waist & Bond, 2001; Senechal et al., 1995; Whitehurst et al., 1988). In these studies, significant word gains occurred when students received repeated exposure to the same storybook with word explanations. In the current study, students received Tier Two word instruction through a combination of single readings, repeated readings, and hands-on experiences with words using Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003) methods. Notably, both teachers found ways to move beyond books to hands-on experiences using props and concrete items to contextualize and teach Tier Two words. Thus, the two cycles the teachers used to implement *Walk Talk Words* created multifaceted ways for students to encounter Tier Two words through visuals, talk, and digitized representations of text.

Inhibiting, Modifying, and Enhancing Factors

One factor, time constraints, continued throughout the intervention to limit the number of words taught per week. For example, time constraints restricted the Creating the Talk and Digitizing *Walk Talk Word* activities the teachers implemented each week. Specifically, time constraints included the realities of teaching in today's classrooms. Meaning, teachers balanced curricular obligations, test-taking practice, and a host of professional responsibilities that limited

not only their time to implement *Walk Talk Words* but also limited their time to complete activities across all curricular subject areas.

One modification, students' oral production of instructed Tier Two words, consistently challenged the teachers. Both teachers modified strategies and grappled with effective questioning techniques to assist students' use of Tier Two words during Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) text production. Other researchers have also noted that engaging very young children in conversations is a challenging task (Bradley, 2004; Schwanenflugel, et al., 2005).

Further, Ms. Bee noted that focusing on too many skills interfered with the focus on learning words. She reflected on the construction of text for a fairy tale D-LEA class book, "I was bringing in too many skills. I think it is best to focus on one concept. Some of the students were off task" (*Walk Talk Words* lesson plan, October 29, 2007). Likewise, in my observational notes (October 29, 2007), I documented how Ms. Bee's purpose to retell a class version of *The Three Little Pigs* became lost when the focus of her interactions shifted to asking students to clarify spelling and grammar. When the study ended, both teachers continued to search for effective and efficient ways to scaffold students' oral production of targeted Tier Two words.

One factor, access to digital equipment, significantly increased the teachers' success, options, and opportunities to implement *Walk Talk Words* in the classroom. For example, either a student or a teacher could spontaneously grab the digital camera stored on a table or desk to capture students engaged in literacy events. Grabbing the camera became part of the classroom routines. Thus, having equipment in the room-enabled teachers to extend and enrich teachable moments. For example, teachers were able to project photographs on the class SMART Board during a few extra minutes in a day to complete Digital Language Experience Approach (D-

LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities, to reread past class created books, and to review previously instructed Tier Two words. Class scanners and printers enabled teachers to quickly print finished versions of D-LEA class books that were sent home with students to read with parents and were placed in the classroom library for rereading throughout the year. Thus, having access to the equipment in the classroom enabled the teachers to extend, enrich, and quickly incorporate *Walk Talk Words* activities during any day in their first-grade classrooms.

Changes in the Educational Environment

Over the course of the 8 weeks of the *Walk Talk Words* intervention*,* the teachers and students became sensitized to learning and using new and interesting words. Tier Two word awareness was evident as teachers and students lived in a learning community that embraced new vocabulary instructional strategies. Furthermore, the strategies resonated with teacher because they aligned well with their beliefs, interests, needs, and resources. For instance, before the intervention training, Ms. Adler indicated on her pedagogical vocabulary goal statement, her disenchantment with her current vocabulary instruction, "I hope to learn new strategies for teaching vocabulary that are more in-depth than what I use now. I think my frustrations with not teaching vocabulary effectively in the past has caused me to not focus more on traditional, explicit vocabulary instruction" (September 13, 2007). Ms. Bee indicated on her pedagogical goal statement, that she wanted to learn new and effective activities and strategies that would create in her students an interest in words. She stated, "I feel that it is important for students to be able to know the meaning of words, but also be able to use them in their daily writing and daily conversations" (September 13, 2007).

After intervention training and the implementation of *Walk Talk Words,* which involved the teachers in adapting effective vocabulary approaches in their primary classroom, the teachers demonstrated an explicit and systematic vocabulary practice. During the final focus group meeting, the teachers reflected on the process and change brought to their instruction practice and learning communities. The following excerpt (codes in the right margin) taken from the videotape transcript (November 5, 2007), documented the following exchange between the two teachers:

Bee: Well, this is something that I will definitely continue. Seeing the kids grow, just not in vocabulary but with writing. It all tied in so nicely together with their needs. You cover so much. It's I mean, even though I have the vocabulary, I am teaching them how to write a story with good beginnings and there is so much more you can tie into this. So you are covering a lot of curriculum area, and to me that is easier.	Integrating skills
Adler: Before, I had folders just full of vocabulary strategies but there never was a system that I could use that made sense like this. I follow it week to week. Before it was just kind of picked something here pick something there and let's see which words we can try on for size. There wasn't a way to improve retention so that the children would use some of the words. Here I have developed a different system. I mean with all the different activities every week. And I have been trying to think of new ones. But it just makes sense. With almost everything I do, I try to relate it to a story. Now I have a system to pull any book that I want and find or associate Tier Two words from any book whether it's a concept or words from the book. I've never had that before. Before, it's what do you do with this book? Where are the words? What words do we use? It just makes so much more sense to me.	Recycling Systematic process Selecting Tier Two words
Bee: But you are right that is such a good system. Before I would just take one book and pull out some words. But this way you use a theme and it makes more sense to them [students]. They have more background with it so they pick it up more.	Thematic instruction
Adler: The children have just grown right along with the process in terms of selecting the words, using the words. It does take some coaching in tallying the words the use. That's important to some children but not to others. But they enjoy hearing them. But there are so many ways throughout the day to incorporate it and use these Tier Two words. I like systems	Recycling Engagement Integration Content areas Systematic

that have a plan, and I like to have different plans. Throughout
the weeks I have tried to see how I could incorporate it like in
writing workshop. I didn't do a lot with guided reading groups   Future goals
so that will be another step.

Bee: I think now that I know the principles of what's effective, I   Teacher
work it in. Doing a little is better than none and I can gauge it   empowerment
day by day.

Adler: Yeah and I've been trying to make it my own and take it
where I can take it.

During the intervention, as the teachers continued to immerse students in Tier Two

words, students began to use and claim ownership to word learning. For example, a student

invented a new word, 'glumful' to describe a storybook character by combining two previously

instructed Tier Two words *glum* and *gleeful*. Particular words resonated with the students. For

instance, Ms. Bee and Ms. Adler commented during the final focus group meeting (Videotape

transcript, November 5, 2007):

Adler: The ones we use the most would be like frustration, *gleeful* that's a very popular
one.

Bee: And with my kids, too, and *glum*. They love *glum*.

Throughout the process as the teachers continued to develop vocabulary strategies for

Walk Talk Words, the students exhibited learning new words in several stages described by Nagy

and Scott (2000). For example, when a student merges glum and gleeful and says 'glumful' he is

demonstrating *polysemy,* a stage of attending to multiple meanings, as he muddles through

learning words conceptually related.

Unanticipated Effects Produced by the Intervention

Walk Talk Words provided first-grade students and their teachers with an opportunity to

focus on new words, to understand the importance of words, and to develop habits of word

learning. The teachers in this study clearly immersed children in rich vocabulary environments.

Through modeling and instruction, teachers created opportunities for students to use targeted

Tier Two words. Consequently, students produced these words outside the classroom environment.

It is worth noting that, after three weeks of implementing the intervention, Ms. Bee and Ms. Adler reported that other first-grade teachers noticed that their students were displaying and using sophisticated vocabulary in their classes during Team Time Target Time, a time during the morning when first-grade students rotated to different classrooms for remediation or enrichment lessons. During the third focus group meeting, Ms. Bee elaborated, "…even some of the other teachers have remarked, because we switch in the morning, that "if your kids say just one more big word" so they [students] are showing the words" (October 5, 2007). Similarly, Ms. Adler referred to the guidance counselor's acknowledgement of her students' use of Tier Two words when she stated, "WOW those are really juicy words!" Further, Ms. Bee shared comments from parents who were noticing their children using Tier Two words at home:

> I've gotten some feedback from the parents too. I've talked to some of the parents that have come in and I said, "Are you noticing a difference in your child, you know, what you're hearing at home? The way that your child talks?" They said that they are hearing more of the words at home. Like *glum*, *radiant*, *avoid*. I think I talked to three or four parents. (Videotape transcript, October 5, 2007)

As the study progressed, other teachers noted and continued to comment on the number of Tier Two words Ms. Bee and Ms. Adler's students were producing outside the classroom environment.

Significance of Findings and Suggestions for Future Research and Practice

The results of the study are significant for several reasons. First, the results of this study indicate that two first-grade teachers found many occasions to integrate effective vocabulary

instruction in their curricular routines. These vocabulary practices included: (a) Tier Two words (Beck et al., 2002), (b) Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003), and (c) Digital Language Experience Approach Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003). Both teachers innovated on, modified, and embraced these three practices to create rich vocabulary environments. This study reports their decision-making processes and practices to create occasions for Tier Two word learning. Future research might isolate a particular component of one of the cycles resulting from the teachers' implementation of *Walk Talk Words* to further investigate its potential as an effective vocabulary approach in the primary grades.

Second, Biemiller and Boote (2006) suggest that presently no research is available on vocabulary approaches beyond storybook read-alouds in the primary grades. Results of this study indicate that the teachers were effective in using and moving beyond storybook read-alouds and discussions to target, contextualize, and instruct Tier Two vocabulary. Future studies might want to explore further the potentials and benefits for utilizing thematic units as a vocabulary approach in the primary grades. Also, because this study explored teachers' decision-making processes and practices, the ways to include Tier Two words in instruction, Ms. Bee and Ms. Adler spent different amounts of time on various activities they created to teach Tier Two words. Subsequently, the ratio of Tier Two word encounters varied per activity. The next stage of exploration might quantify by taking frequency counts of the number of minutes spent on a particular cycles or components of *Walk Talk Words* to understand the effects on students' word growth. Furthermore, future research should explore additional conditions that might enhance word learning for students beyond storybooks.

Third, current research findings are uncertain on how students' previous word knowledge influences word growth when students receive vocabulary instruction (Elley, 1989; Penno, et al, 2002; Robbins & Ehri, 1994). For instance after a vocabulary intervention, studies have shown that higher ability students learned more words than lower ability students (Penno, et al, 2002; Robbins & Ehri, 1994). Another study found that lower ability students showed the greatest gain in word learning (Elley, 1989). In this study, Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007) before intervention scores were used to determine students' entering word knowledge. Stanine scores may offer some indication to entry vocabulary knowledge influencing students' Tier Two word growth after receiving the *Walk Talk Words* intervention. Descriptive statistics suggest that students with average stanine scores outperformed high ability students on the number of Tier Two words learned when Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) activities where included in the instructional cycle. Future research might quantitatively investigate what factors influence Tier Two word growth when words are included in D-LEA activities compared to words instructed but not included in D-LEA activities.

Fourth, in this study, both teachers embraced a routine that allowed them to spontaneously snap photographs of students engaged in a related vocabulary moment. While the routine was time efficient, it missed embedding the thematic words into discussions to contextualize them in conversations surrounding the taking of the photographs. Perhaps if the teachers had been better able to support students use of Tier Two word s during photo walk occasions, it would have been easier for students to co-construct text for photographs. In this study, both teachers continually grappled with ways to engage students in reproducing instructed Tier Two words during Digital Language Experience Approach (D-LEA; Labbo et al., 2002;

Labbo, Sprague et al., 2000; Turbill, 2003) activities. Future research is needed to explore techniques teachers can employ during D-LEA activities to effectively guide students' recycling of Tier Two words.

Lastly, research might investigate the effects of Tier Two word displays on students' learning of words. In this study, Ms. Adler displayed Tier Two words on thematic charts that conceptually related words and posted the charts near her SMART Board so students could reference the chart when constructing text for photographs. Ms. Bee displayed Tier Two words alphabetically on a Word Wall. Perhaps the manner in which the Tier Two words benefited Ms. Adler's students, who learned more targeted Tier Two words on the teachers' Tier Two Word Knowledge Assessment Instrument. Ms. Adler posted her thematic charts on the wall next to the SMART Board, and she glanced at the chart when guiding students to use a particular word. This may also explain why Ms. Adler's class included more Tier Two words in Digital Language Experience Approach activities.

Reflections on how a Formative Experiment Aligned with Professional Development

When designing, conducting, and reporting a formative experiment (Reinking &Watson, 2000) a research is guided by the following six characteristics: (a) establishing a pedagogical goal based in theory, (b) implementing an intervention to achieve the pedagogical goal, (c) collecting data to identify factors enhancing or inhibiting the ability to achieve the pedagogical goal, (d) modifying the intervention based on unanticipated factors, (e) noting how the intervention changes the classroom environment, and (f) determining positive and negative unanticipated effects of the intervention. Table 5.1 shows the alignment between a formative experiment methodology and effective principles of staff development.

In this study, both teachers and myself were dissatisfied with our previous attempts at vocabulary instruction. We shared a mutual interest in exploring ways to teach vocabulary. Together we envisioned that *Walk Talk Words* might provide insights to reach our pedagogical goals. A formative experiment methodology aligned well with Effective Principles of Professional Development suggested by the National Evaluation of the Eisenhower Professional Development Program (2001) to successfully bring about a pedagogical change. Effective principles of professional development include: (a) reform type, (b) duration, (c) collective participation, (d) active learning, (e) coherence, and (f) content focus.

Table 5.1

Formative Experiment Methodology and Effective Principles of Staff Development

Formative Experiment	*Research on Professional Development*
Establishing a pedagogical goal based in theory	*Coherence*: aligning the experience to teacher goals and interests. *Content focus:* studying a particular literacy skill
Implementing an intervention to achieve a pedagogical goal.	*Collective participation*: group sharing of similar goals and interests within a particular school. *Reform type:* learning through study groups, mentoring, internships, and teacher research.
Collecting data to identify factors enhancing or inhibiting the ability to achieve the pedagogical goal	*Duration:* time spent connected to peers, engaged with an activity, and spans across time.
Modifying the intervention based on unanticipated factors.	*Active learning:* active engagement, analysis of instruction, effect on student learning, work samples, and feedback.

First, to bring about pedagogical change, one that teachers will sustain, there must be *coherence* between the teachers' goals, interests, beliefs, and a study's research questions. A

formative experiment methodology offered me the opportunity to design a study that honored and acknowledged teachers' experience and intuitive knowledge. The data collected throughout the formative experiment steps included teachers' pedagogical vocabulary goals, daily journal reflective entries on how the process was working, and *Walk Talk Words* lesson plans that described in detail their planning and instructional practices that involved selecting vocabulary activities.

Second, *content focus* was established as we shared an interest in deepening and strengthening our knowledge about effective practices in the primary grades. *Walk Talk Words* was theoretically grounded in Generative Theory of Multimedia learning (Mayer, 1997) and sociocognitive theory (Vygotsky, 1962; 1978). Research provided guidelines for essential ingredients: Tier Words (Beck & McKeown, 1985), Text Talk (Beck & McKeown, 2001; Beck et al., 2002), and Digital Language Experience Approach (Labbo et al., 2002; Labbo, et al., 2000; Turbill, 2003). A formative experiment includes recognition of the complexities surrounding the gritty realities and allows adjustments in the intervention to address necessary modifications. The teachers in this study received training in the essential ingredients and modified the ingredients to overcome barriers that reflected their interests, beliefs, and classroom practice. For instance, when the teachers wrestled with time constraints to meet and balance all of their professional obligations, they were able to reduce the number of words instructed per week.

Third, we established *collective participation*, which means a group sharing of similar goals and interests within a particular school (National Evaluation of the Eisenhower Professional Development Program, 2001). As a group functioning within a particular school, we shard an interest and investment in bringing about a vocabulary change. I shared with the

teachers an interest to learn effective vocabulary strategies. During the previous year as I worked part-time as one of the school's primary literacy coaches, we had discussed the students' low vocabulary scores on district and state standardized tests. Therefore, through a formative experiment, we were able to share this common interest to bring about a vocabulary pedagogical change that thrived on rich, collective collaboration and active participation between the teachers and myself.

Fourth, the principle of *reform type,* which means to learn through study groups, mentoring, internships, or teacher research, occurred as we met four times during the study in focus group meetings to share 'aha' moments, vent frustrations, share work samples, discuss insights, and learn from one another's perspectives regarding the process of implementing the intervention. During these meetings, the teachers discussed or modeled strategies that were working for them. For instance, Ms. Adler explained how she was using Ten Super Sentences, and Ms. Bee recounted an instance when using snack time talk that engaged students in recycling the words. I served as a liaison between the two teachers sharing successful events I observed while videotaping. Even though the teachers' rooms were across the hall from one another, the teachers had little time for sharing and learning from each other outside of focus group meetings. A formative experiment, with the inclusion of these meetings, brought to light missed teaching opportunities and provided time for us to apply our collective knowledge and experiences to address problems. Consequently, these meeting helped to bring about change and supported teachers' successful implementation of *Walk Talk Words.*

Fifth, in order for change or learning to occur, participants must be *active* in the process. The teachers immediately put into place new ideas they had gained from focus group meetings. Further, the teachers success in understanding and implementing Tier Words (Beck et al., 2002),

Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003), and Digital Language Experience Approach (Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003) occurred because they were invited to identify barriers and modify components of *Walk Talk Words* to fit their needs. For instance, Ms. Bee changed her approach to include more immediate and active student talk with the words. Her strategies, shared in the Creating the Talk section of Chapter 4, demonstrates this change and process. Consequently, she felt a "sense of accomplishment" after producing a D-LEA class book and a sense of pride "when they [the D-LEA class books] don't stay on the shelves" (Videotape transcript, November 5, 2007). In addition, a formative experiment allowed the teachers to design a Tier Two Word Knowledge Assessment Instrument in order to evaluate the effects of their instruction. They were better equipped to adjust their instruction on the results.

Lastly, while the *duration* of this study was short term, the time I spent engaged with the teachers through qualitative data collection allowed me to delve deeply into the instructional content of the intervention. Ms. Bee often requested feedback on a lesson, shared her excitement and frustrations during many informal conversations, and communicated through emails. The design of a formative experiment accommodates open communication. In essence, the results and success to bring about a pedagogical change for two teachers, the improvement of first-grade students' vocabulary knowledge, and the reporting of this study's finding to contribute to a growing body of literature on effective vocabulary practices in the primary grades was enabled by a formative experiment methodology.

<center>Limitations</center>

This study has several limitations. First, it is possible that the short duration of eight weeks to implement *Walk Talk Words* limited the opportunity to see even greater vocabulary

development for first-grade students. Nagy and Scott (2000) state that word learning is a complex process that occurs in small steps and over time. However, the short intervention phase did indicate that the students learned a vast number of the Tier Two words instructed and demonstrated that school instruction can contribute to students' vocabulary growth.

Second, statistical measurements were not conducted beyond descriptive statistics because this study qualitatively explored teachers' decision-making processes and practices to implement a vocabulary intervention in the primary classroom. Without performing statistical analysis on the Peabody Picture Vocabulary Test-4 pre intervention and post intervention scores and on the teachers' created Tier Two Word Knowledge Assessment Instruments, findings are not generalizable to a wider population.

Lastly, another limitation of the study involves the lack of an expressive measurement to document students' expressive growth in vocabulary knowledge and word learning due to participation in the intervention. When designing this study, I anticipate that the teachers would create numerous receptive occasions for students to encounter words but not the numerous opportunities for students to immediately use what they were learning. Without an expressive instrument, I missed an opportunity to measure change in students' oral vocabulary growth.

Final Word

First, this study set out to learn how teachers might integrate *Walk Talk Words* into their first-grade classroom environment using Tier Words (Beck et al., 2002), Text Talk (Beck & McKeown, 2001; Beck et al., 2002; McKeown & Beck, 2003), and Digital Language Experience Approach (D-LEA; Labbo et al., 2002; Labbo, Sprague et al., 2000; Turbill, 2003).

Walk Talk Words findings suggest that multiple and active engagements with targeted Tier Two words positively influences students' learning of Tier Two words. Teachers used

storybooks and curricular resources as a springboard for vocabulary instruction that went beyond read-aloud time. A sociocognitive (Vygotsky, 1962; 1978) framework underscored the teachers' use of *Walk Talk Words* to improve students' vocabulary development. Focus group meetings supported teachers in implementing *Walk Talk Words* through collaborative professional development opportunities. Charts, props, concrete objects, and interpersonal collaborations guided, motivated, and scaffolded students' use of targeted words. *Walk Talk Words* provided teachers with a systematic framework for selecting, teaching, and fostering students' use of targeted Tier Two words. Descriptive statistics indicate that students learned and used more words when D-LEA activities were included in the instructional cycle. Perhaps one of the most exciting outcomes of using a formative experiment methodology is the ability to track the pedagogical changes that resulted in higher awareness of vocabulary strategies that may be incorporated throughout the school day.

REFERENCES

Adams, M. J. (1990). *Beginning to read: Thinking and learning about print.* Cambridge, MA: MIT Press.

Allington, R. L. (2001). *What really matters for struggling readers: Designing research-based programs.* New York: Addison-Wesley Educational Publishers.

Baker, L., Scher, D., & Mackler, K. (1997). Home and family influences on motivations for reading. *Educational Psychologist*, *32*(2), 69-82.

Baumann, J. F., & Kame'enui, E. B. (2004). *Vocabulary instruction: Research to practice.* New York: Guilford Press.

Beaver, J. (1997). *Developmental reading assessment*. Parsippany, NJ: Pearson Learning Group.

Beck, I. L., & McKeown, M. G. (1985). Teaching vocabulary: Making the instruction fit the goal. E*ducational Perspectives, 23*(1), 11-15.

Beck, I. L., & McKeown, M. G. (2001). Text talk: Capturing the benefits of read-aloud experiences for young children. *The Reading Teacher, 55*(1), 10-20.

Beck, I. L., & McKeown, M. G. (2007). Increasing young children's oral vocabulary repertoires through rich and focused instruction. *The Elementary School Journal*, *107*, 251–271.

Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction.* New York: Guilford.

Beck, I. L., Perfetti, C. A., & McKeown, M. G. (1982). Effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational*

Psychology, *74*(4), 506-521.

Becker, H. J., & Anderson, R. E. (1998). Teaching learning and computing: A national survey of

schools and teachers describing their best practices, teaching philosophies, and uses of

technology. *Center for Research on Information Technology and Organizations*. Retrieved

May 26, 2007 from http://www.crito.uci.edu/tlc/html

Becker, W. C. (1977). Teaching reading and language to the disadvantaged-What we have

learned from field research. *Harvard Educational Review*, *47*, 518-543.

Berne, J. (2007, May). *Vocabulary instruction: What teachers want to know*. Paper presented at

the pre-convention session of the International Reading Association, Toronto, Canada.

Biemiller, A. (1999). *Language and reading success*. Cambridge, MA: Brookline Books.

Biemiller, A. (2005). Size and sequence in vocabulary development: implications for choosing

words for primary grades. In E. H. Hiebert & M. L. Kamil (Eds.), *Teaching and learning

vocabulary: Bringing research to practice* (pp. 223-242). Mahwah, NJ: Erlbaum.

Biemiller, A., & Boote, C. (2006). An effective method for building vocabulary in primary

grades. *Journal of Educational Psychology, 98*(1), 44-62.

Biemiller, A., & Slonim, N. (2001). Estimating root word and normative vocabulary

growth in normative and advanced populations: Evidence for a common sequence of

vocabulary acquisition. *Journal of Educational Psychology, 93*, 498-520.

Blachowicz, C. L. Z., Beyersdorfer, J., & Fisher, P. (2006). Vocabulary development and

technology: Teaching and transformation. In M. C. McKenna, L. D. Labbo, R. Kieffer, & D.

Reinking (Eds.), *International handbook of literacy and technology*, (Vol. 2, pp. 341-348).

Hillsdale, NJ: Lawrence Erlbaum Associates.

Bogdan, R. C., & Biklen, S. K. (2003). *Qualitative research for education: An introduction to*

theory and methods. (4th ed.). Boston, MA: Pearson Education Group.

Brabham, E. G., & Lynch-Brown, C. (2002). Effects of teachers' reading-aloud styles on vocabulary acquisition and comprehension of students in the early elementary grades. *Journal of Educational Psychology, 94,* 465-473.

Bradley, B. A. (2004). A formative experiment to enhance verbal interactions in a preschool classroom. Unpublished doctoral dissertation. (University of Georgia, Athens, Georgia).

Brett, A., Rothlein, L., & Hurley, M. (1996). Vocabulary acquisition from listening to stories and explanations of target words. *The Elementary School Journal*, *96*, 415-422.

Bruner, J. (1978). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.

Calkins, L. (2003). *Units of study for primary writing: A yearlong curriculum*. Portsmouth, NH: Heinemann.

Cantalini, M. (1987). *The effects of age and gender on school readiness and school success.* Unpublished doctoral dissertation, Ontario Institute for Studies in Education, Toronto, Canada.

Carey, S. (1978). The child as a word learner. In M. Halle, J. Bresnan, & G. A. Miller (Eds.), *Linguistic theory and psychological reality* (pp. 264-293). Cambridge, MA: MIT Press.

Carlo, M. S., August, D., McGlaughlin, B., Snow, C. E., Dressler, C, Lippman, D. N., Lively, T. J., & White, C. E. (2004). Closing the gap: Addressing the vocabulary needs of English-language learners in bilingual and mainstream classes. *Reading Research Quarterly*, *39*, 188-215.

Charmaz, K. C. (2006). *Constructing grounded theory: A practical guide through qualitative analysis.* Thousand Oaks, CA: Sage.

Clay, M. M. (2006). *An observation survey of early literacy achievement* (2nd ed.). Canada:

    Pearson Education.

Cunningham, A. E. (2005). Vocabulary growth through independent reading and reading

    aloud to children. In E. H. Hiebert, & Kamil, M. L. (Eds.), *Teaching and learning*

    vocabulary: Bringing research to practice (pp. 45-68). Mahwah, NJ: Erlbaum.

Cunningham, A. E., & Stanovich, K. E. (1997). Early reading acquisition and its relation to

    reading experience and ability 10 years later. *Developmental Psychology*, *33*(6), 934-945.

Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional

    development in an era of reform. *Phi Delta Kappa*, *76*(8), 597-604.

De Jong, M. T., & Bus, A. G. (2002). Quality of book-reading matters for emergent readers: An

    experiment with the same book in a regular or electronic format *Journal of Educational*

    Psychology, 94(1), 145-155.

Dewalt, K. M., & Dewalt, B. R. (2002). *Participant observation*. New York: AltaMira Press.

Dickinson, D. K., & Smith, M. W. (1994). Long-term effects of preschool teachers' book

    readings on low-income children's vocabulary and story comprehension. *Reading*

    Research Quarterly, *29*, 10-122.

Dickinson, D. K., & Tabors, P. (Eds.). (2001). *Beginning literacy with language*. Baltimore, MD:

    Brookes.

Dixon-Krauss, L. (1996). *Vygotsky in the classroom: Mediated literacy instruction and*

    assessment. New York: Longman.

Dodd, E. L. (1999). Echoes of the past: Jackdaws and historical fiction. *Childhood Education*,

    75, 3, 136-141.

Dolch, E. W. (1942). *Better spelling*. Champaign, IL: Garrard Press.

Dole, J. A. (2004). The changing role of the reading specialist in school reform. *The Reading Teacher*, *57*, 462-455.

Duffy-Herster, A. M. (1999). *The effects of a balanced, accelerated, and responsive literacy program on the reading growth of elementary school struggling readers.* Unpublished doctoral dissertation. (University of Georgia, Athens, Georgia)

Dunn, L. M., & Dunn, D. M. (2007). *Examiner's manual for the Peabody Picture Vocabulary Test, Fourth Editio.* Bloomington, MN: NCS Pearson.

Elley, W. B. (1989).Vocabulary acquisition from listening to stories. *Reading Research Quarterly*, *24*(2) 174-187.

Emerson, R. M., Fretz, R. I., & Shaw, L. L. (1995). *Writing ethnographic fieldnotes*. Chicago: The University of Chicago Press.

Ezzy, D. (2003). *Qualitative analysis: Practice and innovation.* New York: Routledge.

Feitelson, D., Goldstein, Z., Iraqi, J., & Share, D. E. (1991). Effects of listening to story reading on aspects of literacy acquisition in a diglossic situation. *Reading Research Quarterly*, *28*, 70-79.

Garet, M., Birman, B.F., Porter, A.C., Desimone, L., Herman, R., & Yoon, K. S. (1999). Designing effective professional development: Lessons from the Eisenhower program. Prepared under Contract (EA97001001) by American Institutes for Research for The U.S. Department of Education Office of the Under Secretary. Retrieved on March 22, 2007 from http://www.ed.gov/rschstat/eval/teaching/epdp/index.html

Garfield, V. L. (2000). *A formative experiment investigating the use of electronic portfolios as a means of improving elementary students' perceptions of themselves as readers.* Unpublished doctoral dissertation. (University of Georgia, Athens, Georgia)

Garmston, R. J. (1992). Cognitive coaching: A significant catalyst. In A. Costa, J. Bellanca, & R. Fogarty (Eds.), *If minds matter: A forward to the future* (Vol. 1, pp. 173-186). Palatine, IL: Skylight.

Glaser, B. G., & Strauss, A. L. (1967). *Discovery of grounded theory: Strategies for qualitative research.* Chicago: Aldine.

Graves, M. F. (2006). *The vocabulary book: Leaning and instruction*. New York: Teachers College Press.

Graves, M., & Watts-Taffe, S. (2002). The role of word consciousness in a research-based vocabulary program. In A. Farstrup & S. J. Samuels (Eds.), *What research has to say about reading instruction* (pp. 140-165). Newark: DE: International Reading Association.

Guthrie, J. T., Anderson, E., Alao, S., & Rinehart, J. (1999). Influences of concept-oriented reading instruction on strategy use and conceptual learning from text. *The Elementary School Journal, 99*(4), 343-366.

Hargrave, A. C., & Senechal, M. (2000). Book reading intervention with language-delayed preschool children: The benefits of regular reading and dialogic reading. *Journal of Child Language, 15*, 765-790.

Harry, B., Sturges, K. M., & Klinger, J. K. (2005). Mapping the process: An exemplar of process and challenge in grounded theory analysis. *Educational Researcher*, *34*(2), 3-13.

Hart, B., & Risley, T. (1995). *Meaningful differences in everyday parenting and intellectual development in young American children*. Baltimore, MD: Brookes.

Hiebert, E. H., & Kamil, M. L. (2005). *Teaching and learning vocabulary: Bringing research to practice.* Mahwah, NJ: Erlbaum.

Jewell, T. A., & Pratt, C. (1999). Literature discussions in the primary grades: Children's

thoughtful discourse about books and what teachers can do to make it happen. *The Reading Teacher, 52*(8), 842-850.

Jupiterimages (2007).Clipart.com. Retrieved October 10, 2007 from http://www.clipart.com/en/index.

Kamil, M. L., & Hiebert, E. H. (2005). Teaching and learning vocabulary: Perspectives and perspective issues. In E. H. Hiebert, & Kamil, M. L. (Ed.), *Teaching and learning vocabulary: Bringing research to practice* (pp. 1-23). Mahwah, NJ: Erlbaum.

Labaree, D. (2004). *The trouble with Ed schools*. New Haven: Yale University Press.

Labbo, L. D. (1996). A semiotic analysis of young children's symbol making in a classroom computer center. *Reading Research Quarterly, 31*(4), 356-385.

Labbo, L. D., Eakle, A. J., & Montero, M. K. (2002). Digital language experience approach: Using digital photographs and software as a language experience approach innovation. [Electronic Version]. *Reading Online*, 6. Retrieved March 23, 2006 from http://www.readingonline.org/electronic/elec_index.asp?HREF=labbo2/index.html

Labbo, L. D., Love, M., Prior, M., Hubbard, B. P., & Ryan, T. (2006). *Literature links: Thematic units linking read-alouds and computer activities*. Newark, DE: International Reading Association.

Labbo, L. D. Love, M. S., & Ryan, T. (2007). A vocabulary flood: Making words "sticky" with computer-response activities. *The Reading Teacher*, *60*(6), 582-588.

Labbo, L. D., Sprague, L., Montero, M. K., & Font, G. (2000). Connecting a computer center to themes, literature, and kindergartners' literacy needs. [Electronic Version]. *Reading Online*, 6. Retrieved February 2, 2004 from http://www.readingonline.org/international/inter_index.asp?HREF=labbo

Lenski, S. D. (2001). Intertextual connections during discussions about literature. *Reading Psychology, 22*, 313-335.

Little, J. W. (1993). Teachers' professional development in a climate of education reform. *Educational Evaluation and Policy Analysis, 15*, 129-151.

Mayer, R. (1997). Multimedia learning: Are we asking the right questions? *Educational Psychologist*, *32*(1), 1-19.

McKeown, M. G., & Beck I. J. (2004). Direct and rich vocabulary instruction. In J. F. Baumann & E. B. Kame'enui (Eds.), *Vocabulary instruction: Research to practice* (pp. 13-27). New York: Guilford Press.

Medwell, J. (1998). The talking books project: Some further insights into the use of talking books to develop reading. *Reading, 32*(1), 3-8.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis.* Thousand Oaks, CA: Sage.

Morrow, L. M., & Casey, H. K. (2004). A professional development project with early literacy teachers: Partners in change. *The Reading Teacher, 57*(7), 662-669.

Nagy, W. E. (2005). Why vocabulary instruction needs to be long-term and comprehensive. In E. H. Hiebert, & Kamil, M. L. (Ed.), *Teaching and learning vocabulary: Bringing research to practice* (pp. 27-44). Mahwah, NJ: Lawrence Erlbaum.

Nagy, W. E., & Anderson, R. C. (1984). How many words are there in printed English? *Reading Research Quarterly, 19*, 304-330.

Nagy, W. E., Anderson, R. C., & Herman, P. A. (1987). Learning word meanings from context during normal reading. *American Educational Research Journal*, *24*, 237-270.

Nagy, W. E., Herman, P. A., & Anderson, R. (1985). Learning words from context. *Reading Research Quarterly*, *20*, 233-253.

Nagy, W. E., & Scott, J. A. (2000). Vocabulary processes. In M. L.Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 269-284). Mahwah, NJ: Lawrence Erlbaum.

National Center for Education Statistics (2001). *Teacher preparation and professional development*. (NCES 2001-088). Washington, DC: U. S. Department of Education.

National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups.* Washington, DC: Author.

National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups* (NIH Publication No. 004754). Washington, DC: National Institutes of Health and National Institute of Child Health and Human Development.

Neuman, S. B. (1999). Books make a difference: A study of access to literacy. *Reading Research Quarterly*, *34*, 286-311.

Newman, D. (1990). Opportunities for research on the organizational impact of school computers. *Educational Researcher*, *19*(3), 8-13.

Nicholson, T., & Whyte, B. (1992). Matthew effect from listening to words while listening to stories. In C. K Kinzer & D. J. Leu (Ed.), *Literacy theory, research, and practice: Views from many perspectives* (pp 499-503). Chicago, IL:National Reading Conference.

Paivio, A. (1986). *Mental representations: A dual coding approach.* Oxford, England: Oxford University Press.

Patton, M. (2002). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park,

CA: Sage

Penno, J. F., Wilkinson, I. A. G., & Moore, D. W. (2002). Vocabulary acquisition from

teacher explanation and repeated listening to stories: Do they overcome the Matthew effect?

Journal of Educational Psychology, 94(1), 23-33.

Piaget, J., & Inhelder, B. (1969). *The psychology of the child*. New York, NY: Basic Books, Inc.

Rasinski, T. V. (May, 1983). Using jackdaws to build background and interest for reading. Paper

presented at the 28th Annual Meeting of the International Reading Association, Anaheim, CA.

Reinking, D., & Bradley, B. A. (2004). Connecting research and practice using formative and

design experiments. In N. K. Duke & M. H. Mallette (Eds.), *Literacy research methodologies*

(pp. 149-169). New York: Guilford Press.

Reinking, D., & Watkins, J. (2000). A formative experiment investigating the use of multimedia

book reviews to increase elementary student's independent reading. *Reading Research*

Quarterly, *35*(3), 384-419.

Robbins, C., & Ehri, L. C. (1994). Reading storybooks to kindergartners helps them learn

new vocabulary words. *Journal of Educational Psychology, 86*(1), 54-64.

Rosenblatt, L. M. (1982). The literacy transaction: Evocation and response. *Theory into Practice*,

21, 268-277.

Ruddell, R. B., & Unrau, N. J. (2004). Reading as a meaning-construction process: The reader,

the text, and the teacher. In R. B. Ruddell, & N. J. Unrau (Eds.), *Theoretical Models and*

processes of reading (pp. 1462-1521). Newark, DE: International Reading Association

(Reprinted from Theoretical models and processes of reading, 4th edition, pp. 996-1056, by

R. B. Rudell, M. R. Ruddell, & H. Singer ed., 1994, Newark, DE: International Reading

Association.

Scarborough, H. S. (1998). Early identification of children at risk for reading disabilities: Phonological awareness and some other promising predictors. In B. K. Shapiro, P. J. Accardo, & J. Capute (Eds.), *Specific reading disabilities: A review of the spectrum* (pp. 75-119). Timonium, MD: York Press.

Schwanenflugel, P. J., Hamilton, C. E., Bradley, B. A., Ruston, H. P., Neuharth-Pritchett, S., & Restrepo, M. A. (2005). Classroom practices for vocabulary enhancement in prekindergarten lessons from PAVEd for success. In E. H. Hiebert & M. L. Kamil (Eds.), *Teaching and learning vocabulary: Bringing research to practice* (pp. 223-242). Mahwah, NJ: Erlbaum.

Segers, E., Takke, L., & Verhoeven, L. (2004). Teacher-mediated versus computer-mediated storybook reading to children in native and multicultural kindergarten classrooms. *School Effectiveness and School Improvement,* 159(2)*, 215-226.*

Segers, E., & Verhoeven, L. (2002). Multimedia support of early literacy learning. *Computers & Education, 39*, 207-221.

Segers, E., & Verhoeven, L. (2003). Effects of vocabulary training by computer in kindergarten. *Journal of Computer Assisted Learning, 19*, 557-566.

Senechal, M. (1997). The differential effects of storybook reading on preschoolers' acquisition of expressive and receptive vocabulary. *Journal of Educational Psychology*, *86*(1), 54-64.

Senechal, M., & Cornell, E. H. (1993). Vocabulary acquisition through shared reading experience. *Reading Research Quarterly, 28*, 361-374.

Senechal, M., Thomas, E., & Monker, J. (1995). Individual differences in 4-year-old children's acquisition of vocabulary during storybook reading, *Journal of Educational Psychology*, *87*, 228-229.

Showers, B., & Joyce, B. (1996). The evolution of peer coaching. *Educational Leadership*,

53(6), 12-16.

Snow, C. E., Barnes, W. S., Chandler, J., Goodman, I., & Hemphill, L. (1991). *Unfulfilled expectations: Home and school influences on literacy*. Cambridge, MA: Harvard University Press.

Spradley, J. P. (1980). *Participant observation.* New York: Holt, Rinehart, & Winston.

Stafford, J. (1998). Teachers supporting teachers through peer coaching. *Support for Learning 13*(2), 54-58.

Stahl, S. A. (1999). *Vocabulary development.* Brookline, MA: Brookline Books.

Stahl, S. A., & Fairbanks, M. M. (1986). The effects of vocabulary instruction: A model-based meta-analysis. *Review of Educational Research*, *56*, 72-110.

Stahl, S. A., & Stahl, K. D. (2004). Word wizards all! Teaching word meanings in preschool and primary education. In J. F. Baumann & E. B. Kame'enui (Eds.), *Vocabulary instruction: Research to practice* (pp. 59-78). New York: Guilford Press.

Stanovich, K. E. (1986). Mathew effects in reading: Some consequences of individual differences in acquisition of literacy. *Reading Research Quarterly*, *21*, 360-407.

Stanovich, K. E. (1993). Does reading make you smarter? Literacy and the development of verbal intelligence. In H. Reese (Ed.), *Advances in children development and behavior* (pp. 133-180). San Diego, CA: Academic Press.

Stanovich, K. E. (2000). *Progress in understanding reading.* New York: The Guilford Press.

Stanovich, K. E. & Cunningham, A. E. (1992). Studying the consequences of literacy within a literate society: The cognitive correlates of print exposure. *Memory and Cognition*, *20*(1), 51-68.

Sternberg, R. J. (1987). Most vocabulary is learned from context. In M. G. McKeown & M. E.

Curtis (Eds.), *The nature of vocabulary acquisition* (pp. 89-105). Hillsdale, NJ: Erlbaum.

Teale, W. H. & Sulzby, E. (1986). *Emergent literacy: Writing and reading*. Norwood, NJ: Ablex.

Turbill, J. (2003). Exploring the potential of the digital language experience approach in Australian classrooms. *Reading Online, 6*(7). Retrieved March 6, 2005 from http://www.readingonline.org/international/inter_index.asp?HREF=turbill7/

Van Allen, R. (1982). *Language experience activities* (2nd ed.). Boston: Houghton Mifflin.

Vygotsky, L. V. (1962). *Thought and language*. Cambridge: MIT Press.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Wasik, B. A., & Bond, M. A. (2001). Beyond the pages of a book: Interactive book reading and language development in preschool classrooms. *Journal of Educational Psychology, 93*(2), 243-250.

White, T. G., Graves, M. F., & Slater, W. H. (1990). Growth of reading vocabulary in diverse elementary schools: Decoding and word meaning. *Journal of Educational Psychology*, *82*(2), 281-290.

Whitehurst, G. J., Arnold, D. S., Epstein, J. N., Angell, A. L., Smith, M., & Fischel, J. E. (1994). A picture book reading intervention in day care and home for children from low-income families. *Developmental Psychology, 30*, 679-689.

Whitehurst, G. J., Falcon, F., Lonigan, C. J., Fischel, J. E., DeBaryshe, D. B., Valdez-Menchaca, M. C., & Caulfield, M. (1988). Accelerating language development through picture book reading. *Developmental Psychology, 24*, 552-559.

Wittrock, M. C. (1974). Learning as a generative activity. *Educational Psychologist*, *11*, 87-95.

Wittrock, M. C. (1989). Generative processes of comprehension. *Educational Psychologist*, *24*, 345-376.

SOFTWARE

ATLIS.ti: The Knowledge Workbench (Version 5.2.18). [Computer Software]. (2002-2008). Berlin: Scientific Software Development GmbH.

Clipart.com. (2007). Darien, CT: JupiterImages Corporation. Retrieved October 10, 2007 from http://www.clipart.com/en/index.

Encarta World English Dictionary (North American Edition). (2007). Redmond, WA: Microsoft Corporation. Retrieved April 2, 2008 from

http://encarta.msn.com/dictionary_1861604679/digitize.html?partner=orp.

iMovie (Version 7.1.1). [Computer software]. (2008). Cupertino, CA: Apple Incorporated.

Microsoft Power Point [Computer software]. (2003). Redmond, WA: Microsoft Corporation.

Microsoft Word [Computer software]. (2003). Redmond, WA: Microsoft Corporation.

Smart Notebook (Version 9.7). (1995-2007). Calgary, Canada: Smart Technology.

Sony Digital Voice Editor (Version 3.0). [Computer software]. (1999-2007). Asia Pacific Pte Ltd: Sony Electronics.

SuccessMaker Enterprise (Version v1.5.1). [Computer courseware]. (2005). Scottsdale, AR: Pearson Education, Incorporated.

CHILDREN'S BOOKS

Becvar, P. (1991) *Who was John Chapman?* Maple Grove, MN: Nystrom.

Berenstain, J., & Berenstain, S. (1994). *The Berenstain Bears' New Neighbors.* New York: Random House.

Berger, M. (1993). *An apple a day*. New York: Newbridge.

Bishop, G. (*1989). The three little pigs*. New York: Scholastic.

Bourgeois, P. (1999). *Franklin's neighborhood*. New York: Scholastic.

Branley, F. M. (1985). *Flash, crash, rumble, and roll.* New York: HarperCollins.

Brenner, B. (1972). *Disney's three little pigs*. New York: Random House.

Cannon, J. (1993). *Stellaluna*. New York: Harcourt.

Carle, E. (1998). *A house for hermit crab*. New York: Scholastic.

Carle, E. (2001). *The tiny seed*. New York: Aladdin.

Cronin, D. (2003).*Diary of a worm.* New York: Joanna Cotler.

Earle, A. (1995). *Zipping, zapping, zooming bats (let's-read-and-find-o*ut). New York:

    HarperTrophy.

Fleming, D. (1992). *Lunch.* New York: Henry Holt & Company.

Freeman, D. (1978). *A pocket for corduroy*. New York: Viking Press.

Gallimard, J. G., & Bourgoing, P. (1989). *Weather*. New York: Scholastic.

Gay, M.-L. (1999). *Stella, star of the sea*. Toronto, Ontario: Groundwood Books.

Gay, M.-L. (2003). *Good morning Sam*. Toronto, Ontario: Groundwood Books.

Gay, M.-L. (2005). *Caramba*. Toronto, Ontario: Groundwood Books.

Gay, M.-L. (2006). *Stella fairy of the forest*. Toronto, Ontario: Groundwood Books.

Gibbons, G. (2000). *Apples*. New York: Holiday House.

Gibbons, G. (2000). *The pumpkin book.* New York: Holiday House.

Higgs, L. C. (2006). *The pumpkin patch parable*. New York: Thomass Nelson.

Hillert, M. (1963). *The three little pigs*. Cleveland: Modern Curriculum Press.

Howard, E. (2007). *The big seed*. New York: Aladdin.

Jordan, H. (1992). *How a seed grows (Let's-read-and-find-out science).* New York:

HarperTrophy.

King, E. (1996). *The pumpkin patch.* New York: Puffin.

Kroll, S. (2000). *The story of the star-spangled banner: By the dawn's early light*. New York:

    Scholastic.

Ladybird Easy Reading Book. (1982). *The three little pigs.*

    (http://www.unipaderborn.de/~odenbach/pigs/pigs.html)

Lexau, J. M. (1985). *The big, big pumpkin*. Delran, NJ: Weekly Reader Books

Lucca, M. (2001). *Seeds grow into plants*. Des Moines, IA: National Geographic.

Lovell, P. (2001). *Stand tall Molly Lou Melon.* New York: Putnam.

Maestro, B. (1993). *How do apples grow?* New York: HarperTrophy.

Masteron Elementary Students, First-Grade Students of H. Bryon Masterson Elementary in

    Kennett, Missouri. (2002). *September 12th: We knew everything would be all right.* New

    York: Scholastic.

Middleton, C. (2004) *Enrico starts school.* London: Gullane.

Numeroff, L. (2004). *Beatrice doesn't want to*. Cambridge, MA: Candlewick.

Park, B. (1992). *Junie B. Jones and the stupid smelly bus.* New York: Random House.

Park, B. (2004). *Junie B., First Grader: One-Man Band*. New York: Random House.

Penn, A. (2006). *The kissing hand*. Terre Haute, IN: Tanglewood Press.

Rabe, T. (2004). *Oh say can you say what's the weather today: All about weather*. New York:

    Random House Books.

Ransom, C. (1995). *The big green pocketbook*. New York: Harper Trophy.

Riley, G. B. (2003). *Busy as a bee*. Glenview, IL: Scott, Foresman and Company.

Roald, D. (1997). *George's marvelous medicine*. New York: Scholastic.

Robbins, K. (2003). *Apples*. New York: Scholastic.

Ryan, P. M. (2000). *The flag we love*. Watertown, MA: Charlesbridge.

Scieszka, J. (1996). *The true story of the three little pigs*. New York: Puffin.

Silverman, E. (1995). *Big pumpkin*. New York: Aladdin.

Stewart, D. L. (2000). *Harriets' horrible hair day.* Atlanta, GA: Peachtree Publishers .

Thayer, J. (1953). *The popcorn dragon*. New York: Scholastic.

Viorst, J, (1987). *Alexander and the terrible, horrible, no good, very bad day.* New York: Aladdin.

Wiesner, D. (2001). *The three pigs*: New York: Clarion Books.

Wood, A. (2003). *Alphabet mystery*. New York: Blue Sky Press.

APPENDIX A

INTERVIEW GUIDE

Interview Guide

1. Can you tell me about your educational background and teaching experience?
   (years/grade levels taught/ types of schools/highest level of degree earned)

2. Can you describe a typical day's language arts block of time?
   (reading, writing/your role, students' roles)

3. Can you tell me how you teach vocabulary?
   (reading, writing, content area activities)

4. Can you tell me your beliefs regarding how children learn?
   (use of instruction and connections/ motivating or engaging)

5. Can you tell me what you think are the most important instructional strategies, methods, and or practices for teaching literacy?
   (drill and skill, discussions, rewards, inquiry approach, small or whole group, direct instruction)

6. Can you tell me how many times you read-aloud to your students daily?
   (weekly, materials)

7. When you read aloud, what objectives do you focus on?

8. Can you describe any word learning or vocabulary instructional activities? What would I see happening?
   (when, how often, planning decisions)

9. Can you tell me how you assess students' literacy learning?
   (vocabulary, word learning, decoding, fluency, writing development)

10. Can you tell me how you use computers personally?

11. Can you tell me how you use computers professionally?
    (preparing, correspondence, handouts, grading, resources, assessments)

12. If I followed you through a typical lesson that uses computers, what would I see you doing? What would I see the students doing?
    (where, when, how, software)

13. Can you tell what your objectives are for using computers with your students?
    (skills, Internet resources, presentation, writing process, assessment, communication, software, games)

14. What do you think are advantages for using technology with literacy instruction?

15. What do you think are disadvantages for using technology with literacy instruction?

16. Can you describe your future goals for integrating technology with literacy instruction?

APPENDIX B

HANDOUT FOR FIRST FOCUS GROUP MEETING

11

What are the Goals of Walk Talk Words?

- 🔵 To use everyday classrooms resources, books, materials, and equipment to teach Tier Two words.

- 🔵 To enhance, enrich, and improve first-grade students' vocabulary learning

How to Use Walk Talk Words and Why?

- 🔵 1st Find *Tier Two Words* in books, daily conversations, and classroom contexts to develop and expand word connections

- 🔵 2nd Use *Text Talk* with read-alouds to contextualize learning and strengthen oral language & comprehension skills. Modified versions of Text Talk allow for sprinkling of T2 to daily conversations.

- 🔵 3rd Offer *Digital Language Experience Approach to* represent word meanings in a visual mode

What Does Research Say About Word Learning?

- Repeated readings of same storybook **without** word meaning explanations = 9%* gain in new vocabulary

  (Brabbams & Lynch-Brown, 2002; Elley, 1989; Penno, Wilkinson, & Moore, 2002; Robbins & Ehri, 1994)

- Single storybook readings **with** word meanings explained = 15% gains*

  (Nicholson & Whyte, 1992; Senechal & Cornell, 1993)

- Repeated readings **with** explanations = 26% gains*

  (Brett, et al., 1996; Elley, 1989; Hargrave & Senechal, 2000; Penno, Wilkinson, & Moore, 2002; Robbins &   Ehri, 1994)

** average gains; 3-10 words taught per day; ages 3-10 (different children are learning different words)

Results: Children learn ¼ of word meanings explained during storybook readings

How Does Research Support Walk Talk Words?

- Vocabulary knowledge in kindergarten and first grade predicts reading ability in middle and high school (Cunningham & Stanovich, 1997; Scarborough, 1998).

- Vocabulary knowledge contributes to young children's phonological awareness, which in turn contributes to their word recognition (Nagy, 2005).

- Teaching vocabulary can improve reading comprehension for both native English speakers

  (Beck, Perfetti, & McKeown, 1982) and English learners (Carlo et al., 2004)

214

- Growing up in poverty often limits the vocabulary children learn before formal schooling and hinders future word learning.

  (Coyne, Simmons, & Kame'enui, 2004; Hart & Risley, 1995).

- Less advantaged children have smaller vocabularies than more advantaged children.

  (Templin, 1957; White, Graves, & Slater, 1990).

- Economics predicts children's vocabulary and often predicts school, reading, and comprehension success.

  (Coyne, Simmons, & Kame'enui, 2004; Hart & Risley, 1995).

The number of words an average child hears in a typical hour before starting kindergarten.

Welfare	Working Class	Professional
616	1,251	2,153
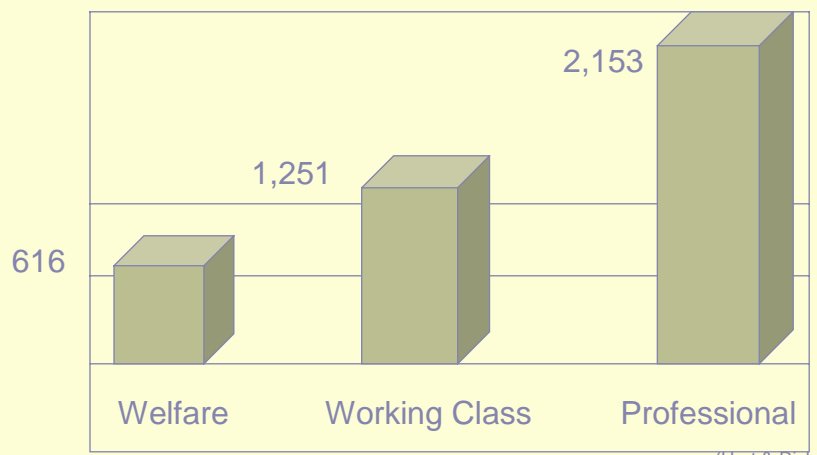
(Hart & Risley, 1995).

How many words do children know?

- Average children start school knowing 6000 words.
- Less advantaged children start school knowing 3000 words.
- By Sixth grade students know approx. 25,000 words.
- The average high school graduate knows approx. 50,000.

  Resulting in roughly 8 words learned in a day.

The Approximate number of root words known by students at the end of 2nd grade.
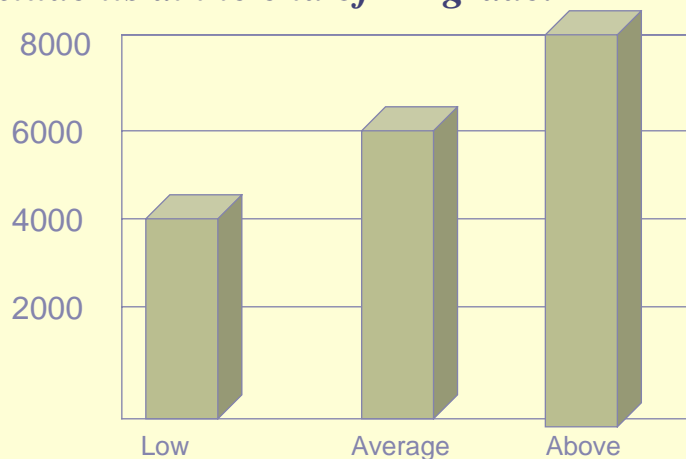
Leaving a 2000 word vocabulary gap between advantaged and less advantaged students. (Hart & Risley, 1995).

Why Does a Vocabulary Gap Continue During the Primary Grades?

- Little to no vocabulary instruction is offered in grades k-2. (NRP, 2000)

- Age not school attendance effects vocabulary growth. (Biemiller, 2003).

- Materials used in the primary grades contain tier one words to support and focus on children's abilities to learn to read.

How Does Walk Talk Words Foster Vocabulary Growth?

- Through Receptive (listening and reading) Vocabulary Activities:

  * students learn words when listening to stories, conversations, creating, and rereading D-LEA class produced books.

- Through Expressive (speaking and writing) Vocabulary Activities:

  * students use T2 words during Text Talk discussions, classroom happening, and D-LEA narrations.

  * students revisit T2 words when composing text for D-LEA photographs.

How Does Walk Talk Words Promote Word Consciousness?

- Draws attention to words sprinkled into classroom routines, events, and discussions.

- Uses Text Talk principles to explicitly teach word meanings during read-alouds and discussions. Extends Text Talk to include explicit focusing on T2 words used during classroom happenings.

- D-LEA captures students actively engaged with T2 word meanings. Photographs serve as the vehicle for background knowledge that enriches discussions, reflections on the experience, composing and sharing of multimedia presentations, and rereadings of class produced books.

What are T2 Words?

(Beck & McKeown, 1985 ;Beck, McKeown, & Kucan, 2002)

- **Tier One**: basic words used in beginning readers like dog, green, father, and run. Words typically not needing formal instruction.

- **Tier Two**: high frequency words for mature language users. Add precision to written communication, and are conceptually known and understood by most young children. T2 words include ajar, coincidence, and morsel.

- **Tier Three:** low frequency words used in specialized content areas such as isotope, lathe, and peninsula.

218

Where Can I Find Tier Two Words?

- Children's literature, trade books, websites, and nonfiction texts

- Commercials, newspapers, Weekly Readers, bulletin boards, billboards, television, songs, poems, conversations, home environments, etc..

What is the Criteria for selecting T2 Words?

- Importance
- Instructional potential
- Conceptual understanding
- And Interest

(Beck & McKeown, 1985)

Are the Words Important?
Do they offer Instructional Potential?

- Can the words function in other contexts to read, write, and speak?
- Are the words useful?
- Are they words students met in later grades and in other books?
- Can students use the word to describe their own experiences?

(Beck & McKeown, 1985 ;Beck, McKeown, & Kucan, 2002)

Can Children Understand the Concept?

- Are students familiar with the idea or concept to connect to the Tier Two word?
- Does the word relate to other words or ideas students know?
- Will it apply to other subject areas and topics studied in the classroom?
- Will it depth and interest to ideas already known?

Students know the concepts of noisy and busy and use this to learn commotion.

(Beck & McKeown, 1985 ;Beck, McKeown, & Kucan, 2002)

Are the Words Interesting?

- Will children use the word in other situations and printable texts?

- Will I enjoy using this word with the students?

What are some Examples of T2 Words Sprinkle into a Classroom Environment?

- Eating: devour, edible, famished, morsel, scrumptious

- Sounds: advice, announce, shriek, blurt, convince

- Movement: launch, trudge, hoist, dash, hurl

- Describing: absurd, dilemma, dignified, contrary, soggy, embellish, ajar

- Behavior: conscientious, cherish, embrace, entice, entrenched

- "The fall leaves are so vivid in the fall."
- "Wasn't the lunchroom boisterous today?"
- I really like the way you have embellished your backpack (drawing, project etc.)
- "I love how persistent you are at writing your name so neatly."
- "Alex, can you illuminate the room?"
- "Thank you for closing the door that was ajar."
- "You've received an E on your work because it is exceptional."
- "I love how the people in the loft were cooperating with one another as you made room for Mike."
- "We need to halt at the end of the spacious hallway on our way to recess."

How do I Use Text Talk to Strengthen Cognitive Links?

Read the book once with limited interruption while reading.
- 1. **Repeat** the word using the story's sentence or classroom event.
- 2. **Define** with a child friendly definition.
- 3. **Say** the word aloud with the students for a phonological representation.
- 4. **Use** the word in different "student familiar" situations. Both teacher and students use the words in various sentences. Ex: "Think of something you would be reluctant to do. Start your sentence with I would be reluctant to …. And tell why." **Support** with additional sentences. Ex: "Which would you be reluctant to hold a kitten or a rattlesnake?" or Which word means?
- 5. **Say the word** again with the students again.

(Beck, McKeown, & Kucan, 2002)

How do I Offer Multiple Exposures?

- Word walls
- Morning message,
- Literacy centers: Drama, computer, write around the room/school, pocket chart
- Mini-lessons
- Concept/Semantic Map
- Charts, tally charts for word sightings
- Newsletter
- School Morning News, broadcasts
- other

How do I use Walk Talk Words with D-LEA?

- 1. Set up an experience to capture T2 words in student friendly, relevant and meaningful experiences.

- 2. Select an experience, students and teacher discuss which pictures to take, where to find the pictures, and how.

Encourage students to orally use tier 2 words during discussions.
 Ex: During a health unit, a teacher might target the words - morsel, devour, and edible

Teacher: "Where can we find an example of a morsel?"
 or "Where can we find someone devouring something edible?"

Child: "We can go to the cafeteria to find morsels on the floor."

Child: "The cafeteria ladies are always cleaning up morsels after lunch."

Child: "We can take a picture of Michael devouring his lunch because he is always hungry."

- 3. Photograph the experience.
  Assign a student to be the week's 'Word Wizard' or 'Word Expert' to photograph the experiences.

- 4. Import the pictures into a software program like Microsoft Word Power Point.

- 5. Create a multimedia story or photo essay:
  View the pictures together.
  Reflect on the experience.
  Sequence the pictures to tell or dictate a story.
  Insert and celebrate T2 words in the context of the event.

- Use SMART software's keyboard to type the story or use record option and have students narrate the story.

- Listen to computer narrate the story or reread text, make changes, highlight tier 2 words with colored text or select a different font, add music, and or animations.

- Create a title, table of content, glossary, index, dedication page, and author profiles.

- Print and bind pages into a class book.

- Print individual pages to reinforce essential questions and or skills.

Walk Talk Words with D-LEA:

- 🜨 5. Reread stories using choral or echo reads.
- 🜨 Print stories for independent reading.
- 🜨 Display in classroom library.
- 🜨 View stories as slide shows.
- 🜨 Read stories on Morning broadcast.
- 🜨 Send home to share with parents.

How can I use Time Fillers with T2 Word Walls?

- 🜨 Thumbs Up Thumbs Down

    "If I say something you might clutch, put up a thumb. Put down your thumb if not.

    Holding a purse tightly

    Holding on to a branch when climbing a tree

    Softly petting a cat's fur

    Blowing bubbles and trying to catch them."

"This morning I ate a morsel of chocolate because a lot could make me fat."

"If the food I mention is a morsel, put your thumb up, if it's not put your thumb down.

A whole pizza

A raisin

A turkey dinner"

Eating		
Appetite	need to eat	*Can I Keep Him?* By Steven Kellogg
Craving	want badly, hungry for	*The Worf's Chicken Stew* by Keiko Kasza
Crouch	stoop, bend over, squat	
Devour	eat greedily, gulp down	
Edible	can eat, not poisonous	
Famished	starving, hungry	
Gnaw	chew or nibble/ worry	*Harriet* by Deborah Inkpen
Hoist	lift, raise	
Morsel	crumb, small piece	*Doctor DeSoto* by Wiliam Steig
Nibble	small bites	*Mouse in the House* by Patricia Baehr
Scrumptious	tasty, lip smacking, gorgeous	T*e Worf's Chicken Stew* by Keiko Kasza
Stingy	thrifty, skimpy, cheap, frugal, careful	
Sufficient	enough, plenty	

APPENDIX C

WALK TALK WORDS LESSON PLAN

Walk Talk Words Lesson Plan

Week: _____

Source: Incidental / Book(s) / Internet / other _____

Book Title or Web Site: _____

Subject Area: _____

Targeted Words: _____   _____

_____   _____   _____

_____   _____   _____

Why Selected:

Circle ones used: **Text Talk and Targeted Words:**	*Circle ones used:* **Activities with D-LEA:**	*Circle ones used:* **Recycle Words:**
Read the book once without interruption. 1. Reread the sentence from the book that contains the tier 2 word. 2. Offer a child friendly definition. 3. Have students repeat the word. 4. Use the word in different situations familiar to the children. 5. Play Thumbs Up or Down by using the word in a judgment sentence. Ex: "Which would you be reluctant to hold a kitten or a rattlesnake?" 6. Students use in a sentence. Say, "Think of something you would be reluctant to do. Start your sentence with I would be reluctant to …." 7. Children repeat the word. 8. Review, "What's the word that means ….?"	Use with Software Programs Writer's Workshop Field trips Discoveries at school At home Newsletters Keypals Emails Postcard Other:	Literacy Center Word Wall Drama Center Concept/Semantic Map Writing on Computer *Walk Talk Word* Sightings & Chart *Walk Talk Words* around Room/School Newsletter Pocket Chart School Morning News Scenarios Morning Message Other:

Describe successes:

Describe difficulties:

What needs modifying and tell why?

Describe any pre or post assessment:

APPENDIX D

CAPTURING VIDEO SEGMENTS AND TRANSCRIBING VOCABULARY

TALK IN ATLIS.TI 5.2

Capturing Video Segments and Transcribing Vocabulary Talk in Atlis.ti 5.2

P11: sa 11 9 2008_01_05_1...

☐ Stretch ☐ Mute ☑ Top

sa 11 9 2008_01_05_15_19_55.wmv (1:04:10.51)

<Quotation>   <Sel Start> <Sel End>   <Sel

3:13.92

Memo Manager [HU: y all ...

Memos   Edit   Miscellaneous   Output   View

Name	Type	Grou...	De
10 19 sa transcripts o...	Memo	0	0

10/19 enter and the children are sitting on the floor in front of the dry erase board as sa is writing on some white laminated math story problem sheets. it's calendar time. i come in and set-up for taking field notes and place the camera on the back book shelf.

t: there are 18 soggy children.

sts: hey

s: stop it

s: soggy that's a clue

t: and then 2 more came. How many soggy children are there?

sts: are there

t: thank you for raising your hand quietly. Kim kim

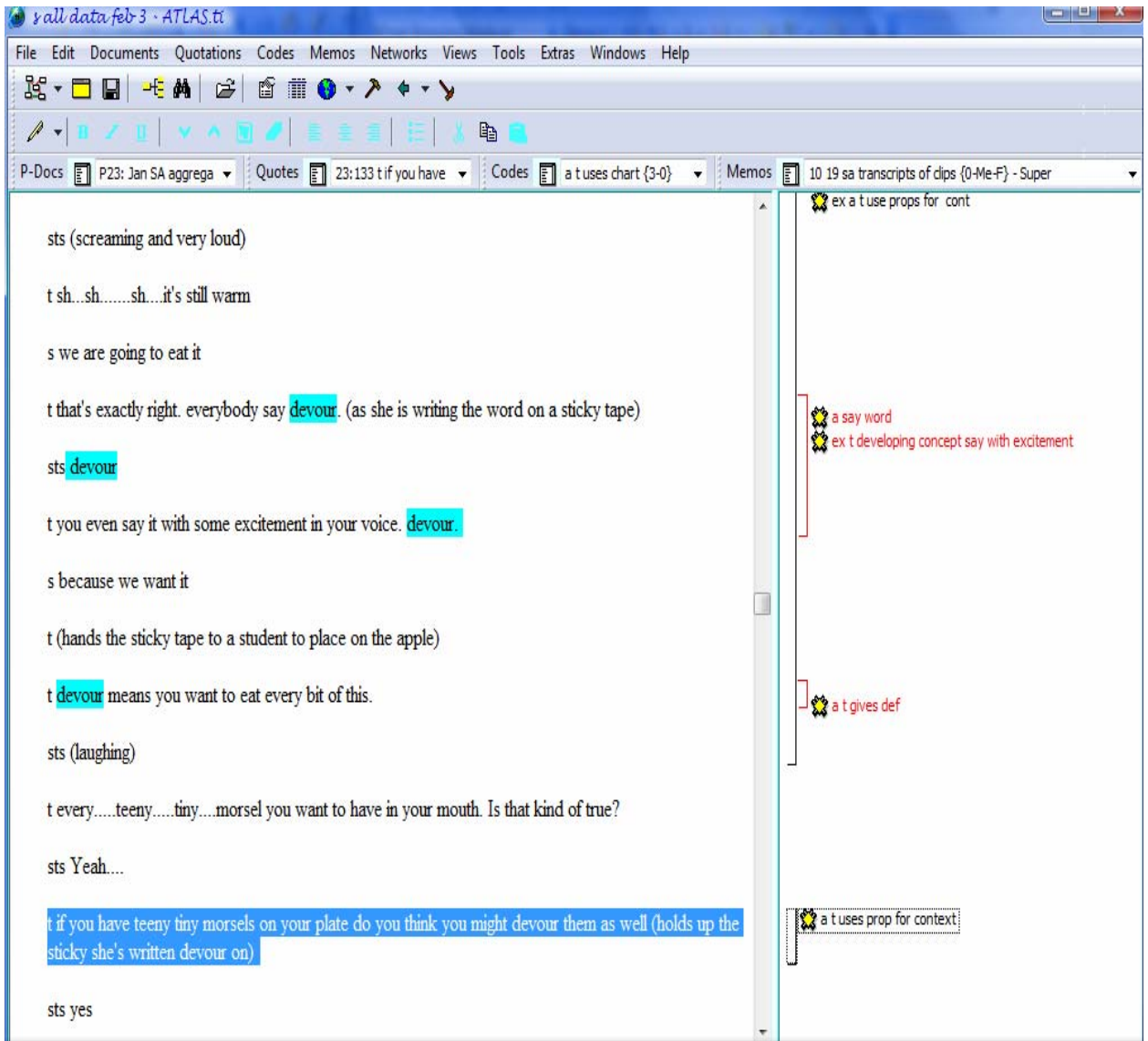t: let's say the thinking rule. What is ssm?

t: ssm

sts: solve and some more

2 Memos   10 19 sa transcripts All   Name - Title

APPENDIX E

INCIDENT-BY-INCIDENT CODING IN A HERMENEUTIC UNIT IN ATLIS.TI 5.2

Incident-by-Incident Coding in a Hermeneutic Unit in Atlis.ti 5.2

APPENDIX F

CREATING CATEGORIES USING FAMILY NODES IN ATLIS.TI 5.2

Creating Categories using Family Node in Atlis.ti 5.2

Code Family Manager [HU: s all data feb 3]

Families   Edit   Miscellaneous   View

active participatio...   home school conn...   modeling coaching...   realities of teachin...   student centered l...
assessing learning...   integrating skills (0)   motivation (0)   recycling (0)   student need (0)
hands on context ...   memory aids (0)   prior knowledge (0)   **reference learni...**   task management ...

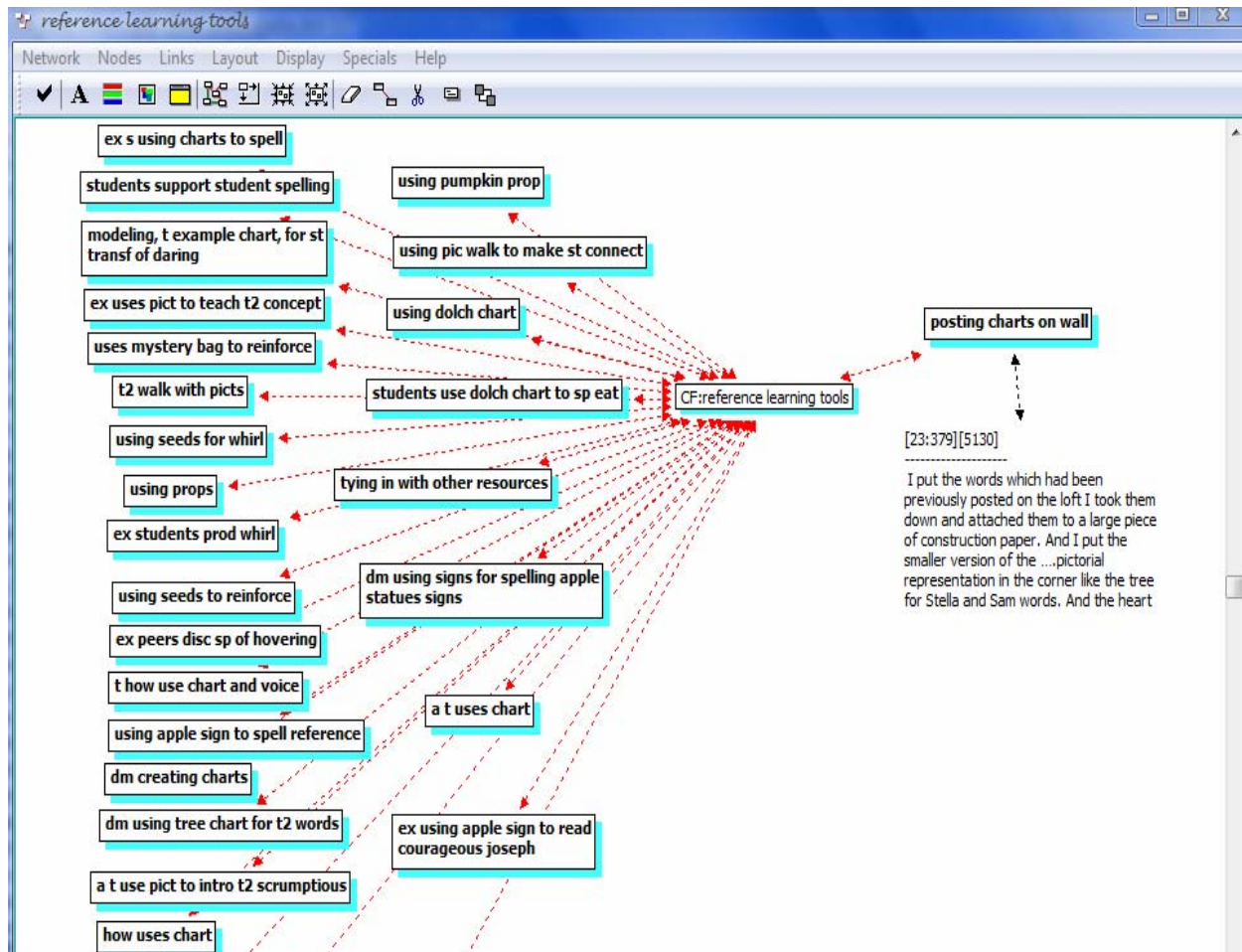|	
a t use pict to intro t2 scrumptious {1...	t scaffoiaig connect to pic t2 {3-0}
a t uses chart {3-0}	t sense of accomplishment {1-0}
dm creating charts {3-0}	t sharing t2 context exper {1-0}
dm using signs for spelling apple stat...	t using text connect for writing prom...
dm using tree chart for t2 words {1-0}	t warm up with rerding t2 chart {1-0}
ex peers disc sp of hovering {1-0}	t2 before and after placing on chart {...
ex peers using charts to spell {1-0}	teacher beliefs {2-0}
ex s using charts to spell {3-0}	teacher enthusiasm {3-0}
ex students prod whirl {1-0}	teachers enthusism for book {1-0}
ex uses pict to teach t2 concept {1-0}	teaching to use words {1-0}
ex using apple sign to read courageo...	thumbs up after rding {2-0}
how uses chart {1-0}	Today she is thinking faster o.. {1-0}
modeling, t example chart, for st tran...	training supports {3-0}
posting charts on wall {1-0}	transfer t2 to writ act {1-0}
sound stretching words {2-0}	transfer to other events counselor {1...
students support student spelling {1-0}	transfering t2 to classroom environ c...
students use dolch chart to sp eat {1...	tying into math {1-0}
t how use chart and voice {2-0}	uniq occ to cont wd in clas envir r {2-0}
t2 walk with picts {1-0}	uses drawing before wriring {2-0}
tying in with other resources {1-0}	using authors chair {1-0}
uses mystery bag to reinforce {1-0}	using classroom resources to spell t2 ...
using apple sign to spell reference {1-0}	using dramtics to yank {1-0}
using dolch chart {1-0}	using inced t2 abundance {1-0}
using pic walk to make st connect {3-0}	using t2 for task managment {3-0}
using props {1-0}	using writing to scaffold and incorp t2...
using pumpkin prop {1-0}	vaniegh reading dlea stella text {1-0}

Both teachers are reinforcing words with visuals, adler uses lots of props--pinecone seeds, students using charts to spell words

15 Families   reference learning tools   Active Filter

APPENDIX G

CODE-MAPPING VISUAL MODEL IN ATLIS.TI 5.2

Code-mapping Visual Model in Atlis.ti 5.2

reference learning tools

Network   Nodes   Links   Layout   Display   Specials   Help

ex s using charts to spell

students support student spelling

modeling, t example chart, for st transf of daring

using pumpkin prop

using pic walk to make st connect

ex uses pict to teach t2 concept

using dolch chart

uses mystery bag to reinforce

posting charts on wall

t2 walk with picts

students use dolch chart to sp eat

CF:reference learning tools

using seeds for whirl

[23:379][5130]
----

using props

tying in with other resources

I put the words which had been previously posted on the loft I took them down and attached them to a large piece of construction paper. And I put the smaller version of the ....pictorial representation in the corner like the tree for Stella and Sam words. And the heart

ex students prod whirl

using seeds to reinforce

dm using signs for spelling apple statues signs

ex peers disc sp of hovering

t how use chart and voice

a t uses chart

using apple sign to spell reference

dm creating charts

dm using tree chart for t2 words

ex using apple sign to read courageous joseph
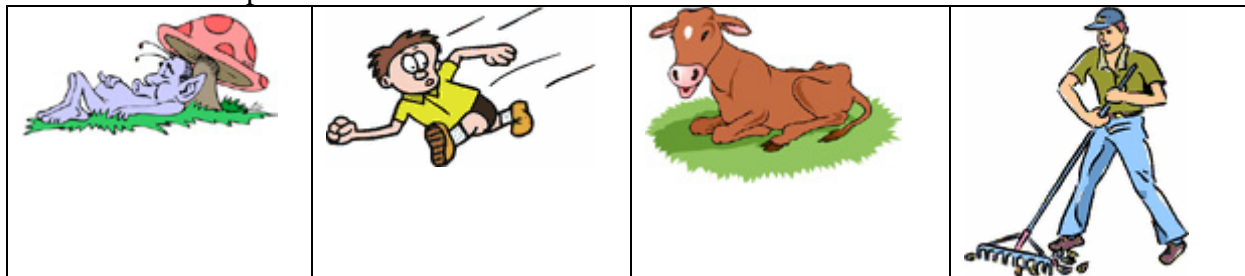
a t use pict to intro t2 scrumptious

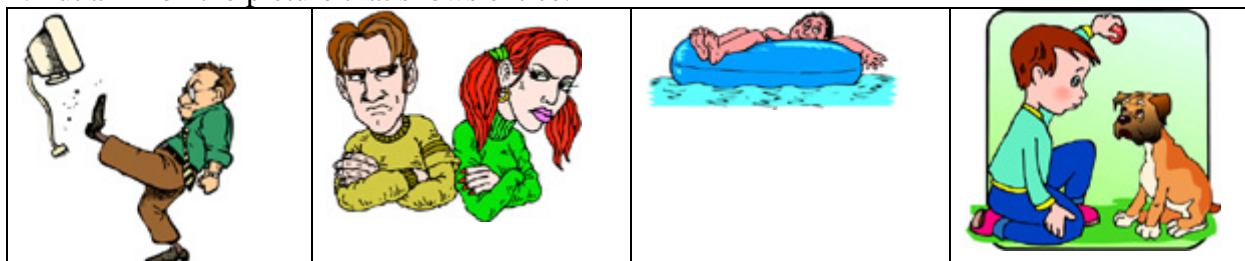how uses chart

APPENDIX H

MS. BEE TIER TWO ASSESSMENT WEEKS 1-3
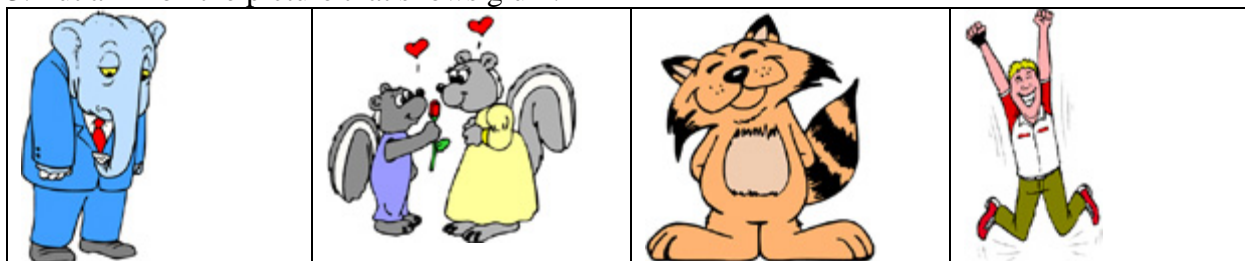
Ms. Bee Tier Two Assessment, Weeks 1-3

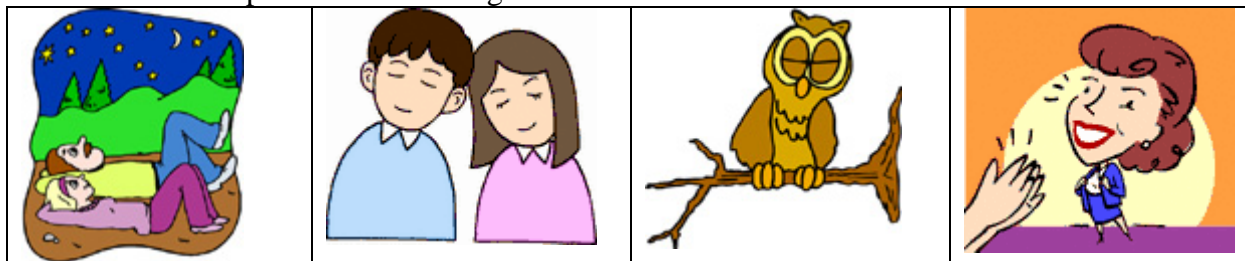1. Put an X on the picture that shows to dash.
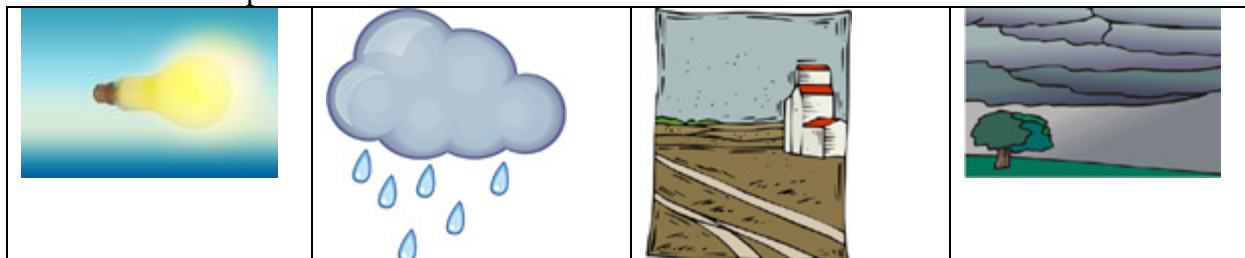
2. Put an X on the picture that shows entice.

3. Put an X on the picture that shows glum.

4. Put an X on the picture that shows gaze.

5. Put an X on the picture that shows illuminate.

APPENDIX I

CHILD ASSENT SCRIPT/FORM

Child Assent Script/Form

I want to see if you would be willing to help me with a research project about how kids learn new words when using digital cameras and when working on the computer. I'll watch your teacher and your class during lessons when your teacher talks about new and fun words. I'll watch you and your friends when you use the digital camera to take pictures of the words and when you make sentences on the computer. I'll only be watching, maybe videotaping, and taking notes from the back of the room. I just want to learn from you, your classmates, and your teacher how children learn new words.

If you decide to do the project with me, I'll ask you to play a game with me by looking at some pictures and telling me what the pictures are. We will also play a game where I'll say a word and you'll point to the picture matching that word. You can also decide to stop playing the game at any time or can choose not to answer questions that you don't want to answer.

Do you have any questions? Would you be willing to do the project with me?

_____
Child's signature

APPENDIX J

AGENDA FOR FINAL FOCUS GROUP MEETING

Agenda for Final Focus Group Meeting

November 5, 2007

1. Share "ah ha" moments and any frustrations.

2. Ask questions.

3. Offer suggestions.

4. Discuss refinements for continued use of Walk Talk Words.

5. Schedule next week's observations and Form B PPVT-4 testing.

November 2007

M	T	W	TH	F
29	30	31	1	2
5	6	7	8	9
12	13	14 1/2	15 1/2	16
19	20	21 H	22 H	23 H
26	27 NRC	28 NRC	29 NRC	30 NRC

December 2007

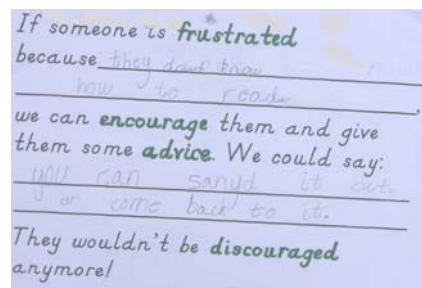| 3	4	5	6	7
10	11	12	13	14
17	18	19	20	21

APPENDIX K

STEPS IN COMPLETING A PARTNER TALK DIGITAL LANGUAGE EXPERIENCE

APPROACH CLASS BOOK PAGE FOR EMOTIONS AND CHARACTER

DEVELOPMENT THEMATIC UNITS

#1

#2

1. Partner Talk groups illustration of something that makes them frustrated.
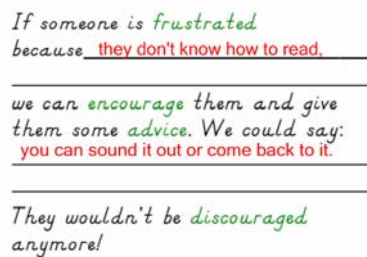2. Partner Talk groups complete a teacher created template with Tier Two words.

He is frustrated because he doesn't know how to read some of the words

They are encouraging him to try to sound it out. That is good advice.

#3

If someone is frustrated because they don't know how to read,

we can encourage them and give them some advice. We could say: you can sound it out or come back to it.

They wouldn't be discouraged anymore!

#4

Students are staged to dramatize the frustrated moment. One member of the Partner Talk group photographs the staging.

3. Photographs displayed on the left page of the class D-LEA book.
4. Written template recreated as a page in Smart Notebook and displayed to the right of the photographs.

APPENDIX L

TEXT AND TIER WORDS USED IN MS. ADLER'S DIGITAL LANGUAGE EXPERIENCE
APPROACH CLASS BOOK

Digital Language Experience Approach Text in Ms. Adler's Six Class Books
Instructed Tier Two Words in Bold

Sam and Stella's Friends in the Woods by Mrs. Adler's Class 2007-2008
One day we saw a butterfly and a caterpillar on the plants. Sam said, "What's that, Stella?" Stella said, "It's a fairy!"
 The next animal we saw was an ant on the ground. "What's that?" asked Sam. "What does that eat?" Stella said "Our food."
"Where do they live?"
"They live in an ant hill."
The next animal we saw was two bears. Sam asked "Do they eat people?" "No," said Stella, "they are too tiny to eat us. They eat meat and fish." "Are you sure?" "Yes," said Stella.
The last animal was an owl. Sam aked, "Are they awake in the day?"
"No," said Stella. "They are awake in the night. They fly around in the night and they catch food."
 0 Tier Two words /135 total words   The end.

Apple Week
ON Monday we ate a **delicious** apple pie! It was **scrumptious!** Everyone **devoured** their pie. Then we threw our plates away. We didn't leave a single **morsel** on our desks.
The next day we did a graph with apples. The Red **Delicious** was the most. The Golden **Delicious** was the least. We love apples because they're **scrumptious.**
On Wednesday we made apple statues. We made the statues on a little pedestal. We enjoy playing with them. We pretend they can talk. We wanted to thank John Chapman for planting all those apple trees.
We pretended that Johnny Appleseed was here. ON the same day that we made the apple statues, it was his birthday!
On Friday, we had an apple taste test. They all tasted good and **scrumptious**. Everyone took a piece of each apple and **devoured** it. There was Golden **Delicious,** Red **Delicious,** Fuji, Gala, and Granny Smith.
Results of the Apple Taste Test Tally Chart
Golden **Delicious** 2
Fuji 2
Red **Delicious** 8
Gala 6
Granny Smith 2
The apple chosen as favorite by most people was the red **delicious**.
14 Tier Two words/182 total words

Stellaluna is Falling!
Will Vanna **clutch** Stellaluna?
Daniel is **clutching** Vanna.
Ben **clutched** Daniel.
Mark **clutches** Steve.
Will they rescue Stellaluna?
Will Ashlyn **grab** Stellaluna?

Jessie is **grabbing** Ashlyn.
Audrey **grabbed** Jessie.
Garrett **grabs** Audrey.
Will they rescue Stellaluna?
Will Joel **grasp** Stellaluna?
Samantha is **grasping** Joel.
Joe **grasped** Samantha.
Zack **grasps** Joe.
Will they rescue Stellaluna?
Will Zybriauna **grip** Stellaluna?
Marissa is **gripping** Zy.
Billy **gripped** Marissa.
Ryan **grips** Billy.
Will they rescue Stellaluna?
Will Vaneigh **hold** Stellaluna?
Mrs. Adler is **holding** Vaneigh.
Who **holds** Mrs. Adler?
Will they rescue Stellaluna?
Wait!
Stellaluna isn't falling!
She is **soaring!**
She doesn't need to be rescued!
20 Tier Two words/105 total words

He's **frustrated** with math.
He is **encouraged** because he's getting help.
Her shoe is untied. This is **frustrating** because she may fall down
She is **encouraged** because they helped her get up.
Two new students are **hesitant** to come into the classroom.
They are **encouraged** when two students give them help.
He is **frustrated** because he doesn't know
how to read some of the words.
They are **encouraging** him to try to sound it out. That is good **advice**.
She is **frustrated** because she doesn't know where her seat is.
She feels **encouraged** because they came to help her.
 11 Tier Two words /99 total words

Our Pumpkin Seed Journal
Day 1
Mrs. Adler cut open the pumpkin. We **yanked** out the seeds. We were **disgusted** by the gooey orange pulp. Some of us **despised** having it on our hands. Some of us didn't **despise** it.
Day 2
We were **curious** about **inspecting** the seeds.
When we **inspected** the seeds, we discovered that we would have to wait for a long time. All of us will have to be **patient.**
Today we **inspected** our pumpkin seeds and we smelled that the smell was **disgusting.**

On day 4 we **inspected** the seeds and something changed. The roots were growing! We were **astonished!** Then we changed the paper towel and got a new bag.

On day 4 we **inspected** the seeds and something changed. The roots were growing! We were **astonished**! Then we changed the paper towel and got a new bag.

On day 5 all of us discovered that our seeds were growing! We were **astonished** and **delighted**!

On day 6 Koale was

so **astonished** his mouth dropped open and his eyes popped open. He shouted "sweeeeeeeeet biscuits!" His seeds grew stems!

Days 7, 8 & 9

On days 7, 8, & 9 our stems grew longer and leaves appeared. The seed coats were off the leaves. All the plants together looked like a jungle.

It was **incredible**!

18 Tier Two words /221 total words

APPENDIX M

TEXT AND TIER WORDS USED IN MS. BEE'S DIGITAL LANGUAGE EXPERIENCE
APPROACH CLASS BOOK

Digital Language Experience Approach Text in Ms. Bee's Six Class Books
Instructed Tier Two Words in Bold

*Red, White and Blue: We are **Patriotic** by: Ms. Bee's First Grade Class*
We are showing that we are **patriotic** in our class. Our shirts are red, white and blue.
We are showing that we are being **patriotic** by coloring the flag. Our whole class likes to color.
We want to celebrate the Fourth of July. We can watch the fireworks. We **gaze** at the fireworks. The fireworks **illuminate** the sky.
We are shaking our flags. We are showing that we are **patriotic,** and we love our country.
We are pledging to the flag. We all gather around, because we love our country.
We learned how to fold a flag and we learned how to **unfurl** the flag. We respect our country, and we are trying not to drop the flag.
We were reading an American book. A student took a picture of us.
We are outside **gazing** at the flag. When we were looking at the flag, the teacher took the picture. We were smiling in the picture.
 8 Tier Two words /156 total words

The Three Little Pigs Retold
The pigs were going to build their own house.
The first pig saw a man with straw. He said he wanted to build his own house with straw.
When the first little pig was finished with his house he played with his flute.
The wolf says "Little pig, little pig let me come in." The little pig said "No, no, not from the hair on my chinny chin chin."
The big bad wolf blew the house in. The big bad wolf ate him.
The next pig said "Please man, can you give me the sticks?"
The second little pig built his house. Then the third pig left the second little pig's house.
The wolf is saying, "Little pig, little pig, let me in." The little pig said, "No, no, not by the hairs of my chinny chin chin."
The big bad wolf said, "Then I will huff and puff and blow your house in." The big bad blew his house down and ate him.
"Please give me those bricks so I build a house," said the third little pig.
The third little pig built his house of bricks.
After a long day of building my house, I finally get to take a break and eat some lunch. The wolf wants the pig to let him in. The pig says, "No no, not by the hairs of my chinny chin chin." The wolf said, "Then I'll huff and puff and blow your house in."
The wolf huffed and puffed, but he could not blow down the house. The wolf fell down, because he could not blow the house in.
"Little pig, there is a turnip field at Mary Garden's farm," said the wolf. The wolf **conviced** the pig to pick turnips. The wolf asked, "What time do you want to pick the turnips?" The pig said said, "six o'clock."
The little pig got up at 5 o'clock. The little pig is picking turnips. He went back home.
The pig said "I already went to the turnip field, and I picked some turnips." The wolf was angry. The wolf said, "I know where a nice apple tree is. We can pick them together. What time do you want to go?" asks the wolf. The little pig said, "We can go at 5 o'clock in the morning."
"Come down!" yelled the wolf. The pig said, "Here!" He threw an apple down at the wolf.
The pig **dashed** home, and

the wolf ran after the apple.

The wolf said "There is a fair. Would you like to go with me to the fair at 8 o'clock?"

The pig rode the merry-go-round.

He went there before the wolf.

After the pig left the fair he saw the wolf coming. He got in the butter churn and rolled down the hill. The pig hit the wolf. The wolf flipped over the butter churn.

He scared the wolf and the pig laughed at the wolf. The wolf was mad!

The wolf told the pig he was coming down the chimney. The pig got a pot of hot water and put under the chimney.

The big bad wolf fell into the hot water. The pig ate the wolf up for dinner.

2 Tier Two words /537 total words

The Weather Book

It is **dangerous.** It is **vigorous**. It breaks houses. It **whirls.** It is blowing. What is it?

It is a hurricane

It is cold. It sprinkles. It freezes. It is white. It is shiny. It is slippery. What is it?

It is ice.

It comes in spring. It comes in summer. It has rain. It has lightening. It has thunder. It has lots of clouds. What is it? It is a thunderstorm.

It is wet. It is shiny. It is **vigorous.** It drizzles. It is cool. What is it? It is rain.

It is cold. It is soft. It is white. It melts. It is fun to play with. What is it? it is snow.

It is fast it **whirls**. It picks up things. It goes up high in the sky. It is big. It is loud. It is very windy. What is it? It is a tornado.

5 Tier Two words /150 total words

I Wonder How We Feel By Ms. Bee's Class

We were surprised when zero the hero came and gave us some doughnuts. We were surprised when we met our teacher, because we were in a new classroom.

We feel **glum** when our mom does not let us play outside. We feel **glum** when our mom doesn't buy us a game or toy.

Sometimes people are **gleeful** when they have their birthday party. Sometimes people are **gleeful** when they get to go first and go snowboarding or go to laser quest.

We are proud when we go to a new school. We are proud when we meet new friends. We are proud when we get a good report card.

We are proud when we go to P.E. because we have to do hard exercises.

Sometimes we are scared when we watch spooky movies in 3-D. We are scared of tigers. We are very scared of snakes.

We are **frustrated** looking at our papers, and we got stuck on the test. We get **frustrated** when we have a hard math problem.

6 Tier Two words /170 total words

*Apple Week*First, we ate an apple pie. Some students liked the apple pie. Our whole entire class **devoured** it. We took pictures of us eating the **delicious** apple pie.

Second, we ate apple chips, and we drank apple juice. The apple chips were **scrumptious** and the juice was **scrumptious**.

Third, we graphed our apples. We graphed them by names. We were **clever** for sorting the colors. All the apples were colorful. We had an "other group" of apples, and they were different kinds.
We sorted the apples by colors. We graphed them in the afternoon.
We made apple books, and we put facts about apples in them.
Facts:Wind helps pollinate the apple blossoms.
After people pick the apples, they are put into storage.
We tasted the apples and wrote them on a piece of paper.
We were writing down how the apples tasted. Then we ate the next apple. We graphed them on the smartboard, and we graphed how everybody liked them.
5 Tier Two words/clever is recycled from week 2/162 total words

How Pumpkins Grow
There was white fluffy mold in our pumpkin. We looked inside the pumpkin, and we picked out the seeds.
Our friends were **gazing** in the pumpkin, and they are **hoisted** the top of the pumpkin. One day in Ms. Bee's class, we got some of the pulp out of the pumpkin.
We looked at our seeds, and we put them on the wet napkin.
Another time we were hoisting our napkins, and we learned how to put them in a bag.   We wanted to make sure the seeds will grow instead of them dying. If the napkin dries out they will die.
The class wrote in their pumpkin journals. We could keep track of what happens to our seeds.
Our seeds were growing faster than we thought. They now have roots.
We shared our seeds. They got bigger and longer.
One day, we looked at our seeds and they had **sprouts**. They were little. There are seed leaves starting to grow.
We checked everyday to see if they had grown any. They were getting bigger.
We see that a leaf had
grown on some of our
plants. It looks like
a lilly pad, and it has
bumpy edges. When you
touch it, it feels fuzzy.
We learned about how pumpkin seeds grow and what they need to grow.
They need water, soil, sunshine, and warmth. We learned about the life cycle. First, we had a pumpkin. Then we took out the seeds. After the seed is planted, it grows into a plant. The plant grows flowers. The flowers turn into pumpkins. Then it starts over and over again.
3 Tier Two words/gazing is recycled from week 1/268 total words