DEVELOPING THE ENGLISH LANGUAGE VOCABULARY OF NATIVE KOREAN-SPEAKING STUDENTS THROUGH GUIDED LANGUAGE ACQUISITION DESIGN

by

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The primary purpose of this research is to determine whether the implementation of Guided Language Acquisition Design (GLAD) teaching strategies increases the English receptive language and expressive vocabulary development of native Korean-speaking students. A secondary focus of the study is to identify specific GLAD strategies that are observed to be effective at supporting the expanding vocabulary of students. Because English language learners need to learn and use vocabulary words for different purposes and in different contexts, this dissertation is focused on vocabulary development for second language acquisition that is not in the context of reading.

Participants included 16 native Korean-speaking students (grade 1, $N = 11$; grade 2, $N = 5$) and their teachers ($N = 7$). The teachers used seven GLAD strategies to implement

their science curriculum over a period of approximately 7 weeks. All of the teacher resources that were necessary to implement the GLAD strategies were provided.

Quantitative data were collected on curriculum dependent as well as curriculum independent measures and were analyzed using paired-samples *t* tests to determine if growth occurred in the student's English receptive and expressive vocabulary development. Results indicate that curriculum independent measures produced findings that were statistically significant in receptive language only, at least at the small sample size. Curriculum dependent measures, however, did produce findings of learning gains that were statistically significant in both areas. These findings suggest that when vocabulary words are carefully selected from the curriculum, intentionally taught and implemented through a variety of strategies, it is possible that receptive language and expressive vocabulary growth may occur on targeted vocabulary.

Qualitative data were also collected through teacher interviews, observation checklists, and web-based teacher questionnaires. The qualitative data were coded and analyzed for patterns to provide information on the implementation and effectiveness of the GLAD strategies. Three strategies, the cognitive content dictionary, total physical response, and 10/2, were identified as strategies that were (a) used frequently, (b) showing effective use when implemented, and (c) used to teach the target vocabulary words. Qualitative data also revealed that these three strategies were used throughout the day and not exclusively during science.

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DEDICATION

This study is dedicated in loving memory to my mother, Hazel Catherine Fleckenstein, a model of strength, integrity, compassion, and faith who lived a humble, selfless life for her family right up until her last day on October 21, 2004.

TABLE OF CONTENTS

Chapter Page

I. INTRODUCTION AND LITERATURE REVIEW 1

Literature Review 6
Similarities and Differences Between English and Korean 7
Cross Language Transfer 11
The Relationship between Vocabulary and Reading 15
Learning Vocabulary in a Second Language 19
Vocabulary Instruction for Second Language Acquisition 21
Practice 1: Build on the Student's Native Language 24
Practice 2: Teach Basic Words and Word Meaning 30
Practice 3: Integrate Vocabulary across Content 35
Practice 4: Teach Academic Vocabulary 40
Practice 5: Review and Reinforce Vocabulary 44
GLAD 51
GLAD Supported through Research 51
GLAD's Approach to Vocabulary Development 54
The Five Practices, Researched Strategies, and Alignment to GLAD 56
Build on the Student's Native Language through GLAD 58
Teach Basic Words and Word Meaning through GLAD 61
Integrate Vocabulary across Content through GLAD 63
Teach Academic Vocabulary through GLAD 66
Review and Reinforce Vocabulary through GLAD 68

II. METHODOLOGY 71

Sampling 73
Setting and Participants 74
Validity Check Sample 75
Data Collection 77
Measures 78
Receptive One-Word Picture Vocabulary Test (second edition) 79
Expressive One-Word Picture Vocabulary Test (third edition) 82
GLAD Vocabulary Word Card Assessment 84
Early Language Listening and Oral Proficiency Assessment 86
GLAD Lesson Observations 91

Chapter Page

Teacher Interviews 94
Web-Based Teacher Questionnaire 95

III. RESULTS 97

Quantitative Data Results 98
ROWPVT 98
EOWPVT 100
GLAD Vocabulary Word Card Assessment 103
ELLOPA 108
Qualitative Data Results 110
GLAD Lesson Observations 110
Teacher Interviews 116
Web-Based Teacher Questionnaire 118
Validity Check Sample Results 121

IV. CONCLUSIONS 125

Quantitative Data Conclusions 125
ROWPVT 126
EOWPVT 126
GLAD Vocabulary Word Card Assessment 127
ELLOPA 128
Quantitative Summary 129
Qualitative Data Conclusions 130
GLAD Strategy Use and Frequency 130
GLAD Strategy Effectiveness 133
GLAD Strategy Evidence 135
GLAD Target Vocabulary Use 136
Qualitative Summary 138
Validity Check Sample 138
Answers to Research Questions 140
Recommendations for Future Research 141

APPENDICES

A. GLAD TEACHER RESOURCES 147

B. RECEPTIVE ONE WORD PICTURE VOCABULARY TEST SAMPLE PAGE 172

Chapter Page

C. EXPRESSIVE ONE WORD PICTURE VOCABULARY TEST SAMPLE PAGE 173

D. GLAD VOCABULARY WORD CARD ASSESSMENT FIRST GRADE 174

E. GLAD VOCABULARY WORD CARD ASSESSMENT RATING SCALE FIRST GRADE 175

F. GLAD VOCABULARY WORD CARD ASSESSMENT SECOND GRADE 176

G. GLAD VOCABULARY WORD CARD ASSESSMENT RATING SCALE SECOND GRADE 177

H. EARLY LANGUAGE LISTENING AND ORAL PROFICIENCY ASSESSMENT (ELLOPA) 178

I. ELLOPA RATING SCALE REVISED 190

J. GLAD LESSON OBSERVATION 192

K. INTERVIEW PROTOCOL 193

L. WEB-BASED TEACHER QUESTIONNAIRE 195

REFERENCES 200

LIST OF FIGURES

Figure Page

1.1. Example of a semantic map used during primary writing. 42
1.2. Conceptual framework for research practices and GLAD integration. 50
1.3. Example of corresponding gesture and word definition for trophy. 60

3.1. Error bar graph of ROWPVT pre- and posttest results. 99
3.2. Error bar graph displaying EOWPVT mean results. 101
3.3. Error bar graph displaying the GLAD vocabulary mean reading results. 104
3.4. Error bar graph displaying the GLAD vocabulary definition results. 106
3.5. Bar graphs displaying the ELLOPA vocabulary and listening results. 109

LIST OF TABLES

Table Page

1.1. Hangul Consonant, Vowel, and Syllable Examples in Relation to English. 9
1.2. Korean Loanwords from English. 27
1.3. Example of the Four-Part Process Involved in the Keyword Technique 28
1.4. Frequency Count from the Three Little Pigs. 32
1.5. K-W-L-H Example for Dinosaurs. 38
1.6. Research that Influenced the GLAD Model 53
1.7. Researched Strategies and GLAD Strategies Aligned 57
1.8. Example of a Sentence Patterning Chart Using the Noun *Miners* 62
1.9. Inquiry Chart from a First-Grade Class Studying Balance. 64
1.10. First-Grade Example of a Cognitive Content Dictionary. 67
1.11. Example of a Yes, Ma'am Chant Used in a Second-Grade Classroom. 70

2.1. Percent of Student Population by Race 72
2.2. Research Questions and Associated Methodology 78

3.1. ROWPVT Descriptive Statistics. 98
3.2. ROWPVT Paired-Samples *t*-Test and Statistics 100
3.3. EOWPVT Descriptive Statistics 101
3.4. EOWPVT Paired-Samples *t*-Test and Statistics. 102
3.5. GLAD Vocabulary Reading Descriptive Statistics 103
3.6. GLAD Vocabulary Reading Paired-Samples *t*-Test and Statistics. 105
3.7. GLAD Vocabulary Definition Descriptive Statistic. 106
3.8. GLAD Vocabulary Definitions Paired-Samples *t*-Test and Statistics. 107
3.9. The Number of Times Each GLAD Strategy Was Used during Direct Observations 111
3.10. Effectiveness of Strategy Implementation 113
3.11. Evidence of Strategies in the Classroom. 114
3.12. Target Vocabulary Used with GLAD Strategies 116
3.13. Frequency of GLAD Strategy Use 119
3.14. GLAD Strategy Effectiveness for Teaching Vocabulary. 120

CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

Research conducted in the area of second language acquisition draws, in part, from the native Spanish-speaking population. Because Spanish is the majority minority language spoken in the United States today, there is clearly a need for research that identifies the most effective instructional strategies, program models, and English language development activities to best serve this large population of English language learners (ELL). However, educators must be cognizant about meeting the linguistic needs of ELL students from other language groups as well. This dissertation research focuses on native Korean-speaking students and their needs for English language vocabulary development.

The National Center for Education Statistics (NCES) reports that from 1980 to 2005 the Asians/Pacific Islanders resident population grew 260%, which was greater than the 192% growth among Hispanics (NCES, 2007). Although this growth by percentage is surprising, it is important to note that absolute numbers, however, in comparison, are significantly smaller. One subgroup of the Asians/Pacific Islander race is the Korean population. The Korean language is becoming more evident in schools with a growing number of students enrolling from native Korean-speaking backgrounds. According to NCES statistics in 2005, 78% (972,000) of the Korean population in the United States was foreign-born, including 38% (99,000) being children under the age of 18 (NCES, 2007).

The percentage of Korean elementary and secondary school age students who spoke a language other than English at home was 73% and 23% of these students spoke English with difficulty (NCES, 2007).

In comparison, 70% of Hispanic elementary and secondary school age students spoke a language other than English at home and 19% of them spoke English with difficulty (NCES, 2007). Furthermore, the NCES statistics in 2005 reveal that 40% of Hispanics were foreign-born, including 12% of children who were under the age of 18 (NCES, 2007). In short, Koreans have a high percentage of families, including children under age 18, living in this country who were not born here and will be educated in the U.S. public and private school system.

In an effort to meet these linguistic needs educators are currently using English language development strategies with Korean speakers found to be successful with native Spanish speakers, to help them acquire English. It is difficult to know, unless specifically assessed, if effective language strategies used with native Spanish speakers would also benefit native Korean-speaking students learning English. A review of the literature, however, reveals that little research has been done in comparing and using English language development strategies with other language populations, such as Korean students.

Although English, Spanish, and Korean are all alphabetic languages, of these three languages only English and Spanish share similar orthographies, or symbol systems. Korean does not. With this knowledge, we cannot assume that strategies found to be

successful in one alphabetic language would also be successful in another alphabetic language, especially if they have different orthographies. It would be difficult to know, consequently, if the strategies are beneficial to Korean speakers unless they are researched empirically.

In review of successful teaching strategies used with native Spanish speakers, the Guided Language Acquisition Design (GLAD) model is predominantly used at the elementary school level for English language development with ELL students. This model includes specific strategies that align with research-based evidence on effective English language vocabulary learning and will be reviewed throughout this dissertation. The GLAD model is designed to support English language development by promoting language through integration across the curriculum, and interrelating expressive (speaking, writing) vocabulary and receptive (reading, listening) language, into the curricula in all contents through a variety of strategies.

Kamil and Hiebert (2005) acknowledged that the words we use come in two forms: oral and print. The knowledge of these words also comes in two forms: (a) receptive (words we understand or recognize) and (b) expressive (the words or vocabulary used when we speak or write). Expressive language can best be defined as the process of formulating or sending a message; communicating or expressing language through writing, speaking, or gestures such as pointing to words, pointing to pictures, or using sign language (Annikeris, 2008). Receptive language, on the other hand, is the process of receiving and

understanding a message through language that is spoken or written by others such as through listening and reading (Annikeris, 2008). The specific GLAD strategies and how they integrate both the receptive and expressive language to build vocabulary and word meaning for ELLs will be discussed later in this dissertation.

Although a large amount of research has supported the view of developing vocabulary for the reading of text, this dissertation is focused on vocabulary development for second language acquisition that is not in the context of reading. Because ELLs learn language orally and visually at the same time, this dissertation examines the importance of developing both the receptive language and expressive vocabulary of second language learners. This dissertation considers the alignment between five teaching practices, comprised of researched strategies, and seven GLAD strategies, and explores the effectiveness of using GLAD strategies with native Korean-speaking students.

A key to understanding the distinction of GLAD strategy use in this context is that they purport to enhance receptive and expressive language for students *without* a major focus on independent reading. In other words, GLAD depends on interactive and visual approaches as the instructional design, and is being used in many schools for vocabulary development and especially with ELL populations. Where sustained reading is present, in read-alouds, it is an interactive instructional design and not an independent or self-directed design. Thus, independent reading, while a very important consideration in vocabulary

development for native Korean-speaking students, is beyond the scope of the research addressed here. It is an important aspect for future work in the field.

The research questions examined here will investigate the effectiveness of English language vocabulary development through GLAD teaching strategies on the vocabulary development of native Korean-speaking students in first- and second-grade. The following research questions will frame the study:

1. Does implementation of GLAD strategies increase the English receptive language and expressive vocabulary development of native Korean-speaking students based on pretest and posttest assessment data?
2. If GLAD strategies seem to support expanding the vocabulary of native Korean-speaking students, what specific strategies can be observed to be effective, using observational studies at the case study site?

The hypothesis considered here is that the implementation of the GLAD strategies will increase the receptive language and expressive vocabulary of native Korean-speaking students, though it is anticipated that there may be a greater increase in the expressive vocabulary development than receptive language of these students. A main reason for drawing this conclusion is because the interactive design of the GLAD strategies provides several opportunities for students to use their receptive and expressive vocabulary, but emphasizes spoken vocabulary. It is also hypothesized that the specific GLAD strategies—such as the cognitive content dictionary, TPR, and 10/2, to be described in the next sections—will be observed to be effective in increasing the receptive language and expressive vocabulary development of native Korean-speaking students.

Literature Review

Before reviewing the strategies used for English language development, it is important to understand the similarities and differences between the English and Korean languages. The contrast between the alphabetic writing systems could pose advantages and disadvantages for native Korean speakers who are reading and acquiring vocabulary in English. In review of both languages, detectable similarities between the symbol systems are few. Although the Korean and English languages are characterized as being alphabetic, Wang, Park, and Lee (2006) differentiated that English is a Roman alphabetic system, similar to French, Italian, and Spanish, and Korean is a non-Roman alphabetic system.

Understanding the differences between writing systems requires a review of the history of the Korean alphabetic system. The Korean alphabetic language, Hangul, was created during King Sejong's dynasty in the 1400s in an effort to improve the literacy of people who then were using Hanja, or Chinese characters (J. Cho & McBride-Chang, 2005), which are not phonetic. A manual with 1,446 pages was created to teach people how to read and learn the phonetic Hangul script (J. Cho & McBride-Chang). Hangul was not widely used until the 19th and 20th centuries and as a result adult Koreans today read and write using a combination of both Hangul and Hanja (J. Cho & McBride-Chang). Hanja, which can best be described as a subset of Chinese characters adapted for Korean, is not typically taught to students until they are at the secondary level (J. Cho & McBride-

Chang). Although early literacy for Korean speakers begins with the phonetic Hangul script, the unique design of the alphabet is evident when compared to English.

Similarities and Differences Between English and Korean

One similarity within the English and Korean alphabetic languages, however, is that both share a fundamental alphabetic principle, the graphemes correspond to phonemes. Graphemes are a letter of the alphabet, whereas phonemes are the smallest units of sound. Correspondence between the two means that letters or symbol relate to a phonetic sound. Specifically, between English and Korean they share phonemes such as "m" and "n," but not "th," "f," or "v" sounds because Korean does not have these phonemes. In addition, Koreans have difficulty distinguishing between the English sounds of "l" and "r" (Wang et al., 2006). Although both languages have graphemes that correspond to phonemes, not all of the graphemes or phonemes are shared between Korean and English.

The differences that exist between the two languages have an impact on native Korean speakers acquiring language and learning to read in English in the primary grades. Differences include the spatial layout, syllable differences and letter position constraints. Before addressing these three areas in detail, it is necessary to highlight that differences also exist with the sequence for teaching basic literacy skills. For example, with Korean Hangul, students are first taught using syllable units, whereas with most alphabetic orthographies, like English, students are taught initially with the phonemic unit learning letter names and sounds (J. Cho & McBride-Chang, 2005). Korean children learn the letter

names and sounds, in addition to the combination rules of vowels and consonants, later in school (J. Cho & McBride-Chang), which is different than their English-speaking peers. One of the most notable differences between Korean Hangul and English is that Hangul has a nonlinear spatial layout as compared to other orthographic systems like English. The symbols are arranged from left to right and top to bottom so that the arrangement of letters is a syllable block that is somewhat square-like (Wang et al., 2006). For example, ㅎ ㅏ ㄴ would be written in Korean as 한. When divided into sounds, ㅎ is equivalent to the "h" sound, ㅏ is a vowel and sounds like "ah" and finally ㄴ is a similar phoneme to the English sound for "n," and together pronounced as han 한. Because Korean has a nonlinear spatial layout, first- and second-grade Korean students learning to read in English, many of whom have already had some exposure to the symbol system and written language principles in their native language, will need to learn the differences with directionality and spacing.

Each syllable in Hangul has two to four symbols that, when joined in various combinations, can represent each of the 24 phonemes (Wang et al., 2006). In English, there are approximately 40 phonemes. In addition, Korean Hangul is labeled as having a shallow orthography (Chiappe, Glaeser, & Ferko, 2007; J. Cho & McBride-Chang, 2005; Wang et al.) because one letter represents one sound. However, English is defined as having a deep orthography because one letter can have several different sounds. These sounds, in English, are represented in a variety of different spellings (Alperin & Wang,

2008). Consequently the Korean syllable structure is simpler than English because of the letter-sound correspondences. Because the English phonemes are not as simple as the Korean, they are difficult to recognize and must be taught. This may present challenges for native Korean speakers to learn all of the English letter-sound correspondences needed for reading and language acquisition.

Syllable differences also exist between the languages and unlike English, there are no initial consonant clusters in Korean syllables and the final consonant clusters are limited. The syllables in Korean can take the forms of CV (consonant/vowel), CVC, and CVCC. Examples of Hangul consonants, vowels and syllables are identified in Table 1.1 and demonstrate the complexity that first- and second-grade students may have adjusting from Hangul to English.

Table 1.1. Hangul Consonant, Vowel, and Syllable Examples in Relation to English.

Consonants	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㄷ
	k/g	n	t	r/l	m	d
	ㅂ	ㅅ	ㅇ	ㅈ	ㅎ	
	p/b	s/sh	0/ng	ch/j	h	
Vowels	ㅏ	ㅔ	ㅣ	ㅗ	ㅡ	
	a	e	i	o	u	
Syllables	생 일		할 아 버 지			
	saeng il		ha (r)a bo ji			
English	birthday		grandfather			

Also, some Korean consonants may be pronounced differently depending on whether they are followed by a vowel or another consonant. For example, in Table 1.1 the Korean word for birthday, 생 일, shows the last consonant in the first syllable "ㅇ" pronounced as "ng," however, when it is the initial consonant in the second syllable, it is silent. Another example is evident in the Korean word for grandfather, 할 아 버 지. The final consonant "ㄹ" in the first syllable is not pronounced with the initial consonant and vowel, but rather carried over into the second syllable where the initial consonant is silent and joined with the vowel to form the syllable "라." This may present a challenge for first- and second-grade Korean speakers learning English if they apply their Korean consonant/vowel rules to English for pronunciations. In addition, native Korean speakers, by the age of 5 or 6, can already read CVC words fairly well (J. Cho & McBride-Chang, 2005) because of their early introduction to a syllabary writing system so this understanding is already established before they enter first grade.

Letter position constraints also exist for the Hangul syllables. Because the Hangul syllable blocks are separated, which is different from English, there is a clear syllable boundary for a Hangul word (e.g., 사 라 / Sa ra / Sara). Because the syllable structure is simple, it may become a challenge for native Korean speakers learning to read in English due to the phonemic-level phonological processing (Wang et al., 2006).

Cross Language Transfer

In order for there to be transfer between languages, for example Korean to English, some level of language ability needs to have already been established in the first language. With this understanding in mind, some researchers have further investigated whether a certain level of proficiency is needed in the first language before transfer can occur to the second, and if so, at what level of proficiency.

Atwill, Blanchard, Gorin, and Burstein (2007) explored the issue of first language proficiency influence on cross language transfer with 68 native Spanish-speaking kindergarten students, 26 boys and 42 girls, with limited English skills. Receptive vocabulary and phonemic awareness were assessed in English and Spanish. Using the Peabody Picture Vocabulary Test (PPVT) and Test de vocabulario en Imagenes Peabody, Atwill et al. (2007) assessed the Spanish and English receptive language of students. The researchers analyzed the scores as a whole and then disaggregated the data based on the receptive vocabulary performance level as either above average or below average. The phonological awareness was assessed in both languages using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Indicadores Dinamicos del Exito en la Lectura (IDEL) through the two measures of initial sound fluency (ISF) and phoneme segmentation fluency (PSF). Findings from the study suggest that there was evidence of cross language transfer for students who had above average receptive vocabulary scores but there was no

evidence for cross language transfer for students who had a lower than average receptive vocabulary.

Another study on cross-language phonological and orthographic transfer conducted by Wang et al. (2006) included 45 bilingual Korean-English-speaking students, 24 boys and 21 girls, in first- through third-grade. All of the student participants (16 first-grade, 14 second-grade, and 15 third-grade) were fluent in English and, with the exception of five students, learned Korean as their first language. At home, however, four students spoke only Korean, and 41 of the students spoke Korean and English.

Students were given experimental phonological tasks, in Korean and English, in onset detection, rhyme detection, and a phoneme deletion task. Students were also assessed in both languages on an orthographic choice task, real-word naming task and pseudo-word naming task. For the onset-rhyme detection tasks students listened through headphones to a CD of 15 nonwords for each task. Students would hear three spoken words, with 5 seconds between words, and identify which of the three words did not start with the same sound as the other two words (for the onset detection task) or did not end with the same sound as the other two words (for the rhyme-detection task). Students were given 15 seconds between items and a corresponding number card, either 1, 2, 3, to represent each word so they could point to the number of the word for their answer to reduce memory demands.

For the phoneme deletion task students interacted with the experimenter who used nonwords for the task. When students heard a word, they were asked to repeat the word and then when asked to remove a specific sound in the word the student would say it again without the designated sound. For the orthographic choice task students were presented with 28 word cards that had pairs of nonwords and students were asked to point to the word that looked the most like a real word. The test was helpful in identifying children's sensitivity to English orthographic patterns.

The Real-word naming task, taken from the Word Recognition subtest of the Wide Range Achievement Test-Revised (WRAT-R), had students say the word aloud after being shown a card with one word on it at a time and 35 words in all. The final task, pseudoword naming, used 40 items from the Word Attack subtest of the Woodcock Reading Mastery Test-Revised. Students were shown two items on a card at a time and asked to sound out the letter string. The onset-rhyme and phoneme deletion tasks in Korean were parallel to the English and the orthographic choice task real-word and pseudoword tasks were also administered in Korean with some modifications.

Wang et al. (2006) study found that phonological skills are highly correlated with each other in these two alphabetic languages which suggest that increased phonological skills in Korean would be associated with increased phonological skills in English (Wang et al.). Findings suggest that Korean phonological skills were also significantly correlated with English real-word and pseudo-word reading. Because the two orthographies are

alphabetic but different in visual forms there are limitations to the orthographic skills transferring from one to the other. Wang et al. acknowledged, however, that phonological and orthographic skills are important predictors in reading in two different alphabetic orthographies.

Chiappe et al. (2007) examined the roles of speech perception and phonological processing in spelling and reading acquisition of 50 first-grade students. Among the student participants 27 were native Korean speakers (KS) and 23 native English-speaking (ES) students. The native Korean-speaking students in the study had been previously assessed by the school district on the California English Language Development Test to evaluate English proficiency levels. All of the KS students scored in the lower two levels of proficiency on the five-level English proficiency scale prior to the study. In addition, all of the participants were identified as poor or average readers as determined by their performance on the Wide Range Achievement Test-3 (WRAT-3) at the beginning of the study. Of the 7 students scoring at or below the 25th percentile and classified as poor readers 4 were ES and 3 KS. Also, 42 students of whom 18 were ES and 24 KS scored at or above the 30th percentile and were classified as average readers. Researchers then assessed students individually on spelling and reading tasks, speech perception, receptive vocabulary, and phonological processing, at the beginning and end of the school year.

At the end of first-grade both language groups showed equal performance in phonological awareness. The findings suggest that strong literacy skills were developed in

native Korean speakers even though their initial processing of English phonology was different than their native English-speaking peers. In addition, the ES and KS showed similar performance on phonological processing measures but on the oral language proficiency in English the KS showed a weaker performance on both measures. In relation to the receptive vocabularies the KS children made similar growth to the ES however researchers found that in both languages receptive vocabulary was unrelated to reading comprehension for both groups.

Phonological awareness, or the ability to identify and manipulate smaller units of speech such as phonemes or rimes (the part of a syllable that contains the vowel and following letters), is a strong predictor of reading acquisition (Chiappe et al., 2007). Although the primary focus of this dissertation in relation to vocabulary is language acquisition that is not in the context of reading, it is important that readers are aware of the role phonological awareness play as a predictor of beginning reading success and recognize the important relationship that exists between reading and vocabulary development. The next section briefly describes the connection between vocabulary and reading.

The Relationship between Vocabulary and Reading

Vocabulary is one component of reading, along with phonemic awareness, phonics, fluency and comprehension, as identified by the National Reading Panel (Center for the Improvement of Early Reading Achievement [CIERA], 2003). The relationship between

vocabulary and reading is important for two main reasons, because vocabulary plays an important part in learning to read, and vocabulary is very important to reading comprehension (CIERA, 2003).Vocabulary plays an important role for beginning readers and influences their initial reading instruction because their oral vocabulary is significantly larger than their print vocabulary (Kamil & Hiebert, 2005). Thus they use words they have heard before to help make sense of the words they are now seeing in print (CIERA, 2003).

Beginning readers initially learn letter-to-sound correspondences that support their ability to decode printed words to speech. If these words are a part of the child's oral vocabulary they should be able to comprehend the word. Consequently, if the word is too complex or not a part of their vocabulary, comprehension is unlikely to occur even if the child is able to accurately decode the word. As a reader it is important that students are not only able to decode what they read, but that what they read is also understood.

Current research conducted on the relationship between vocabulary and reading recognizes the important role vocabulary plays with regard to a reader's comprehension of the text. "Vocabulary serves as the bridge between the word-level processes of phonics and the cognitive processes of comprehension" (Kamil & Hiebert, 2005, p. 4). The relationship between reading comprehension and vocabulary can be described as reciprocal, where vocabulary can increase reading comprehension, and comprehending what is read can lead to a larger vocabulary (Carlo et al., 2004). In review of the long-term effects of vocabulary

development, assessment results on vocabulary in the first grade predicted over 30% of reading comprehension variance in the eleventh grade (Cunningham & Stanovich, 1997).

As students emerge as readers, however, they begin to read text that presents familiar words along with vocabulary words that are not in their oral vocabulary. Students need to learn the meaning of these words that are not in their oral vocabulary simply because they cannot understand what they are reading if they do not know the meaning of most of the words they are encountering in the text (CIERA, 2003).

In review of the unfamiliar words readers encounter in text, studies have estimated that of 100 unfamiliar words encountered in reading, between 5 and 15 words will be learned (Beck, McKeown, & Kucan, 2002). Unfamiliar words in a text will impact a student's comprehension of the text, thus if the reader has a larger vocabulary they will comprehend more of what they read. A determining factor of poor reading comprehension is low vocabulary skills for ELLs (Carlo, August, & Snow, 2005).

One way to increase a child's vocabulary is to teach them a sight word vocabulary or high frequency words. The belief is that students can effortlessly read because they are able to decode and identify these words in a reading passage allowing them to focus more on the comprehension of the text. Knowledge of words, for students, is crucial for learning, however knowledge of individual words is not enough; more is required for reading comprehension (Scott, 2005). One way to ensure improvement in reading

comprehension is to implement vocabulary instructional strategies, in the context of reading, that have been shown in research to be effective.

Scientific research on vocabulary instruction identifies that most vocabulary is learned indirectly and children can learn the meanings of words through reading activities by engaging in oral language daily, listening to adults read to them, and reading extensively on their own (CIERA, 2003). The research also describes that some vocabulary needs to be taught directly and teaching specific words before reading helps with reading comprehension in addition to the learning of vocabulary (CIERA, 2003).

The National Reading Panel examined vocabulary instruction with the intent to identify various approaches and their effectiveness with teaching students how to read. The research findings drew from studies that focused on grades 3–8. In the summary of the National Reading Panel's specific conclusions about vocabulary instruction the foundation includes a variety of methods used effectively: (a) learning in rich contexts with items from content learning materials, (b) repetition and multiple exposure to vocabulary that is likely to appear in many contexts, (c) and learning vocabulary though active engagement in learning tasks.

These methods, although in the context of vocabulary instruction as it pertains to reading, appear to be similar to those that support vocabulary development for second language acquisition. The vocabulary instruction recommendations by the panel are also similar to the GLAD strategies and their approach to vocabulary development. The GLAD

strategies and their relationship to researched vocabulary strategies will be evaluated later in this dissertation.

In addition to reading, ELLs need to learn and use vocabulary words for different purposes and in different contexts, and need to have a deeper understanding of words to really know them for use. In order to do this they need to develop their oral and print vocabularies instead of just focusing on developing vocabulary for the purpose of reading.

Learning Vocabulary in a Second Language

Learning vocabulary is an essential part of mastering a second language, and the first or initial step in the process of acquiring vocabulary is to establish a form-meaning link (Schmitt, 2008). As previously cited in this dissertation words come in two forms, oral and print. Knowing the oral (or spoken) form means that the second language learner is able to recognize the word when it is spoken and can also express the meaning of a word through speaking. Knowing the print (or written) form identifies that the second language learner can recognize the word when reading and can use the word appropriately in writing. Research suggests that in order for second language learners to really know a word they not only need to know the form and meaning but be able to connect the two; also known as the form-meaning link (I. Nation, 2001).

Furthermore, the strength of the form-meaning connection is very important because it will in part determine how easily the ELL student can retrieve the meaning when

hearing or seeing the word form, and also retrieve the word form when they need to express the meaning (I. Nation, 2001). When ELL students can successfully retrieve the form or meaning the connection between the two is strengthened, as suggested by Baddeley (as cited in I. Nation). In the early stages of learning English, it is helpful if learners initially see the form and meaning together and have several opportunities to retrieve both the form and meaning of words.

Strategies that support ELL students in strengthening the form-meaning link for vocabulary acquisition in a second language, according to Nation (2001), include: (a) activities that put a native language connection between the second language word form and meaning; (b) making sure there is a clear connection between the sound or shape of the word form and the meaning, such as through sign language; and (c) establishing the connection, if possible, between the same form in the native language and the relation to the same meaning in the second language, such as through loanwords or cognates.

One challenge that can affect vocabulary learning, as indicated in the research, involves word pronunciations (Ellis & Beaton, 1993). Students learning English as a second language may have difficulty pronouncing the words as a result of the differences between their native language orthography/phonology and English. This can impact the link to meaning and affect vocabulary learning.

In review of the various teaching strategies used for second language acquisition it is apparent that certain approaches may be more appropriate than others at different

language proficiency stages. For example, in the early stages of learning a second language an explicit approach, focused on establishing the form-meaning link, can be the most effective. Learners in more advanced stages may benefit from the exposure approach to enhance contextual knowledge (Schmitt, 2008).

Information in the research literature acknowledges that word form is often a challenge for second language learners (Schmitt, 2008), thus it is important to spend the necessary time developing this skill with ELL students by implementing teaching strategies that have been effective.

Vocabulary Instruction for Second Language Acquisition

Several opinions emerge with regard to vocabulary instruction for second language acquisition. Discussions in the literature center around how many and exactly which words ELL students need to learn in English, what it means to actually know a word, and whether intentional or incidental vocabulary instruction is more effective in supporting vocabulary development for second language learners. There are also discussions about the influence of the native language, whether strategies build the receptive or expressive vocabulary, and what strategies facilitate long term retention of words and their meanings. These important topics will be discussed throughout this dissertation when identifying specific teaching strategies for vocabulary development. The position taken in this dissertation with regard to

the incidental and intentional approaches to instruction for vocabulary development is described below.

The research literature identifies the importance of incidental and intentional vocabulary instruction to develop the oral and print vocabularies of second language learners. The intentional and incidental learning approaches can be effective when used in conjunction to enhance vocabulary development for the second language learner (I. Nation, 2001). Although it is important to note that there is controversial literature that speaks to one being more effective than the other, the viewpoint in this dissertation supports that both are important in developing the receptive language and expressive vocabulary of students acquiring a second language.

Nation (2001) provided a structure through his four strand model for the integration of both incidental and intentional vocabulary teaching for second language acquisition. Through these four strands he identified the importance of implementing a balanced language program where learners have equal opportunities through instruction to develop their receptive language and expressive vocabularies. The four strands include: (a) meaning-focused input, (b) meaning-focused output, (c) language-focused learning, and (d) fluency development. Instruction in each area can best be described by the activities used to teach within each strand. Activities that support the development of meaning-focused input include communication activities and listening to stories. Language-focused learning activities, however, center on the direct teaching of vocabulary and direct learning.

The meaning-focused output activities include communication with written input, prepared writing and linked skills. Finally, the fluency development activities focus on repeated reading, listening to easy input, and rehearsed tasks. This balanced approach leads to word repetition and various learning situations so students can learn words in depth.

An overview of the research suggests the characteristics of strong vocabulary instruction for ELLs in primary grades include some or all of the following teaching practices, delivered through various researched strategies. These practices will be the focus of this paper: (a) build on the student's native language (August, Carlo, Dressler & Snow, 2005; Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Nation, 2001; Prince, 1996); (b) teach basic words and word meaning (August, Carlo, Dressler, & Snow, 2005; Beck et al., 2002; P. Nation & Newton, 1997); (c) integrate vocabulary words across content (Beck et al., 2002; Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Gersten et al., 2007); (d) teach academic language (Gersten et al., 2007; I. Nation, 2001; Schmitt & McCarthy, 1997); and (e) review and reinforce vocabulary words (August et al., 2005; Beck et al., 2002).

Whereas these practices identify *what* teachers should be doing, such as teaching basic words and their meaning, this dissertation is also examining *how* teachers should be doing it, or rather what strategies they might use, for example, to most effectively teach basic words and their meaning. Throughout the literature these five teaching practices are implemented through a variety of teaching strategies with the collective purpose to deliver strong English vocabulary instruction to ELLs to support second language acquisition.

Although some teaching strategies used in the supporting empirical research are described, this dissertation is focused on the GLAD teaching strategies and how well they align to the vocabulary teaching strategies identified in research. The GLAD teaching strategies will be explained in detail, along with how they relate to the research strategies, in the GLAD section of this dissertation.

Practice 1: Build on the Student's Native Language

A student's native language plays a significant role in their learning of second language vocabulary. Swan (as cited in Schmitt, 2008) acknowledged that there is no doubt in the research literature that the native language has a considerable influence in many ways on the learning and use of the second language vocabulary. Studies conducted in the field of psycholinguistics reveal that the native language is active during lexical processing of the second language for beginning learners (Jiang, 2002), and that a student's native language affects their second language development at different levels of proficiency in the second language (Sunderman & Kroll, 2006).

In addition, the use of native language translations in recalling newly learned words is more effective for less proficient learners, for example primary students, than drawing from a second language context (Prince, 1996). As shared previously in this dissertation, the native language can help to establish the form-meaning link, where the new second language word form is attached to a corresponding word in the native language.

Knowing that the native language plays a significant role in the development of a second language, it is important for teachers to utilize effective teaching strategies to build on a student's native language knowledge. Three strategies identified in research to support students in making connections between their native language and English include cognate strategies, loanwords, and the keyword strategy.

If the student's native language cognates with English, then students are more able to pronounce and derive the meaning of the new English words. For example, the English word "attention" and the Spanish word "attencion" are cognates. As cognates they are similar in pronunciation and word meaning. ELL students can decipher the meaning of the English words through their native language knowledge to increase their vocabulary. Prior to learning a second language most students will have developed vocabulary in their native language to the point where they may know a word and, perhaps, its meaning. As a student begins learning a second language, they may experience new vocabulary words in the second language that are known in the native language, but unknown in the second language. For example, Spanish-speaking students are likely to know the words in Spanish, both word and meaning, but may not know them in English (August et al., 2005). The cognates may help support students when developing their vocabulary in English.

Because Korean is a phonetic language, it is possible that native Korean speakers could identify cognates between Korean and English and learn words based on the pronunciations. Cognates exist between these alphabetic languages because their

similarities phonetically contribute to the sharing of words that are similar in pronunciation and word meaning. For example, the written language would make it difficult to know that the words "coffee" and 커피 have the same meaning. However, through the oral language pronunciations, which translate to "coffee" and "kuh-pe," students may also be able to use the cognate strategy to learn new vocabulary words. For primary students, their competence in listening and speaking is stronger than their reading and writing competence (Beck et al., 2002) therefore cognate strategies, which focus on oral language, may benefit first- and second-grade Korean students.

In addition to cognates, a second and similar strategy for building on the student's native language includes the use of loanwords. In review of the Korean vocabulary, 5% of the words are identified as loanwords, or words that have been borrowed from other languages (Y. Cho, Hyo, Schultz, Sohn, & Sohn, 2000). For example, loanwords that may be a part of the oral vocabulary of Korean-speaking ELL students are listed in Table 1.2 along with the English word, Korean spelling, and pronunciation. Of the 14,000 loanwords in Korean, almost 90% are from English and include commonly used words for daily living and cross-cultural communication (Y. Cho et al.). These words can benefit primary students who are developing their English language vocabulary. Accessing the students' native language knowledge in the classroom through loanwords and cognate strategies encourages the development of their expressive vocabulary in both languages. In the primary grades, ELL students usually have a stronger oral than written language, so

strategies for vocabulary development that support speaking at any proficiency level are encouraged.

Table 1.2. Korean Loanwords from English.

Loanword	Pronunciation	Spelling
Cake	K'eik'u	케 이 크
Sports	S'up'och'u	스 보 츠
Computer	K'omp'yut'o	컴 뷰 터
Ice cream	Aisuk'urim	아 이 스 크 림
Orange juice	Orenji jusu	오 렌 지 주 스
Television	T'ellebijon	텔 레 비 전

Note. From Y. Cho et al. (2000)

A third strategy supported in the research literature is the use of keywords. Through the keyword strategy, students are introduced to the unknown second language word and its meaning, and then think of a native language word that sounds like either part or all of the unknown word. This native language word is the keyword. The student thinks of a visual image that combines the meaning of the unknown and native language word. For example, if a Korean student learning English wants to learn the English word *moon*, the student could use the word 문 (mun) for the keyword, which is the Korean word for *door,* and construct an image of a moon and a door. An example would be an image of a door with a moon window in it.

The keyword technique utilizes form and meaning associations and can best be described through a four-part process, as shown in Table. 1.3, where Step 1 is the unknown word, Step 2 provides a word form link between the unknown word and native language keyword, and Step 3 provides the meaning link between the keyword and unknown word meaning with Step 4 leading to the meaning of the unknown word (I. Nation, 2001). Through the four-part sequenced process, a link is created from the form to the meaning of the unknown word for the second language learner.

Table 1.3. Example of the Four-Part Process Involved in the Keyword Technique.

Steps						
1.		2.		3.		4.
unknown word	→	Native language keyword	→	A mental image combining the meaning of the unknown word and the meaning of the keyword	→	Meaning of the unknown word
Core	→	*hor* (Serbo-Corat) meaning "choir"	→	A choir standing on the core of an apple	→	The most important or central part

Note. From Nation (2001, pp.311-312)

The keyword technique was one of three vocabulary learning methods researched by Sagarra and Alba (2006) with beginning second language learners. In an experimental design study they explored the role that the keyword method, semantic mapping, and rote memorization play on second language vocabulary learning for students in the early stages

of language acquisition. Participants included 778 university students in their third semester of learning Spanish as their second language. The students took a pretest to make sure the target words they would be given during the study were unfamiliar to them. For the pretest the students translated Spanish words into English.

There were two independent variables, within-subjects variable (treatment with three levels: semantic mapping, rote memorization, and keyword method) and between-subjects variable (presentation order with three levels: presentation order 1, 2, 3) and two dependent variables (immediate and delayed posttests). Participants were given 24 experimental words in Spanish with the English translation in three sets of eight words and completed a posttest immediately after each set. For each set of words the participants would exercise a different strategy. During the rote memorization set participants would write and read what they saw on the screen continuously in a study book for one minute. For the keyword method the participant connected the Spanish word to the English keyword, which was learner-generated, and would write the connection in their book. With the third method of semantic mapping the participants developed a diagram that showed the target word and semantic associations. Participants also completed a delayed posttest 3 weeks later.

Findings from the Sagarra and Alba study suggest that the keyword method was a stronger method with regard to retention than either the semantic mapping or rote memorization. In addition, the keyword technique also produced consistently strong

effects in a meta-analysis conducted by Stahl and Fairbanks (1986). In the meta-analysis they reviewed close to one hundred studies to compare the effectiveness of vocabulary instruction methods. Through the analysis they determined that the keyword technique was a strong method.

Practice 2: Teach Basic Words and Word Meaning

A second practice for developing the vocabulary of ELL students is to ensure they know basic words and meanings for words that their native English-speaking peers already know. Knowing how large of a vocabulary is needed for ELLs to be successful can help to determine, perhaps, how many and what specific words are needed and should be identified as basic words to be taught first.

Few would disagree that there is a need to teach ELL students basic words, however, it is difficult to specify which words are considered to be basic words that need to be taught. Studies of native English speakers' vocabulary tend to view all words as having equal value and being important for students to learn (I. Nation, 2001), which would be nearly impossible for ELL students acquiring English as a second language. Teaching words that are used most frequently in English can be helpful for ELL students. High frequency words are made up of a small group of words that are very important because they occur in multiple uses of the language and extend over a large proportion of words in written as well as spoken texts (Nation). High frequency words are estimated to be around

2,000 words in the English language. The General Service List of English Words (GSL), which is a classic list of high frequency words, contains words that cover over 80% of a general text (I. Nation, 2001; Tran, 2006). The high frequency words in a language are so important, as evidenced by their frequency, coverage and range, that according to Nation, teachers should spend a considerable amount of time teaching them and making sure they have been learned.

Frequency-based studies are primarily conducted in the context of reading and have provided very valuable information for those in the early stages of learning a language (P. Nation & Newton, 1997). Although the identification of frequently used words includes those that students would encounter in conversation as well as text, the research conducted has primarily been in the context of print through reading passages. For example, a book that primary ELL students may encounter is *The Three Little Pigs*. A frequency count using words from the Ladybird version of this story (I. Nation, 2001) reveals the number of times each word emerged in the passage. As noted in Table 1.4, some words appeared much more frequently than others. Although four kinds of vocabulary can be distinguished in the text: high frequency words, low frequency words, academic words, and technical words, (I. Nation, 2001) for the purpose of identifying basic words ELL students may encounter most frequently and would benefit them to learn, the focus was on high frequency words.

Table 1.4. Frequency Count from the Three Little Pigs.

Frequency count for each word used in the story									
The	41	Pig	22	A	16	He	12	Me	10
Little	25	House	17	Said	14	I	10	Some	9

Note. From Nation (2001).

Several of the words in Table 1.4 are identified as being high frequency words or words most used in oral and print form. Repeated findings of frequency counts reveal that the most frequent 2,000 headwords account for 85% of the words "on any page of any book no matter what the subject matter" (P. Nation & Newton, 1997, p. 238). In deciding on what basic words should receive attention first, Nation and Newton (1997) supported the view that the high frequency words should be the primary focus, because without these words it would not be possible to use English.

Basic words may also be referred to as Tier I words and defined by Beck et al. (2002) as mostly common words, such as door, book, or run, that rarely need to be taught (August et al., 2005; Beck et al.). Although the definition suggests that these words require little instruction, depending on the level of English proficiency of students, that may not be the case for ELL students with limited oral and print vocabularies. Some of the basic or Tier I words that require instruction can be taught through strategies, for example, such as

pointing to an object or a picture of a word, or demonstrating the word for the student. Both strategies support ELLs in learning the meaning of basic words (August et al.).

In teaching basic words and their meaning, for the purpose of second language acquisition, it is important to not only teach the words ELLs will encounter most frequently in oral and print form, but also the meaning of these and other basic words. Even with frequently used words ELL students lack depth of word knowledge (Carlo et al., 2004). One argument presented in the research literature centers around building vocabulary word depth as opposed to breadth. The concern is that ELL students need to learn word meaning, which can only come from teaching these basic words in depth. A deeper understanding of words is necessary to support their conceptual understanding. Knowing which words to teach, how often to present them, what aspects of word knowledge to focus on, and what instructional strategies to use were questions that Carlo et al. attempted to answer in their vocabulary intervention study.

The vocabulary intervention study was conducted with 254 bilingual and monolingual fifth-grade students from four schools in three states. Among the student participants 142 were ELL and 112 were native English speakers. The study employed a quasi-experimental design where classrooms were randomly assigned at each site to the treatment and comparison groups. Ten classrooms were assigned to the treatment group and 6 classrooms served as comparisons. The students in the intervention group consisted

of 94 ELL students and 75 native English-speaking students with the remaining students in the comparison group. The majority of ELL students were native Spanish speakers.

The intervention, which took place over a 15-week period of time, combined direct word instruction with instruction in word-learning strategies. The major goals of the study were to test the impact of this English vocabulary intervention on ELLs. For the intervention 10–12 target words were introduced at the beginning of each week and for 4 days a week students received instruction for 30–45 minutes. Target words from the previous 4 weeks were reviewed every fifth week. Curriculum materials, such as lesson plans, guides, homework assignments, reading materials and overhead transparencies were provided for the teachers, along with support for their implementation.

All of the students were tested in the Fall and Spring with the following measures: Peabody Picture Vocabulary Test Revised, polysemy production test, reading comprehension assessed with multiple choice cloze passages, word mastery test of 36 target word multiple-choice items, word association task to measure depth of word knowledge, and morphology tasks where students provided the base form for 27 words.

Results revealed that the curriculum focused on strategies for inferring word meaning from context, teaching academic words, awareness of polysemy (multiple meanings), and tools for analyzing morphological and cross-linguistic aspects of word meaning, improved the performance of both native English speaking and ELL students (Carlo et al., 2004). Students who participated in the intervention classrooms improved in

their knowledge of words that were explicitly taught, support was also shown for incidental learning of words, and that the intervention was effective in improving reading comprehension. In addition, the findings suggest that direct vocabulary instruction, which is effective with both ELL and English-only students, should include repeated use of the words, teaching strategies for inferring the meaning of unknown words, introducing words in the context of engaging material, hands-on activities such as charades, and teaching about cognates.

The development of a core list of words and specifying which words to be taught first can help instructors focus on teaching words in depth for meaning rather than simply exposing students to words. August et al. (2005) recognized that additional research in this area is needed to determine if ELLs should learn a specific list of words, whether these words should be taught in a certain order, and whether these words would differ based on a student's native language (August et al.). Learners can do a lot with a relatively small amount of well-selected vocabulary words according to Nation (2001).

Practice 3: Integrate Vocabulary across Content

It is not surprising that the more a learner engages with a new word, the greater their chances of actually learning it. One way to increase the amount of time a second language learner engages with a new vocabulary word, especially in the primary grades, is by integrating the new word across content areas. This is the third practice for building

vocabulary in ELL students. The contexts where students see words are rich, including various content areas (Kamil & Hiebert, 2005). By integrating the new words across content areas students will encounter words several times during the day in reading, writing, spelling, math, or science. Strategies that support integrating vocabulary across content areas also promote engagement with the new words frequently throughout the day.

Before integrating the words the teacher selects the vocabulary words they want the students to learn. Then, they provide activities for students in each content area so students can interact and use the target words expressively and receptively. Through this practice students not only have multiple opportunities to engage with the words throughout the day, but also opportunities to see the words used in different contexts creating exposure to the multiple meanings of the identified words. When students engage with words they increase their chances of identifying, understanding and retaining the word so it becomes a part of their active vocabulary.

Effective vocabulary instruction includes frequent exposure, such as over several days, to target words in the areas of reading, writing, and speaking (Gersten et al., 2007). Frequent exposure can take place by implementing strategies such as thematic teaching, a K-W-L-H chart, and creating interaction in a word-rich environment, along with other strategies that promote students actively engaged with the new vocabulary words. The first strategy used in elementary schools for integrating vocabulary words throughout the day is through thematic teaching or planning interrelated activities. At the elementary level,

especially in primary grades, teachers are usually challenged trying to teach the required curriculum in all content areas each day. Through the strategy of thematic teaching they can take a general concept from the curriculum, like the study of plants, and integrate the instruction they need to teach from other content areas.

For example, during math teachers may plan for students to use measurement and measure the plant's growth, amount of water it needs or chart the amount of sunlight it received. Teachers could use the vocabulary from the plant unit as a springboard for a writing activity or have them write sequenced sentences of how a plant grows. The words could be used in spelling, or a book about plants could be read aloud to the class with the vocabulary words highlighted and their meaning discussed. Such integrated designs make it easy for teachers and students to use the specific, target vocabulary words across several content areas for instruction throughout the day.

Another strategy used to integrate vocabulary across content, and commonly used in the primary grades, is the K-W-L-H chart, whose acronym stands for: what we know, what we want to find out, what we learned, and how can we learn more. The letters in the acronym identifies each of the different columns on the chart related to what is being explored as shown in Table 1.5. The K-W-L-H chart is an example of pictorial schemata, which uses grids or diagrams as a semantic strategy and has been shown in research to support student learning and retention of new words (Schmitt & McCarthy, 1997). Students in whole group, under the guidance of their teacher, complete the chart before,

during, and after the unit they are studying. The example of a K-W-L-H chart taken from the North Central Regional Education Laboratory (1995) uses the topic of Dinosaurs and is displayed in Table 1.5.

Table 1.5. K-W-L-H Example for Dinosaurs.

What We Know	What We Want to Find Out	What We Learned	How Can We Learn More
Dinosaurs are large.	How long ago did they live?	An archeologist has an exciting life.	Research
Dinosaurs are dead.	Why did they die?	Dinosaurs eat plants and some eat meat.	Museums
They lived a long time ago.	How do we know what they looked like?	Some dinosaurs were gigantic, but had small brains.	Field Trips
There is a movie about dinosaurs	Who are the people who study dinosaurs?	Fossils uncover dinosaur traits.	Archeological digs
			Videos
			Internet computer search

Although the integration of vocabulary throughout the day in all content areas can be evident in individual classrooms, Blachowicz et al. (2006) viewed vocabulary integration to mean that vocabulary is a core consideration across the school, in all grade-level subjects, throughout the day. A school-wide integration means shared practices, vocabulary and principles leading to a solid understanding among colleagues with regard to word learning and vocabulary development (Blachowicz et al.).

Whereas the thematic strategy provides the structure for how to integrate the vocabulary throughout different content areas, it is important to make sure that students are actively engaged with the vocabulary while learning. The facilitation of vocabulary

learning can include anything that leads to more attention, time spent on the specific vocabulary word, more exposure or manipulation of the words (Schmitt, 2008).

Another way to integrate the vocabulary throughout the day to support instruction is by engaging students in a print-rich or verbal-rich environment, also referred to as a language or word-rich environment. A word-rich environment includes academic language and items designed by students and the teacher and used daily to support the English language development of ELLs. Walls should show numerous work products with the language of the students and the content they are learning (Brechtal, 2001). The word-rich environment then provides opportunities for students to read, talk, hear and use new vocabulary in several different ways (Blachowicz et al., 2006).

Of course a word-rich environment becomes more effective if used regularly, in addition to being decoration for the classroom. Students should interact with the language and words, using them as a tool for learning. One way to interact with the language as a tool for learning is through word play. Word play is one element of a word-rich classroom yet critical for word awareness and word consciousness development in students and is strongly supported in research (Blachowicz & Fisher, 2004). Utilizing a variety of strategies, including a combination of incidental and intentional practices, will support vocabulary development of students within a print-rich environment (Blachowicz et al., 2006).

Whether teachers use the K-W-L-H strategy, emphasize a word-rich environment or teach using themes, the process of integrating vocabulary across content areas will provide students with several opportunities throughout the day to engage with and use new vocabulary words. Instruction that engages students will help them to make connections between and among words and concepts. By focusing on implementing engagement activities or promoting engagement in the classroom it is clear that the frequency and quality of the engagement, according to Schmitt (2008), should improve vocabulary learning.

Practice 4: Teach Academic Vocabulary

In a previous section (Practice 2) the purpose of teaching basic words and their meaning to second language learners was explored. Whereas basic words are important as a foundation of words in the new language, acquiring academic language is also important for students to be successful in school. The fourth practice for building vocabulary in ELL students includes the intentional teaching of academic vocabulary. The instruction for developing the English academic language of ELL students should be intensive and interactive. The teaching of academic language should provide both definitional and contextual information about the words to be learned as well as multiple exposures and opportunities to use them (Blachowicz et al., 2006, p. 528). Explicit teaching is needed to teach academic words for second language acquisition and can be accomplished through

activities that encourage frequent encounters with words, integrating new and old words, facilitating imaging and concreteness, deep level processing, and by using a variety of techniques (Schmitt & McCarthy, 1997).

Developing academic English is one of the core recommendations identified by Gersten et al. (2007) who offered recommendations specific to literacy and the ELL population based on their review of the research. In the context of literacy, they recognized that early and consistent instruction in academic English, across content, at the primary grades supports ELLs ability to understand the core curriculum they are learning (Gersten et al.). Academic language is understood to be words that students may encounter in textbooks or school that require teaching, because they are not words that students would frequently encounter or learn through social interactions. Vocabulary words from math or science content areas, for example, would be identified as academic vocabulary.

A variety of strategies, such as semantic mapping, can help teach academic words by allowing teachers and students to work together to build a visual framework of connections between ideas (I. Nation, 2001). Semantic mapping is a strategy for graphically representing concepts and has been shown in research, as cited in Blachowicz et al. (2006), to help strengthen the vocabulary of students because they have an opportunity to be engaged in the learning, make connections and understand relationships between words. Semantic mapping, also referred to as graphic organizers or concept mapping, creates opportunities for students to use the academic words and articulate the

common themes of words, building their expressive vocabulary. Because the knowledge required for expression is greater than the knowledge required for reception, when teachers engage in a dialogue with students they are encouraging them to use or produce the vocabulary they are modeling (Nation) and semantic mapping is a great way for this to be accomplished.

There are several semantic maps that can be used with any content area and one example used during writing on the topic of animals is shared in Figure 1.1. Students begin the semantic map with a topic word that is placed in the center of the map, connect ideas using the map, and include academic language in the development of their ideas. Drawing from the animal example in Figure 1.1, students can learn academic words, like species or habitat, through the development of the semantic map. These academic words share meaning with the commonly used words the student has included in the map. Semantic mapping is a versatile strategy that can be used in any content area, draw from the general knowledge students have of a topic area, explore current events or previously read stories.

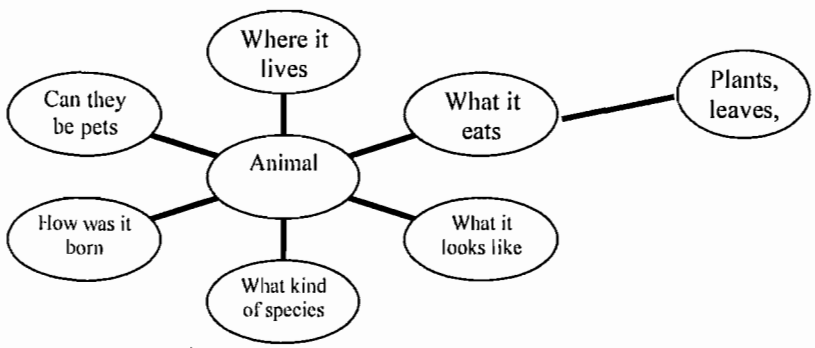


Figure 1.1. Example of a semantic map used during primary writing.

Because the purpose of a semantic map activity is to increase the expressive vocabulary, Nation (2001) identified four areas or features that should be evident with the implementation of a semantic map. First, instead of the teacher providing the words for the map, they should encourage students to produce the vocabulary that will be placed on the map. The teacher may need to provide suggestions or clues to help students, such as first language translations, paraphrases, or other formal clues to help them retrieve the word from their receptive vocabulary for the semantic map activity.

Second, the teacher asks the students to increase the connections between the words or ideas they have on the map by asking them to explain or justify what they have placed on the semantic map. The teacher may help the student by rephrasing what they say and provide grammatical support, and repeat the vocabulary words and share meanings. Third, the teacher can review what the students have placed on the map to repeat and reinforce the important vocabulary words and connections between the words. Finally, upon completion of the map the teacher will continue to use it for discussion or writing activities.

Although it can be a challenge to bring a student's receptive language into their expressive vocabulary, one important aspect of the semantic map strategy is the dialogue that occurs between the teacher and students during and after the mapping activity. The discussion during the building of the semantic map is what contributes to vocabulary learning (I. Nation, 2001). Part of the discussion about the new word and its meaning can include the comparisons and relationships between the words (Stahl, 2005).

In addition to the semantic map, additional strategies focused on the explicit or intentional teaching of vocabulary can be very effective for teaching academic vocabulary. Intentional vocabulary learning that has an explicit focus not only leads to greater and faster gain, but also increases the chances of reaching a productive level of mastery along with retention of the words (Schmitt, 2008). The teaching of academic vocabulary aligns with the explicit learning of vocabulary, whereas the review and reinforcement of vocabulary, as presented in the next section, can be accomplished through strategies focused on incidental learning.

Practice 5: Review and Reinforce Vocabulary

The final practice for developing the vocabulary of ELLs is to frequently review and reinforce the new vocabulary that students have learned. The synonymous term used in the literature for this practice is repetition; utilizing strategies that engage the learner with repeated encounters of vocabulary words. Reviewing and reinforcing vocabulary by using strategies focused on vocabulary word repetition is important. Repetition will help strengthen students' ability to retain the learned words and their meanings. Nation (2001) shares that when it comes to vocabulary learning repetition is essential, because there is so much information to know about each word it would be difficult to expect that one encounter with the word would provide a student with enough information to know and use the word effectively.

Beck, McKeown, and Kucan (2002) acknowledged that if words are to become permanent in a student's vocabulary, then they need frequent encounters with the new words and vocabulary research strongly supports this view. Repeated encounters with words could be considered incidental learning of vocabulary words. Incidental learning in vocabulary development has primarily been researched by focusing on words in the context of reading (Cunningham, 2001). Even though a teacher can review, reinforce or repeat words to support students acquiring a second language, encountering these words in the reading context still develops the receptive language of ELL students and should not be overlooked.

One teaching strategy evident in the literature to review and reinforce vocabulary words is through read-alouds. During read-alouds teachers can pre-teach key words that will be used in the reading passage so that students recognize or are familiar with the word when they encounter it in the text. This builds concept knowledge. In addition, it is important to reinforce the vocabulary words through questions that require students to understand and use the words during or after the read aloud.

One longitudinal study conducted by Appel and Vermeer (1998) utilized read-alouds and examined whether it was possible to speed up the acquisition of vocabulary for migrant children in the Netherlands who were behind their native Dutch-speaking peers. Five schools participated in the experimental program and produced two cohorts of students. One cohort included the students who were four years old and had not been

exposed to Dutch at the time of the first testing. The second cohort included students who were one grade ahead and did not participate in the experimental program. The total number of students who finished the four-year study included 57 students in the experimental group (32 in cohort 1, 25 in cohort 2). Initially there were six schools in the experimental group but one school dropped out after the first year. Eight schools participated in the comparison group and included 53 students.

The goals of the research program were to study a group of students who had never been exposed to the Dutch language, provide them with 30 minutes of instruction four times a week on target vocabulary words with a total of 1,000 new words learned each year. The instruction to teach the target language included half of the words already in the regular curriculum materials and the other half presented through interactive picture book read-alouds. During the lesson the teacher would activate the students' prior knowledge and incorporate pictures to tell the story and include explanations of the target vocabulary words.

In addition, the students participated in language games, dialogue, or performed tasks including listening to stories on tape. Some of the tasks included the Total Physical Response (TPR) approach in the lower grades. The experimental program focused on implicit acquisition of the target language in meaningful contexts and communicative tasks (Appel & Vermeer, 1998, p. 163). The experimental schools spent two to four hours a

week on the program and the intervention continued the first four primary years in school, beginning in first grade and ending at the completion of the fourth grade year.

Data were collected from teacher questionnaires, curriculum-dependent and curriculum-independent assessments. The teacher questionnaires were completed annually and included information on the time spent on the program, student participation and items related to their level of satisfaction. Curriculum-dependent lexical tests were individually administered to students as pretests and posttests at the beginning and end of the school year for each of the four years. Due to annual changes in curriculum, the curriculum-dependent assessments were reconstructed each year and developed to determine how many target vocabulary words had been acquired throughout the year. Receptive tests were used the first year, productive tests the following years, and definition tasks were given to students in the fourth grade.

The curriculum-independent tests that were used included two subtests of the Taaltoets Allochtone Kinderen, Language Test for Minority Children. The receptive tests were administered at the beginning of first grade and at the end of fourth grade, and the productive tests at the beginning of second grade and at the end of fourth grade. Two reading cloze-task tests were also administered 6 months after the experiment and three years after the experiment. The researchers had hoped that the Dutch vocabulary of the migrant children would have approximately 5,000 to 6,000 words in their receptive

knowledge and 4,000 to 5,000 words in their expressive knowledge and equate to the vocabulary of their native speaking peers at the end of the four year study.

Results of the study revealed that by the end of the fourth year the experimental group was one to two years ahead of the comparison group in vocabulary and sustained this difference three years after the study. Although the students who received the targeted vocabulary instruction showed gains in comparison to other non-native speakers in the study and narrowed the achievement gap with their native Dutch peers, they remained one year behind at the conclusion of the study. Furthermore, results from the reading tests revealed that the children who participated in the experimental group not only showed gains in vocabulary but their reading skills also improved. Because the results for reading were obtained three years after the study the researchers conclude that the students in the experimental group maintained their reading achievement. The design of the study, and specific teacher materials, allowed students several opportunities to hear and use the vocabulary words repeatedly throughout the four year study. The findings in this study suggested that repeated exposure or use of vocabulary words, and vocabulary word review, contributed to an increase in vocabulary and reading skills.

Aside from read-alouds, other teacher directed activities can support reviewing and reinforcing vocabulary words through activities such as word walls, making scripted books designed to reinforce word meanings, asking students to use words in story retells, story mapping and dramatization (August et al., 2005). Student directed activities can also

provide support by using tapes in a student's native language to reinforce English words and story meaning, utilizing activities that help students listen for and use words outside of the reading class, providing games for student pairs using picture cards, or games where students listen to new words or previously taught words, the use of technology and, perhaps, home activities that involve parents (August et al.).

Through each of the five teaching practices and researched strategies, students can experience multiple exposures to words, support word meaning, and have additional opportunities to use the words. The more students can use the vocabulary words through expressive and receptive language, the greater the chance they will become a regular user of the terms and incorporate them into their language. The conceptual framework displayed in Figure 1.2 shows how the five practices, when implemented through the GLAD strategies, draw from and develop both the receptive and expressive vocabularies of students. In the following section the GLAD model and strategies will be explained, including its development, supporting research and alignment to the researched strategies.

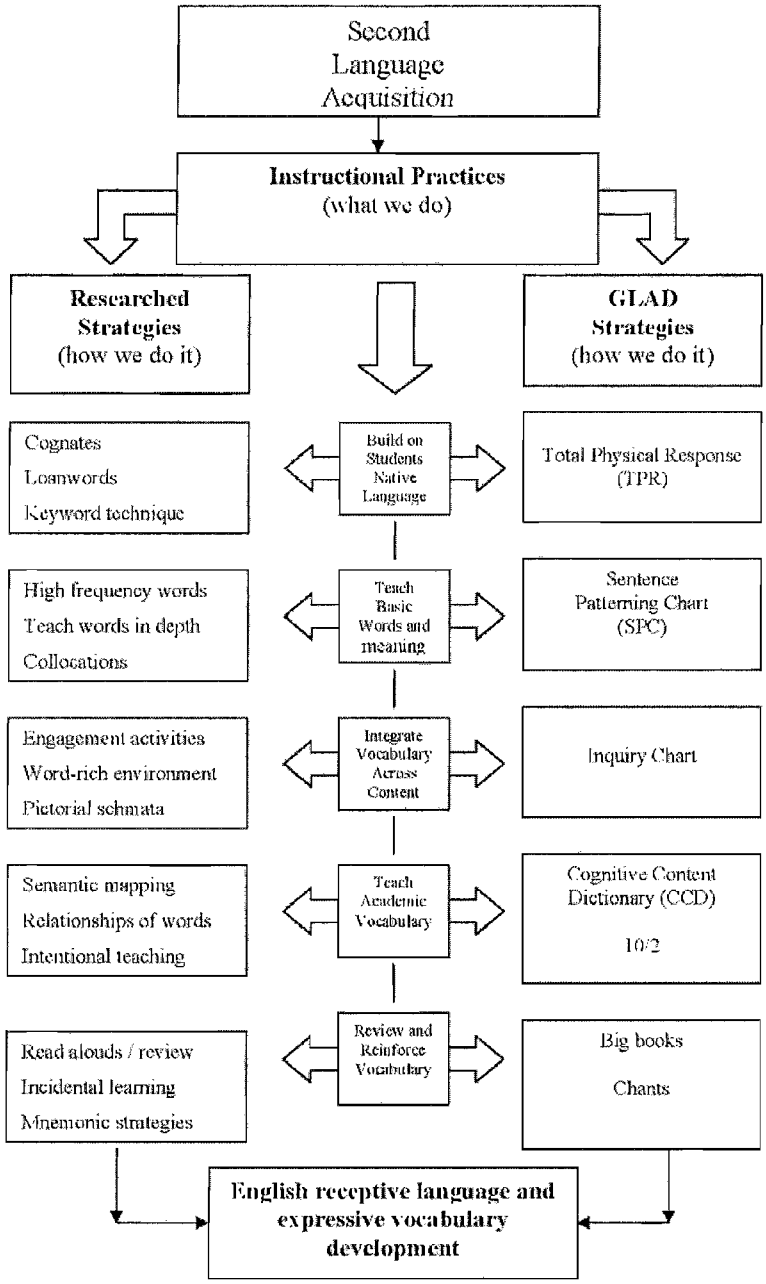


Figure 1.2. Conceptual framework for research practices and GLAD integration.

GLAD

This literature survey now moves from describing some main practices and researched strategies for second language vocabulary development to identifying how these researched principles align with the GLAD strategies, which will be the subject of the investigation. The research questions in this dissertation involve GLAD, through first identifying if the interactive strategies increase the English language vocabulary of native Korean speakers and, if so, what precise strategies seem most effective. The upcoming methods section describes how GLAD strategies and learning outcomes will be measured and documented through observations at one elementary school site. The next section of the literature survey presents key elements of GLAD important to the research questions and intervention methodology. This section begins with an explanation of what research supports the GLAD model, and further information about the GLAD strategies within the model that are used in classrooms to support second language acquisition.

GLAD Supported through Research

The GLAD model was developed, researched, and field tested by Marcia Brechtel and Linnea Haley. Together they used the GLAD model as a basis for writing a Title VII staff development grant and conducted nationwide teacher in-services on how to utilize the model (Brechtal, 2001). Initially the model was created so that ELL students could learn grade level academic content in ways they could comprehend (Santa Ana Unified School District, 2009). The GLAD model is built on the concept that through unit planning, second

language acquisition strategies can be integrated into the regular curriculum to support the language skills of all students, especially those who are ELL. The foundation of the model is two-fold; focusing on integration through meaningful content to promote language and thinking, and focusing on making connections (Brechtal, 2001).

The GLAD model supports the integration of listening, speaking, writing, and reading into the curricula and an understanding of how they are interrelated. The model also supports a focus on creating meaningful connections including those between prior knowledge and new information, connections between content areas, and links among the areas of receptive language (reading, listening) and expressive vocabulary (writing, speaking) (Brechtal, 2001). An additional principle is that language is acquired most effectively when an emphasis is placed on meaning, and should be acquired while studying something of interest, that relates to real life, or is related to a student's background or experiences (Brechtal, 2001).

Brechtel (2001) acknowledged that several areas of research influenced the GLAD model beginning with research conducted by Stephen Krashen (1983) and other researchers including Virginia Collier and Wayne Thomas as shown in Table 1.6. Seven key aspects were drawn from this collection of researchers and integrated into the model (modified from Brechtel, p. 5). The seven key aspects collectively identify the importance of classroom-based interactive opportunities for students to use and practice their second language for learning.

Table 1.6. Research that Influenced the GLAD Model.

Key Aspect	GLAD Model Integration	Supporting Researchers	Evidence
Language is acquired, not learned	Language is acquired by meaningful immersion, demonstration, and opportunities to practice	Krashen, Cambourne	--Krashen & Terrell, (1983) *The Natural Approach.*
Comprehensible input	Do not assume that what you say, repeat, or write on the board is understood. Check that you are understood	Krashen, Cummins	
A low affective filter	Develop a classroom where high self-esteem, low anxiety, and inclusion for students are the norm	Krashen, Cummins, Baron, Sagor, and Wink	--Cummins, J. *Affirming Diversity* --Wink, J., *Critical pedagogy, notes from the real world.*
Negotiating for meaning, comprehensible output, guided oral practice, zone of proximal development and scaffolding	Students need opportunities to use new vocabulary and concepts with someone they understand, and this is usually not the teacher	Long, Swain, Cummins, Vygotsky	
Academic language	Teach cognitively demanding, complex concepts and language. Teach to the highest common denominator	Shefelbine, Collier / Thomas	Collier & Thomas, *Longitudinal Study of Successful Programs for Second Language Learners* (1991)
Pull-out program	Avoid pull-out designs as they are the least effective method for elementary setting	Berman, Collier / Thomas	Berman et al., *Meeting the challenge of language diversity* (1991)
Teacher and student generated text	What students can say and understand, they can write or dictate; what they can write or dictate, they can learn to read. Following these principles produces truly leveled reading.	ELD Standards, Brechtel/Haley, Van Allen	

Note. Modified from Brechtal (2001, p. 5).

Additional research in the areas of retrievable information, brain research and meta-cognition has influenced the GLAD model and design of the GLAD strategies. Brechtal

(2001) recognized the work of Susan Kovalik as having an initial influence on the understanding of retrievable information. Continued research in this area recognizes that patterning, either through visual methods such as graphic organizers or oral methods like songs, poems or chants, can help to improve retention of information which is tied to memory. This information contributed to the development of the chant and sentence patterning chart GLAD strategies. In addition to retrieval, meta-cognition and the understanding that all students may approach learning differently is evident in GLAD. The strategies, and implementation of the strategies, encourage differentiation and the ability to teach in a way that reaches the various learning styles of students.

GLAD's Approach to Vocabulary Development

Because vocabulary development through GLAD is intended to focus on words students may already recognize orally or in print, but do not clearly know the meaning of, the GLAD strategies are designed to connect word form and meaning either through direct instruction or in context. The GLAD teaching strategies strengthen the connection between form and meaning for students by utilizing highly interactive activities that encourage: repetition and frequent exposures to target words, visual charts, auditory exercises and gestures, and interaction that incorporates the use of receptive and expressive language. Simply stated the GLAD approach to vocabulary development incorporates mnemonic devices that are verbal and visual, or both, so that learned vocabulary is retained.

Opportunities for students to negotiate for meaning are also used to strengthen the connection between form and meaning.

The GLAD approach to vocabulary development also includes the use of complex sentence structure, scaffolding, contextual clues, and an understanding that vocabulary is acquired through a process. Students have an active role in the process of vocabulary development through GLAD and help to establish the meaning of words, with the guidance of the teacher, for ease in recalling the words for future use.

In addition, the GLAD approach to vocabulary development acknowledges that students use vocabulary for a variety of purposes in multiple contexts. Thus the approach is mindful to equip the ELL student with a vocabulary where they can understand words when they encounter them either in conversation, text, or academic settings.

One way the interactive GLAD strategies establish meaning is by allowing several opportunities for oral practice of vocabulary words and processing time so that meaning of words can be determined or clarified. A second way meaning is established through GLAD is by allowing time for collaboration, learning from peers, and opportunities for students to contribute to discussions. Meaning is also established through the GLAD strategies by repeating new words and concepts, or by scaffolding, to build on what was learned the previous day. The strategies help students gain meaning of new words through relational words, word families and the help of the teacher in making connections between words they have already learned that relate to new words.

Students actively engage in language development activities through each strategy, since the strategies are designed to build on native language knowledge, utilize print cues in their classroom environment, and provide continuous opportunities for listening, reading, speaking and writing. The interactive design of the GLAD teaching strategies supports the development of the receptive language and expressive vocabularies of all students, especially those who are learning English as a second language. According to Gersten et al. (2007), the goal of rich vocabulary instruction is for students to develop an understanding of word meanings to the point where they can use these and related words in their communication and as a basis for further learning (p. 13).

The Five Practices, Researched Strategies, and Alignment to GLAD

Previously in this dissertation five teaching practices, and the researched strategies that implement them, were outlined. These researched strategies share similarities with the GLAD strategies and will be aligned in the following section. One reason for this alignment is to identify the level of support in research for each of the GLAD strategies because there is limited research that is available that recognizes the GLAD strategies under their GLAD label. Because GLAD strategies will be used for the intervention in this study, it is important to identify what level of support there is in research for each GLAD strategy, even if identified under a different name.

Although there are numerous GLAD strategies, seven are predominantly used in primary classrooms and will be reviewed in the following sections. A brief description of each is shared in Table 1.7 and reiterates their use and alignment to the research strategies

Table 1.7. Researched Strategies and GLAD Strategies Aligned.

Vocabulary Development			
Researched Strategies		**GLAD Strategies**	
Practice	**Researched strategies**	**GLAD strategy**	**GLAD Strategy description**
1. Build on the student's native language	*Use loanwords *teach cognate strategies *teach and demonstrate keywords	Total Physical Response (TPR)	*Students learn hand signals or actions for target words they are learning along with their definition.
2. Teach basic words and word meaning	*high frequency words *tier I words *teach words in depth *collocations	Sentence patterning chart	*chart with 4-5 columns, each color coded and labeled adjective, noun, verb, prepositional phrase and adverb on occasion. Students brainstorm words and learn new vocabulary along with sentence structure as related to the topic they are learning about.
3. Integrate vocabulary across content	*engagement activities *word-rich environment *thematic units *pictorial schmata	Inquiry Chart	*charts are designed with columns to access student background knowledge, introduce information, pre-teach words and concepts and is similar to the K-W-L chart: What do we know about . . ., what do we want to learn or what have we learned? The chart is interactive, includes student input and stays up in the classroom throughout the unit.
4. Teach academic vocabulary	*semantic mapping *relationships and connections of words	Cognitive Content dictionary	*a chart that highlights specific academic words. Students in whole group predict the meaning of the chosen word, draw a picture to help them remember the word meaning, and use the word in a sentence.
	*oral language processing time *intentional teaching	10/2	*For every 10 minutes of direct instruction students orally process their understanding of concepts with a partner for 2 minutes in either their native, second language, or both.
5. Review and reinforce vocabulary	*read alouds and retells *review vocabulary words	Big books	* Big books can be utilized by ELL students in the classroom to reinforce vocabulary word meaning and concepts that were previously learned when the big book was made for the unit.
	*mnemonic strategies *incidental learning	Chants	*chants are designed with content vocabulary and can be reviewed or practiced after the unit to reinforce content vocabulary and concepts.

within the five teaching practices. It is important to note that all seven of the GLAD strategies can be used successfully with any of the five practices because of their versatility; however, for the purpose of highlighting each strategy in detail, and in an effort to provide examples for each practice, one or two approaches have been described in each section.

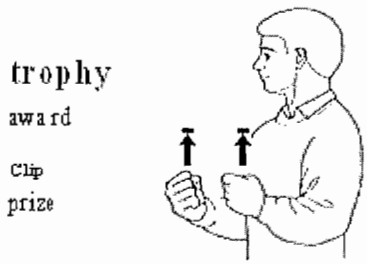
Build on the Student's Native Language through GLAD

The keyword technique was identified in research as a strategy that utilizes the student's native language to help build their English vocabulary. The GLAD teaching strategy, total physical response (TPR), also uses a similar keyword approach to support students in learning new words and connecting its meaning to a word in their native language. Whereas the keyword technique has the student create an association between the new word and one in their native language and then develop an image for the keyword, the TPR incorporates a gesture that is associated with the meaning of the new word and definition, instead of just a visual image connection between the native and second language word.

As evidenced by the term TPR, students physically engage in the lesson by actively performing the new word. This strategy can help to establish the connection between the word and meaning the child may know in their native language, to the word in the second language. Students who may know the word in their native language, but may not

recognize the word in English, can make the connection to the new word by acting out the meaning through the gesture. Usually the teacher and students decide together on what the TPR will be for the new vocabulary words. After the initial teaching of the word, its meaning, and brief practice of the TPR gesture, the teacher begins the lesson and uses the TPR gesture while teaching. Each time the vocabulary word is spoken throughout the lesson or unit the teacher and students engage the word by demonstrating the gesture while saying the word and definition aloud.

The TPR strategy helps students to associate the new word and its meaning with a gesture through repeated exposure throughout the lesson, unit or school day. In primary classrooms it is common to use the TPR word as a target word, where teachers say the target word, and students demonstrate the motion while saying the definition, each time they hear the target word used during the day. To best describe the TPR in visual form an example of the word trophy, as shown in The Dictionary of New Zealand Sign Language (Kennedy, as cited in Nation, 2001), is shown in Figure 1.3. Teachers implementing the GLAD strategy of TPR also model the gesture and share the verbal instructions of how to demonstrate the word before providing the matching definition that will be used with the gesture.



Both fists are held out at waist-level, some way apart, palms facing each other/up, blades down, and are moved lip to chest level.
Hint: Raising a trophy Clip by its handles.

USE: (Nc) Our team got a trophy for winning the tournament.
Who will win the world cup? We won a gold cup. We also won the award for the best uniform. Who got the prize?

ACW

Figure 1.3. Example of corresponding gesture and word definition for trophy.

TPR can be used in several content areas with a variety of words. For example, one fifth grade class with several ELL students decided to use TPR while learning new vocabulary for their science unit on the digestive system. In an effort to remember the sequence of the digestive system, along with the accompanying vocabulary, the class developed a TPR for each of the targeted vocabulary words in the lesson: mouth, esophagus, stomach, large intestines, small intestines, etc. During the science lesson and unit, students would say the targeted word and definition while demonstrating the appropriate gesture. The teacher frequently used these words throughout the day for repeated practice of the words, instead of isolating the words by using them only during science instruction. Because the vocabulary for this unit included several academic words,

the TPR was helpful for ELL students connecting the academic word to their native language word through the gesture for greater understanding.

Although there is strong support in the research literature for the keyword technique as a strategy that supports second language vocabulary development, there is only minimal research support for the TPR strategy. One reason for this could be that the TPR teaching strategy is a combination of the keyword technique and use of gestures. Where there is strong research that supports the keyword technique even as a mnemonic device (Sokmen, 1997), there is minimal research that supports the use of gestures for second language vocabulary acquisition (Gullberg, 2006). There are studies, however, that have explored the use of gestures as a type of communicative strategy to replace missing words (Yoshioka & Kellerman, 2006) or the thinking for speaking patterns among second language learners (Negueruela, Lantolf, Jordan, & Gelabert, 2004). Although the teaching strategy of TPR has components identified in research, as a teaching strategy it is minimally supported in the research to date.

Teach Basic Words and Word Meaning through GLAD

Teaching basic words in depth develops word meaning and is identified in research as a strategy that develops the English language vocabulary. One way to learn a word in depth is to experience it in context such as in a sentence or passage. The sentence patterning chart GLAD strategy is designed to take a targeted vocabulary word and develop

it into a sentence related to the curriculum theme for a deeper understanding of the word and its meaning. The sentence patterning chart assists students with the learning of vocabulary words, parts of a sentence, and sentence structure.

The sentence patterning chart is designed on a large piece of butcher paper and displayed in the classroom for reference throughout the thematic unit. The chart is divided into four columns and labeled adjective, noun, verb, prepositional phrase, as shown in Table 3.3, and each column is written in a different color. The sentence patterning chart is developed with the students, who brainstorm words to accompany the noun that has been provided. In the example in Table 1.8 the word *miners* is the noun used to begin the sentence patterning chart.

Table 1.8. Example of a Sentence Patterning Chart Using the Noun *Miners.*

Adjective	Noun	Verb	Prepositional Phrase
Sad	miners	dig	under the mountain
Tired		work	in the rivers
Lonely		shovel	around mining camps
hard-working			

Note. From Brechtal (2001, p. 140).

Teachers introduce the sentence patterning chart by defining the column heading words, both orally and in writing, for students. In whole group the class develops the chart together, however the teacher provides oral definitions for accuracy and meaning, examples or pictures, and opportunities for students to read or repeat each word that is shared and

recorded on the chart. As the chart begins to fill the teacher will model for students how to put the colored parts of the chart together to form sentences and, again, provide oral opportunities for students to practice constructing different sentences. The teacher places a sticky note next to two adjectives on the list, the noun, one verb and one prepositional phrase, and sings the new sentence to the class to the tune of the Farmer and the Dell. Then the class sings the sentence together. For example, the tired miners dig under the mountain, as shown in Table 1.8. This strategy can be used in a variety of different ways to promote vocabulary, word meaning, sentence construction and conversations with ELL students to build their oral and written language.

Words that commonly go together, or collocational relationships, can have long lasting links to the lexicon (Schmitt & McCarthy, 1997) and activities that encourage their practice can be worthwhile. The sentence patterning chart is an example of a grid that encourages collocational relationships and has been supported in research as helping students to expand and understand vocabulary. As a result, there is research evidence to support the sentence patterning chart for the development of the English vocabulary.

Integrate Vocabulary across Content through GLAD

Integrating vocabulary across content areas can be accomplished, as indicated in research, by using strategies that engage the student with the new words and their meaning through repeated exposures. One GLAD teaching strategy, the inquiry chart, supports

engagement by having students interact with the new topic. Students, through whole group discussion with the teacher, draw from their collective background knowledge on the new subject and share information they already know about the new topic. The teacher records the information on the inquiry chart, under the first heading of what we think we know, and explains any new words that are shared. The class also discusses any questions that they have about the new topic and the teacher records the questions under the second heading of what we want to know. The inquiry chart stays posted in the classroom and is referred to throughout the day and unit. The inquiry chart, as shown in Table 1.9, was used during a first-grade science unit on balance.

Table 1.9. Inquiry Chart from a First-Grade Class Studying Balance.

What we think we know	What we want to know
Balance is when you have the same amount of weight on each side	Could we use our nose to balance things?
We could balance things on our finger	How can you balance heavy things?
When you put the weight on top it flops	Why does it (crayfish) flop when you put the weight on top?
Balance point is not always in the middle	

The inquiry chart was developed from the K-W-H-L chart (Practice 3) and displays a resemblance in both design and implementation. The K-W-H-L has the same headings in the first two columns but has two additional columns for further information. The inquiry chart, like the K-W-H-L chart, is interactive, includes student input, can be used across

content, and stays posted in the classroom throughout the unit. For example, a fourth grade class may be studying the solar system in science and begin using the inquiry chart during their science time. They may have decided to use the solar system as a thematic unit, incorporating other content areas into their study of the solar system such as math and reading. During guided reading the students use an informational text related to the solar system and information in the book answers one of the questions listed on the inquiry chart. The teacher can refer to the chart and generate a discussion with students related to the informational text and reinforce targeted vocabulary words even though it is not science time. This would be one example of integrating the vocabulary words across content using engagement strategies through a thematic approach.

There is evidence in the research literature to support the strategy of engagement (I. Nation, 2001) and the use of grids or diagrams as a semantic strategy (Schmitt & McCarthy, 1997). The GLAD strategy of the inquiry chart incorporates engagement strategies when it is being implemented so the teacher and students can discover what the students collectively know and want to learn. In addition, the inquiry chart is an example of pictorial schemata. The pictorial schemata, which is a teacher or student-generated grid or visual device, is supported in research, thus there is support for the inquiry chart strategy.

Teach Academic Vocabulary through GLAD

Teaching academic vocabulary can be accomplished, as indicated in research, by using semantic mapping and intentional teaching strategies. The research literature acknowledges that the discussions during and after the development of the semantic map contribute to vocabulary learning. Two GLAD teaching strategies can be implemented to support the teaching of academic vocabulary through mapping and discussion. The first GLAD strategy, the cognitive content dictionary (CCD), is a variation of a semantic map.

With the CCD the teacher selects an academic vocabulary word from the curriculum and in a whole group setting generates a discussion where students offer predictions of the word while the teacher records them on the CCD chart. The teacher also records the appropriate meaning or definition of the word on the CCD to ensure that students learn the correct meaning and that the appropriate definition is reinforced. Students contribute ideas on what the matching picture could be, that aligns with the meaning, and the teacher draws a picture that will be remembered by students for the meaning. Students then work in table groups to discuss how they could use the new word in a sentence. The teacher selects one person from each table group to share the sentence they designed and either records all of the sentences on the chart or just one. One example of a cognitive content dictionary, used in a second-grade class during a science unit on Change, is displayed in Table 1.10.

Table 1.10. First-Grade Example of a Cognitive Content Dictionary.

Word	Prediction	Meaning	Picture / Sketch	Sentence
evaporation condensation	-When water dries up and becomes rain -a solid that turns into a liquid -when water becomes a gas	The process where a liquid becomes a gas	(picture drawn here)	Evaporation is a part of the water cycle.

The example in Table 4.4 uses words and their meanings that were taken directly out of the grade level science curriculum and will be important for students to learn in order to participate in the lesson and understand the concepts being taught. The cognitive content dictionary should include academic vocabulary words that best align with the English proficiency level of the students and content material.

The second GLAD teaching strategy, the 10/2, can be used in combination with the CCD. With the 10/2 GLAD strategy teachers pause after every ten minutes of direct instruction to allow students oral processing time with a peer for two minutes. Implementation of this strategy provides ELL students with frequent opportunities to orally process what they are learning in their native language, English, or both, for a deeper understanding of the concepts being taught during direct instruction. The 10/2 GLAD strategy, along with the cognitive content dictionary, creates opportunities for students to practice listening for meaning and then speaking aloud to a partner and sharing in their own words what was said or learned.

There is evidence in the research to support the use of grids or diagrams as a semantic strategy (Schmitt & McCarthy, 1997) and the discussions that take place during and after the development of the diagram. As a result, the GLAD strategy CCD, which is an example of pictorial schemata, and discussion through the GLAD strategy 10/2 are both supported in research.

Review and Reinforce Vocabulary through GLAD

One of the most effective ways to review and reinforce vocabulary is to use researched strategies that allow for incidental learning to take place such as through read-alouds. Two final GLAD strategies can be used that are similar to the researched strategies, the big book and chant GLAD strategies. Both strategies are designed to repeat vocabulary words that students have already been exposed to during the unit and reinforce their meaning. The first GLAD strategy, the big book, is developed by the teacher to include targeted vocabulary words presented in context with matching pictures. Teachers design the big books prior to units to introduce key concepts, vocabulary and patterned phrases. They read the book aloud to the class, focusing on specific vocabulary along with word meaning, and ask questions to engage the students. The book is displayed in the classroom and can be read by students at any time. ELL students can practice their vocabulary words by re-reading the big book aloud either in small group, with a partner or independently.

Big books can be reviewed at any time, reinforcing the concepts either during or after the unit.

The second GLAD strategy, the chant, is also designed by the teacher to include targeted vocabulary words for the current unit. The rhyming of poetry or song enhances memory and is one of the most common verbal mnemonic devices according to Sokmen (1997, p. 246). The chants have lyrics specially designed with content vocabulary and, like the big books, can be reviewed or practiced after the unit to reinforce content vocabulary and concepts. The teacher displays the chant in the classroom and uses a pointer to track the text while using it with students. Examples of chants include the Yes Ma'am chant, where students echo the teacher, and a Bugaloo chant as shown in Table 1.11. In both chants the teacher can highlight or underline the targeted vocabulary words for students. Chants are effectively used in primary classrooms to review vocabulary words and reinforce their meaning in a musical way. The combination of rhyming with meaning, according to Baddley (1990), affects retention in a powerful way. The chant examples in Table 1.11 were used during a science unit in a second-grade classroom.

In relation to the research literature, there is support for read-alouds. The big book GLAD strategy is an example of a read-aloud specially designed to be used with the curriculum unit, thus it is supported by research. There is also support in the research for strategies that provide repeated opportunities for students to engage with the material, as shared in Practice 5, which includes both the big book and chant strategies. The chant

GLAD strategy encourages repetition of vocabulary words, and is supported in research for its use as a mnemonic device, incorporating both verbal and visual information that leads to the learning and retention of vocabulary words.

Table 1.11. Example of a Yes, Ma'am Chant Used in a Second-Grade Classroom.

Is This Matter? Yes, Ma'am Chant	
Teacher	**Student**
Is this *matter*?	Yes, Ma'am
Is this *matter*?	Yes, Ma'am
How do you know?	It takes up space
What are the *states of matter*?	*Solid, liquid, and gas.*
Give me some examples.	Everything in our world!
Is this a *solid*?	Yes, Ma'am
Is this a *solid*?	Yes, Ma'am
What are its *properties*?	It has a definite *shape and volume*
Can *solids change*?	Yes, it can *dissolve* in water and become a liquid
Give me some examples.	Sugar, powder and gravel.

CHAPTER II

METHODOLOGY

A single-group pretest-posttest design was selected for this study in part because one group of subjects was being studied and given a pretest, then the treatment, and then a posttest. The pretest and posttests administered to subjects were the same, just administered at different times. With the pretest-posttest design subjects were exposed to the treatment and specifically in this study the treatment subjects received was their science curriculum through the implementation of the GLAD strategies. The single-group pretest-posttest design was selected to determine if any changes, from the pretest to the posttest, were evident after the application of the treatment.

An additional small sample at another school was included in this analysis as a small validity check sample to suggest a range for vocabulary learning gains that might be occurring for students in this population in the absence of the treatment, or GLAD training and formal school-site GLAD implementation for teachers.

In order to answer the research questions, qualitative and quantitative data needed to be collected to identify if there was an increase in the English receptive language and expressive vocabulary development of the subjects and to identify the specific GLAD strategies that were observed to be effective. Single-group pretest-posttest designs can include a mix of qualitative and quantitative evidence, which were needed in this research

to effectively answer the research questions, both through measuring quantitative learning gains and observing and investigating teacher behaviors.

The single-group pretest-posttest design was conducted at Sherwood Forest elementary school, in Federal Way School District. According to the Washington State School Report-card 2007-2008 data identified by the Office of Superintendent of Public Instruction (OSPI), Sherwood Forest has a diverse student population, with 551 students in kindergarten through fifth grade of whom 51% are male and 49% are female. Among the students, 20% are Asian with the majority within this group being ethnically Korean. The racial diversity of Sherwood Forest elementary is identified in Table 2.1 and highlights the percentage of students from major race/ethnicity populations within the school. School-wide data identifies that 8.6% of students participate in special education programs and 16.8% of students are in transitional bilingual programs (OSPI, 2008). At Sherwood Forest 37% of students qualify for free or reduced lunch (OSPI).

Table 2.1. Percent of Student Population by Race.

Race	Percent of students
American Indian/Alaskan Native	.9
Asian	20.0
Pacific Islander	1.6
Black	12.0
Hispanic	12.2
White	50.8

Sampling

Purposive sampling strategies were employed beginning with the site selection of Sherwood Forest elementary, selected because of the high percentage of Asian students and public information that the majority were ethnically Korean. The school was also selected because of their program design which supports the implementation of GLAD strategies, and through which all of the teachers had received previous professional development training in the strategies.

Because the research focus was on native Korean-speaking students in the first- and second-grade, all nine of the first- and second-grade classrooms were considered for the study. Information the researcher received from the principal and office staff identified that each classroom, with the exception of one second grade classroom, had between one and four students who were native Korean speakers and also met the criteria for participation in the study. Each identified student received a passive parental consent form in English and Korean. The goal was to obtain a sample size of at least 15 students in grades 1–2. The principal and office staff confirmed that there were four first-grade and four second-grade classroom teachers with native Korean-speaking students. The researcher met with the teachers by grade level to initially explain the guidelines and participation requirements of the study and confirm that they had previous training in GLAD.

Setting and Participants

Twenty native Korean-speaking students were recruited for the research study (grade 1, $N = 13$; grade 2, $N = 7$). The families of four students declined consent to participate in the study (grade 1, $N = 2$; grade 2, $N = 2$). Thus a total of 16 students, 10 boys and 6 girls, participated in the study. Eleven of the students were in the first-grade and 5 students were in the second-grade. According to self-report data, 9 spoke only Korean or mostly Korean at home, and 7 spoke Korean and English at home.

Eight classroom teachers, who were working with these native Korean-speaking students in their classes, were recruited for the study, 4 first-grade and 4 second-grade teachers. One second-grade teacher had one student in her class who qualified for the study but did not give consent to participate. As a result, the teacher did not participate in the study. The remaining 4 first-grade and 3 second-grade teachers participated and completed the research study. All of the teachers had received the two-day GLAD training during the previous school year and had completed a five-day GLAD training during this school year, prior to implementing the lessons for this study.

The first- and second-grade classroom teachers implemented their regular science curriculum, as identified on their district science kit rotation, and used seven GLAD strategies to implement the curriculum. The first-grade teachers taught a unit on Balance and Motion while the second-grade teachers taught a unit on Changes. All of the classroom teachers received black line masters, charts and vocabulary resources pre-made

for the unit. Teachers were given an integrated lesson plan block 1 booklet, which included: (a) the 12 target vocabulary words and definitions list; (b) the five daily detailed lesson sessions that outlined when and how they were to use the GLAD strategies and accompanying materials; (c) the alignment chart identifying the specific target vocabulary words used for each daily lesson; (d) a list of the grade level science learning expectations for alignment to state standards; and (e) teacher versions of the accompanying GLAD materials needed for the unit (see Appendix A for GLAD teacher resources).

The teachers also received an integrated lesson plan block 2 booklet, similar to the block 1 booklet, that included the next block of lessons and any new teacher resources. The teachers implemented the first block of five lessons at the beginning of the science unit and the second block of five lessons at the end of the science unit. It is important to note that the district science units on average take 6 to 8 weeks to implement so the unit was divided into two blocks for the intervention. On average, the students spent approximately 10 hours working with these materials, over approximately 7 weeks.

Validity Check Sample

A small validity check sample of students completing the same science unit but without GLAD strategies was planned to be conducted to provide evidence of the range of vocabulary development growth that might be considered to occur without the specific GLAD interventions. The validity check sample was conducted at Enterprise elementary

school in Federal Way school district, which is less than two miles from the treatment group site. This school was selected as the site for the validity check sample because they had several native Korean-speaking students in the first- and second-grade and the teachers had not been trained in GLAD, and thus were not specifically using GLAD strategies. Information received from the ELL teacher confirmed that there were native Korean-speaking students in first- and second-grade classrooms and that teachers in the school had not received training in GLAD and did not implement GLAD-specific strategies in the classroom.

Four native Korean-speaking students, (grade 1, $N = 2$; grade 2, $N = 2$) were selected for the validity check sample. One student did not give consent to participate in the study, however, the remaining three students (grade 1, $N = 2$; grade 2, $N = 1$) participated and completed the study. Each student was from a different homeroom classroom, and had different teachers. The three teachers of these students were recruited for the validity check sample. As participants in the validity check sample these teachers implemented the same science curriculum using their regular instructional methods. The researcher observed that there was no evidence of GLAD materials in their classrooms. Through this sample the researcher began to explore to what extent the vocabulary of native Korean speakers increased without the use of the GLAD strategies.

Data Collection

Quantitative and qualitative data were collected during this research study in an effort to effectively answer the two research questions. Quantitative data were collected from the Early Language Listening and Oral Proficiency Assessment (ELLOPA), the Receptive One-Word Picture Vocabulary Test (ROWPVT) second edition, the Expressive One-Word Picture Vocabulary Test (EOWPVT) third edition, and the GLAD vocabulary word card assessment. The ELLOPA, a language specific measure, was used to collect data on the English proficiency levels of students in two areas, vocabulary (speaking) and listening comprehension. The English receptive language of students was measured using the ROWPVT and GLAD vocabulary word card assessment. The English expressive vocabulary of students was measured using the EOWPVT and the GLAD vocabulary word card assessment. The quantitative data was collected to determine if growth occurred in the English receptive language and expressive vocabulary of the native Korean-speaking students.

Qualitative data on fidelity of implementation of the GLAD intervention were obtained from first- and second-grade classroom teachers through GLAD lesson observation checklists, interviews with teachers by grade level, and the web-based teacher questionnaire. The qualitative data were collected to evaluate the implementation fidelity of the GLAD strategies and the identification of the specific strategies observed to be

effective. The instruments used to collect the qualitative and quantitative data, and how they are aligned to the research questions, are displayed in Table 2.2.

Table 2.2. Research Questions and Associated Methodology.

Research Question	Sample	Methods	Instrument	Analysis Techniques
1A	Sherwood Forest Elementary, first- and second-grade students. Grade 1 Comparison: $N = 11$ Grade 2 Comparison: $N = 5$	Pre/post Single group	ELLOPA ROWPVT EOWPVT GLAD vocabulary word card assessment	*t*-test *t*-test *t*-test *t*-test
1B	Sherwood Forest Elementary, first- and second-grade students. Grade 1 Comparison: $N = 11$ Grade 2 Comparison: $N = 5$	Pre/post Single group	ELLOPA ROWPVT EOWPVT GLAD vocabulary word card assessment	*t*-test *t*-test *t*-test *t*-test
2	Sherwood Forest Elementary, first- and second-grade classroom teachers Grade 1 ($N = 4$) Grade 2 ($N = 3$)	Teacher observation Teacher web-based questionnaire Teacher interviews by grade level	Observation protocol Questionnaire protocol Interview protocol	Pattern matching Pattern matching Pattern matching

Measures

The demographics of the students involved in this research led to the selection and use of instruments appropriate for native Korean-speaking students in the primary grades

and the educators who teach them. Seven measures, collecting both qualitative and quantitative data, were used to gather information from teachers and students and included both curriculum-dependent as well as curriculum-independent assessments. Four of the measures were selected to provide information on receptive language and expressive vocabulary. The remaining three measures were specifically developed to assess the implementation, frequency and effectiveness of the seven GLAD strategies.

Receptive One-Word Picture Vocabulary Test (second edition)

The Receptive One-Word Picture Vocabulary Test (ROWPVT) second edition is a norm-referenced test that is designed to assess a student's English hearing vocabulary. The ROWPVT is standardized for use with students who are between 2 years 0 months and 18 years 11 months in age (see Appendix B for ROWPVT sample page). Although the test has a number of uses one frequent way the test is used, is to evaluate an English learner's hearing vocabulary. The ROWPVT can be used with students who are learning English as a second language to evaluate the extent of their English vocabulary.

Prior to testing each student the researcher recorded the student's date of birth and date of the test to determine their chronological age, which is used to identify the first item to begin the test. The ROWPVT was then individually administered to all first- and second-grade students by the researcher as a pretest, prior to receiving any instruction with GLAD strategies, and as a posttest, at the conclusion of the GLAD science unit. For the test

the researcher told the students a word and showed them a series of four pictures. Each of the four pictures had a corresponding number. The students were asked to identify the picture that matched the word given by the researcher. Students could either point to the picture or say the corresponding number of the picture for their answer.

During the test the researcher recorded the answers in a preprinted test booklet precisely as the student had shared. If an item was answered incorrectly the researcher put a slash through the number item. A basal was established at the beginning of the test by eight consecutive responses so if the initial item a student started with was too difficult the researcher would work backward since the items are arranged in the order of difficulty. After the basal was established the researcher would go back to the original starting point and continue testing the student, moving forward through the items in the test, until a ceiling was reached. The ceiling was determined by six consecutive incorrect responses. The raw score was the number of correct responses up to the last item in the ceiling and all responses below the basal are scored as correct.

After manually computing the students raw score in the test booklet the researcher used the ROWPVT / EOWPVT scoring software to figure the standard score, range, percentile rank and age equivalent for each student. Scores for both the EOWPVT and ROWPVT were taken from the computer program and recorded manually on each student's test booklet, although copies of the scores were also logged into the software.

Test developers for the ROWPVT explained that reliability was assessed by reviewing three types of reliability evidence: internal consistency, test-retest, and interrater reliability. The internal consistency was measured using the Cronbach's coefficient alpha and split-half coefficients computed at each age level for all individuals that participated in the standardization study. There were high correlations from each of the analyses to indicate homogeneity of test items with coefficient alphas ranging from .95 to .98 with a median of .96 and split-half coefficients ranging from .97 to .99 with a median of .98 (Academic Therapy Publications, 2000). The test-retest reliability was examined by testing, and retesting 20 days later, 226 examinees by the same examiner. According to the test-retest correlations that range from .78 to .93 with a mean of .84 for the sample, there is evidence that the ROWPVT is stable over time (Academic Therapy Publications, 2000).

The interrater reliability was evaluated by looking at the consistency in scoring procedures among examiners after the test had been given. Protocols from the standardization sample were randomly selected, two from each of the 15 age levels, and four scorers were asked to follow the procedures to obtain raw scores based on the markings of items already on the protocol. The results showed consistency among the scorers, at 100%, indicating that scoring procedures and scoring are clear and can be consistently implemented.

A summary of the reliability evidence of the ROWPVT indicates that it is "a consistent measure relatively free of error" (Academic Therapy Publications, 2000, p. 58)

because it provides consistent measurement from test to test, it can be administered and scored by different examiners with consistency, and the content of the test has a high level of homogeneity.

Expressive One-Word Picture Vocabulary Test (third edition)

The Expressive One-Word Picture Vocabulary Test (EOWPVT; third edition) is a norm-referenced test that is designed to assess a student's English speaking vocabulary. The EOWPVT is standardized for use with students who are between 2 years 0 months and 18 years 11 months in age (see Appendix C for EOWPVT sample page). Although the test has a number of uses one frequent way the test is used is to evaluate an English learner's spoken vocabulary. The EOWPVT can be used with students who are learning English as a second language to evaluate the extent of their English vocabulary.

Prior to testing each student the researcher recorded the student's date of birth and date of the test to determine their chronological age, which is used to identify the first item to begin the test. The EOWPVT was then individually administered by the researcher to all first- and second-grade students as a pretest, prior to receiving any instruction with GLAD strategies, and as a posttest, at the conclusion of the GLAD science unit. Students were administered the EOWPVT prior to taking the ROWPVT, as outlined in the test administration manual. For the test students were shown a series of pictures (objects,

actions and concepts) and asked to say the word that named each picture or group of pictures.

During the test the researcher recorded the answers in a preprinted test booklet exactly as the student had shared. If an item was answered incorrectly the researcher put a slash through the number item. A basal was established at the beginning of the test by eight consecutive responses so if the initial item a student started with was too difficult the researcher would work backward since the items are arranged in order of difficulty. After the basal was established the researcher would go back to the original starting point and continue testing the student, moving forward through the items in the test, until a ceiling was reached. The ceiling was determined by six consecutive incorrect responses. The raw score is the number of correct responses up to the last item in the ceiling and all responses below the basal are scored as correct.

After manually computing the student's raw score in the test booklet the researcher used the ROWPVT/EOWPVT scoring software to figure the standard score, range, percentile rank, and age equivalent for each student. Scores for both the EOWPVT and ROWPVT were taken from the computer program and recorded manually on each student's test booklet, although copies of the scores were also logged into the software.

Test developers for the EOWPVT explained that reliability was assessed by reviewing three types of reliability evidence, the internal consistency, test-retest, and interrater reliability. The internal consistency was measured using the Cronbach's

coefficient alpha and split-half coefficients computed at each age level for all individuals that participated in the standardization study. Coefficient alphas ranged from .93 to .98 with a median of .96 and split-half coefficients ranged from .96 to.99 with a median of .98 (Academic Therapy Publications, 2000). The test-retest reliability was examined by testing, and retesting 20 days later, 226 examinees by the same examiner. According to the test-retest correlations that range from .88 to .97 with a mean of .90 for the sample, there is evidence that the EOWPVT is stable over time (Academic Therapy Publications, 2000).

The interrater reliability was evaluated in three different ways, reliability of scoring, reliability of response evaluation, and reliability of administration, to examine different potential sources of error. A summary of the reliability evidence of the EOWPVT indicates the findings were consistent with the prior measure.

GLAD Vocabulary Word Card Assessment

The GLAD vocabulary word card assessment was collaboratively developed between the researcher and an ELL GLAD trained coach. Such assessments are usually developed by teachers because they are developed for different curriculum units and the targeted vocabulary for each GLAD unit will change. Thus the assessment is created to align with targeted words for the unit. Two different sets of word cards were developed to accommodate the grade level science curriculum differences. The words for the first-grade GLAD vocabulary word card assessment were taken from the district adopted science

curriculum unit Balance and Motion (see Appendix D). The words selected for the second-grade GLAD vocabulary word card assessment were taken from the district adopted science curriculum unit Changes (see Appendix F). Twelve words were selected for each grade level assessment, based on the number of challenging academic words from the science unit, and one word was placed on each card.

The researcher administered the GLAD vocabulary word card assessment, as a pretest and posttest, to students individually. Students were shown one word card at a time, and asked to read the word and say the definition within 30 seconds. Students were shown twelve word cards all together. Students were scored in two areas; their ability to read the vocabulary word aloud and say the definition. Students received a number score on a scale from 1 to 3 for their ability to read the word, and a separate score for their ability to identify the word's definition. When a student read the word aloud correctly or self corrected their answer within the 30 second time frame they received a score of 3. If they segmented the sounds of the word, decoded it or mispronounced the word during the time frame they receive a score of a 2. Students who were unable to read the word either by guessing, producing a nonsense word, or did not respond during the time frame, received a score of 1.

For the definition portion of the assessment students received a score of 3 if they were able to correctly define the word as measured by the science curriculum definition within the 30 second time frame. If a student was able to recite the definition of the word, use it in an example correctly, or use an alternate definition that was acceptable within the

30 second time frame they received a score of 2. Students received a score of 1 if they were unable to correctly recite the definition of the word, incorrectly guess the definition or did not answer within the time frame.

The GLAD vocabulary word card assessment was developed and used in this study because of the need to assess the specific science vocabulary words that were taught through the GLAD strategies during the science unit. By developing the GLAD vocabulary word card assessment unique to this particular unit and administering it before and after the unit, the target words were assessed before and after they were introduced through the strategies to students to evaluate if the GLAD strategies influenced the learning of new vocabulary words.

As a result of this specially designed assessment, it had not been used before which could pose possible problems with the construct validity and reliability of the measure. However since the researcher was the only person administering the pre- and post-assessment there was consistency in the administration of the instrument.

Early Language Listening and Oral Proficiency Assessment

The Early Language Listening and Oral Proficiency Assessment (ELLOPA) was developed by the Center for Applied Linguistics (CAL) and National Foreign Language Research Center (NFLRC) at Iowa State University. This innovative language proficiency instrument is designed to assess the highest level of performance in oral fluency, grammar,

vocabulary, and listening comprehension of pre-kindergarten through second-grade ELL students (see Appendix H for ELLOPA instrument). The assessment is an interactive listening and speaking interview conducted entirely in English, the student's second language, and includes hands-on activities where students are encouraged to interact with each other and the test administrators during the activities or tasks (Center for Applied Linguistics, 2008).

The ELLOPA was administered as a pretest and posttest to all first- and second-grade students in the case study school. Although the test was designed to be administered by two examiners to a pair of students at a time, unforeseen circumstances resulted in only one examiner, the researcher, administering the assessment to pairs of students. Student pairs were selected based on homeroom class, for example, two students from the same class were paired for the assessment. Students in classrooms with an odd number were paired with another grade level peer. Due to the odd number of students at each grade level in the study one first-grader and one-second grader were paired.

The assessment included four games beginning with Game 1, the Magic Bag. Students interacted with the researcher's dinosaur puppet which asked the questions. Students took the geometric colored shapes out of the magic bag and while taking turns answered as prompted by the researcher to: point to different colors, point to different objects, put objects in the same "group" such as by color or shape, name different colors, name different objects, and count as they put the shapes back in the bag. The second game,

Talking With Mrs. Cow (the researcher used a dinosaur puppet instead of a cow), students were asked to point to corresponding pictures or parts of pictures for each question. Students were asked what the weather was like today, the names of the four seasons, what the weather is like in their favorite season, to describe their partner and what they are wearing, along with what they like to do in school, what their favorite class is and why.

The third game, How Plants Grow, gave the students the opportunity to describe a process using sentence-level speech. Students were shown four pictures demonstrating how a tree grows and then took turns answering what was happening in each picture. A list of prompts that were used with the corresponding pictures is provided in detail in Appendix H. The fourth game, Goldilocks and the Three Bears, was administered using a magnetic storyboard. Students were asked if they knew the story and some students did and some did not. The researcher asked students to identify some of the magnetic objects that corresponded to the scenery, by asking the students to point to or show the researcher an object. The magnetic story had over 40 pieces for the researcher to use for this activity. The students were then asked to review and name some of the objects.

For the pretest the researcher told the story and when words were used that matched a magnetic object the students would select them and put them on the storyboard. Sometimes students needed verbal prompts and sometimes they did not. During the posttest, students were asked to retell the story if they could remember it, review the names of some of the objects, and ask their partner to place some of the objects somewhere on the

storyboard to encourage interaction. In both tests students were asked questions by the researcher that had to do with the story such as where the bears were going, what they thought might happen next, and how they think the bears might feel.

A holistic rating scale was used for scoring the interviews by determining what students could do with language. Although the rating scale identified the four areas of oral fluency, grammar, vocabulary (speaking) and listening comprehension, students were only scored in vocabulary (speaking) and listening comprehension. Students were scored for proficiency in each area as: 1 (*Junior Novice Low*), 2 (*Junior Novice Mid*), 3 (*Junior Novice High*), and 4 (*Junior Intermediate Low*). A copy of the rating scale is presented in Appendix I.

The ELLOPA instrument was selected as one of the instruments for this research study because it was a linguistic measure used with ELL students in the primary grades, which aligned with the target population of the research study. It was also selected because the interactive nature of the assessment collects listening comprehension data and speaking vocabulary data of ELL students which was needed for the study. A final reason for using the ELLOPA was to utilize an instrument that had been designed by researchers and was currently being used in schools with the ELL population.

Prior to administering the ELLOPA the researcher reviewed the assessment administration manual and had several phone conversations with the researcher who developed the assessment at the Center for Applied Linguistics. The researcher was able to

clearly understand how to administer and score the assessment since formalized training on the ELLOPA was unavailable.

The validity testing of the ELLOPA took place over the course of two years (2001–2002) at one immersion and three non-immersion program testing sites. A total of 485 students were interviewed using the ELLOPA and included students in kindergarten, first- and second-grade from the immersion site and students in kindergarten, first- , second- and third-grade from the non-immersion program sites. The Teacher Observation Matrix-ELLOPA, which is a teacher observation scale, along with the Early Language Learning Student Self-Assessment (ELLSSA), a student self-assessment scale, were also included in the validation study (Thompson, Boyson, & Rhodes, 2006).

Results from the validity testing were divided into two data sets with non-immersion and immersion data from 2001 in the first data set and immersion data from 2001 and 2002 in the second data set. The first data set were then grouped three ways for analysis by reviewing students by language, by program type, and all together. The second data set compared the language proficiency ratings of the same students in the immersion programs for 2001 and 2002.

For each instrument the frequencies, means, and standard deviations were calculated along with correlations between ELLOPA, ELLSSA, and TOM-ELLOPA and tests of significance performed (Thompson et al., 2006). Correlations between these three instruments were significant ranging from a low .27 to a moderate .41. The correlations

were acceptable when taking into consideration that the three instruments were different in terms of the evaluator and basis of the language sample (Thompson et al., 2006). In addition, correlations were made between the sum of scores on each instrument and subscores on the ELLOPA and TOM-ELLOPA and revealed that the correlations were significant and moderate ranging from .48 to .61 between the ELLOPA and TOM-ELLOPA (Thompson et al., 2006). Findings also suggested that the teachers generally rated their students higher than the outside trained evaluators, however there was support for the validity of the ELLOPA, as shown by the data analyses results, for assessing listening comprehension and speaking proficiency across languages for second language learners (Thompson et al., 2006).

GLAD Lesson Observations

The GLAD lesson observations were conducted by the researcher in all first- and second-grade classrooms. The researcher recorded information on the GLAD observation checklist, which had been developed by the researcher, to collect specific data on the implementation of the strategies to help answer the research questions. The researcher has been trained in and participated extensively in teacher observations for seven years as an elementary principal at bilingual Spanish and ESL model schools where teachers implement GLAD strategies.

Two GLAD lesson observations were planned for each teacher during the implementation of the science unit with the GLAD strategies. All of the teachers were observed once during the first block of five lessons at the beginning of the unit. The length of time for the observations differed by classroom, however, time ranged between 40 minutes to 1 hour per observation. The second observation was conducted within the second block of five lessons toward the end of the unit. All of the teachers, with the exception of one first-grade teacher, participated in a second observation. The length of time for the second observation ranged from 25 minutes to 1 hour.

The researcher used the observation checklist to score the implementation of the GLAD strategies. As identified on the checklist (see Appendix J for GLAD lesson observation checklist) teachers were scored in three areas in relation to the seven GLAD strategies. The researcher used a scale from 1 to 3 to determine the level of effectiveness of implementation for each strategy as decided by the researcher, with 1 being that the strategy was implemented but not appearing to be effective, 2 implemented and somewhat effective, and 3 implemented and very effective. Effectiveness of the strategy implementation was determined by the researcher through observing the student subjects and their participation in the lesson or response to the strategy the teacher was implementing at the time.

Teachers also received a score if there was evidence of the GLAD strategies in the classroom. For example, if there was evidence of the strategy in the classroom, like the

cognitive content dictionary, however it was not used during the observed lesson, they were scored with an E. If the strategy was used, they received a score of ER for evidence of this strategy in the classroom (the strategy was used or revisited during the observation). If the teachers used the targeted vocabulary during the lesson they received a score of a V, but if not, a score of VN (for targeted vocabulary not used during the lesson). Finally, teachers were scored on the frequency of the GLAD strategies and receive a score of an A if they used that specific strategy once or twice, a B if they used the strategy sometimes which would be three or more times, and a score of a C if they used a strategy more frequently. Observation comments or additional notes were also recorded at the bottom of the GLAD lesson observation checklist as needed (see Appendix J).

The GLAD lesson observation was used in this study to provide data of what was actually taking place in the classrooms with strategy implementation from a perspective different than that of the implementing teacher. The lesson observations were used in this study to capture information about the strategies that may or may not be evident from the teacher questionnaire or grade level interview responses. This information was collected by observing both the teacher performance and student response to the teaching during the observation. In addition, lesson observations were used in this study to provide additional information to help answer the research question of which specific strategies were observed to be effective.

Teacher Interviews

Teacher interviews were conducted by the researcher with the first-grade teachers and then with the second-grade teachers in separate interviews. The researcher developed the teacher interview protocol (see Appendix K for teacher interview protocol) which was used during both grade-level interviews. For the first-grade teacher interview three of the four teachers were able to participate. Teachers were asked eleven questions about the GLAD strategies they used during the two block lessons, frequency of use and why any strategies were not used. They were asked to share in detail how they introduced the vocabulary words and to explain about activities that allowed students opportunities to use their expressive and receptive language skills. Teachers were asked all of the questions on the interview protocol and the researcher recorded notes for each response to the questions.

For the second-grade teacher interview, two of the three teachers were able to participate at the beginning of the interview and then the third teacher joined the interview late. Another teacher left the interview early. Similar to the first-grade teacher interview, teachers were asked eleven questions about the GLAD strategies they used during the two block lessons, frequency of use and why any strategies were not used. They were asked to share in detail how they introduced the vocabulary words and to explain about activities that allowed students opportunities to use their expressive and receptive language skills. Teachers were asked all of the questions on the interview protocol and the researcher recorded notes for each response to the questions.

The teacher interview protocol was developed so the researcher could gain more information from the teachers on the specific strategies they used, and how often they used them during the two lessons since the researcher was unable to be in all classrooms throughout the entire two blocks of lessons during the unit to observe. The questions were purposely designed to align with the questions on the Web-based teacher questionnaire and GLAD lesson observation checklist.

Web-Based Teacher Questionnaire

The Web-based teacher questionnaire was developed by the researcher on surveymonkey.com and included ten question items about the implementation of the GLAD strategies during the block science units. The questionnaire items were selected to retrieve specific data to help answer the research questions. Every first- and second-grade teacher received the same questionnaire.

Teachers received the survey link by email from the researcher after they finished implementing the science block 1 and science block 2 lessons in the unit. Teachers anonymously responded to all ten items on the questionnaire, though teacher data was kept separate by grade level through use of separate links to the survey. Questionnaire items included the teacher identifying specific strategies they used, frequency of use, and types of evidence they collected from students that may demonstrate the strategies were successful in student learning. Teacher response rate to the survey was 86 percent (6 out of 7 teachers responded). See Appendix L for a copy of the Web-based teacher questionnaire.

The data collected from the Web-based questionnaire helped answer the research questions relating to the GLAD strategies. The researcher selected a Web-based questionnaire so teachers could answer questions anonymously and respond authentically to how they implemented the strategies without concern or reservation. The questionnaire was piloted by two teachers, in advance of being used. They were given the opportunity to provide feedback to the researcher on the items and format so that modifications to the instrument could be made prior to being used in the study.

CHAPTER III

RESULTS

In this section, I report my results and describe my strategies for analyzing the qualitative and quantitative data. Results from qualitative and quantitative data analysis were used to answer the two main research questions: (a) does implementation of GLAD strategies increase the English receptive language and expressive vocabulary development of native Korean-speaking students based on pretest and posttest assessment data; and (b) if GLAD strategies seem to support expanding the vocabulary of native Korean-speaking students, what specific strategies can be observed to be effective.

The quantitative data provided information on student performance through pre- and posttest results to determine if growth occurred in their English receptive language and expressive vocabulary development. The qualitative results provided information with regard to implementation of the GLAD strategies and identification of specific strategies, if shown to increase vocabulary, that were observed to be effective and, perhaps, those that were not. Results are also listed for the students who participated in the validity check sample. Although the results of the qualitative and quantitative data are reported separately in this section for clarity, the conclusions drawn from both, along with the validity check sample, are explained in the following section in order to clearly answer the main research questions.

Quantitative Data Results

Quantitative data were collected from the pre- and post-assessments from the ROWPVT, EOWPVT, and GLAD vocabulary word card assessment, and analyzed using paired-samples *t* tests in SPSS. I used a repeated-measures design with an intervention, using the same student participants in both conditions. Error bar graphs were then used to display the data for initial review prior to running the one-tailed *t*-tests for analyses. Because it was theoretically determined by the directional hypothesis that growth was expected, one-tailed *t*-tests were used.

ROWPVT

The ROWPVT was administered to students prior to the study as a pretest and at the end of the study as a posttest. Initial pretest scores for the 16 student participants ranged from 71 to 109 with a mean of 92.56 and posttest scores ranged from 77 to 113 with a mean of 96.69. These descriptive statistics are listed in Table 3.1.

Table 3.1. ROWPVT Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
Mean.receptive	16	74.00	107.50	94.63	9.24
ROWPVT.pretest	16	71	109	92.56	10.46
ROWPVT.posttest	16	77	113	96.69	9.80

An error bar graph displaying the values is in Figure 3.1 and highlights the differences in means along with the 95% confidence interval. The error bar graph of the repeated-measures shows that the mean of the posttest scores was higher than the mean of the pretest scores. The mean difference was 4.13 points between the pre- and posttest.

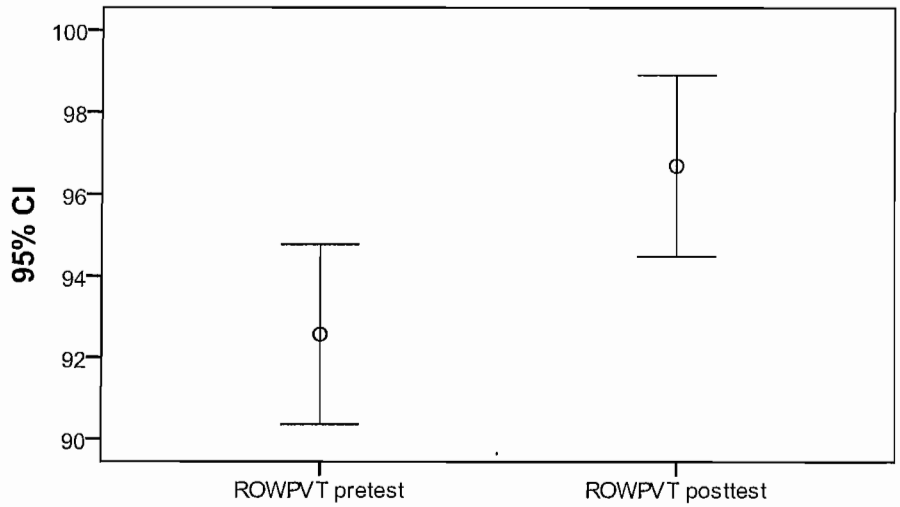


Figure 3.1. Error bar graph of ROWPVT pre- and posttest results.

After using an error bar graph to display the data for initial review, I conducted a paired-samples *t*-test on the ROWPVT. The paired-samples *t*-test was conducted to evaluate whether students showed an increase in their receptive language. The results, listed in Table 3.2, indicated that the mean for the ROWPVT posttest ($M = 96.69$, $SD = 4.15$) was greater than the mean for the pretest ($M = 92.57$, $SD = 4.15$), $t\ (15) = -1.99$,

$p = .0325$, and it was statistically significant. The standardized effect size index, d, was .407, a medium effect size.

Table 3.2. ROWPVT Paired-Samples *t*-Test and Statistics

		Paired Samples Statistics			
		Mean	*N*	Std. Deviation	Std. Error Mean
Pair 1	ROWPVT pretest	92.57	16	4.15	1.04
	ROWPVT posttest	96.69	16	4.15	1.04

Paired Samples Test

		Paired Differences					*t*	*df*	Sig. (1-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	ROWPVT pretest - ROWPVT posttest	-4.13	8.29357	2.07339	-8.54	.29	-1.99	15	.0325

EOWPVT

The EOWPVT was administered to students prior to the study as a pretest and at the end of the study as a posttest. Initial pretest scores for the 16 student participants ranged from 70 to 104 with a mean of 86.13 and posttest scores ranged from 67 to 119 with a mean of 87.81. These descriptive statistics are listed in Table 3.3.

Table 3.3. EOWPVT Descriptive Statistics

	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
Mean.expressive	16	70.00	111.50	86.97	11.21973
EOWPVT.pretest	16	70.00	104.00	86.13	9.72900
EOWPVT.posttest	16	67.00	119.00	87.81	13.38300

An error bar graph displaying the values is in Figure 3.2. The error bar graph highlights the differences in means along with the 95% confidence interval. The error bar graph of the repeated-measures shows that the mean of the posttest scores was higher than the mean of the pretest scores. The mean difference was 1.69 between the pre- and posttest and the confidence intervals overlap substantially.

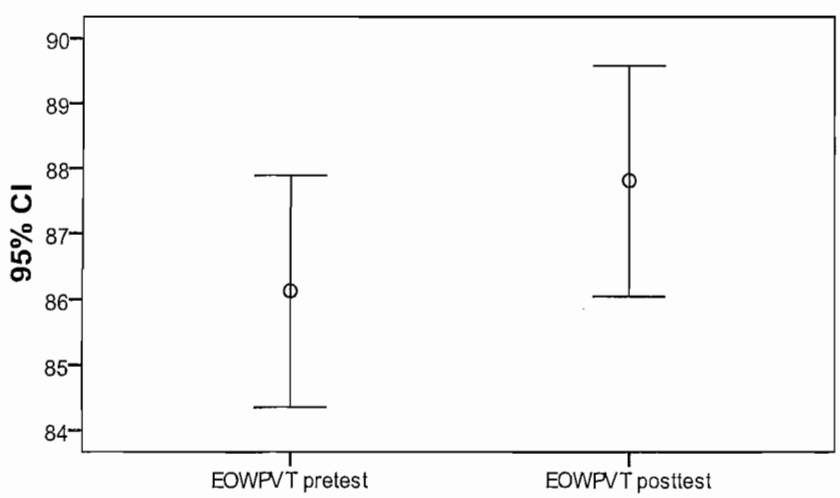


Figure 3.2. Error bar graph displaying EOWPVT mean results.

After using an error bar graph to display the data for initial review, I conducted a paired-samples *t*-test on the EOWPVT. The paired-samples *t* test was conducted to evaluate whether students showed an increase in their expressive vocabulary. The results, listed in Table 3.4, indicated that the mean for the EOWPVT posttest ($M = 87.81$, $SD = 3.32$) was greater than the mean for the pretest ($M = 86.13$, $SD = 3.32$), $t\ (15) = -1.02$, $p = .1625$, however the difference was not statistically significant. The standardized effect size index, *d*, was .143, a small effect size.

Table 3.4. EOWPVT Paired-Samples *t*-Test and Statistics.

Paired Samples Statistics

		Mean	*N*	Std. Deviation	Std. Error Mean
Pair 1	EOWPVT pretest	86.13	16	3.31521	.82880
	EOWPVT posttest	87.81	16	3.31521	.82880

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	*t*	*df*	Sig. (1-tailed)
Pair 1	EOWPVT pretest - EOWPVT posttest	-1.6875	6.63042	1.65761	-5.22060	1.84560	-1.02	15	.1625

GLAD Vocabulary Word Card Assessment

The GLAD vocabulary word card assessment was administered to students prior to the study as a pretest and at the end of the study as a posttest and data collected in two areas, the student's ability to read the vocabulary words, and their ability to explain the meaning, or definition, of each word. Results from the reading portion are reviewed first, followed by the definition results.

Initial pretest scores for the 16 student participants on the GLAD vocabulary reading pretest ranged from 12 to 32 with a mean of 22.13 and posttest scores ranged from 28 to 36 with a mean of 33.25. These descriptive statistics are listed in Table 3.5.

Table 3.5. GLAD Vocabulary Reading Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
Mean.GLAD.vocab.rdg	16	20.00	34.00	27.69	4.83692
GLAD vocab.rdg. pretest	16	12.00	32.00	22.13	6.83000
GLAD vocab.rdg..posttest	16	28.00	36.00	33.25	3.60600

An error bar graph displaying the values shows in Figure 3.3 and highlights the differences in means along with the 95% confidence interval. The error bar graph of the repeated-measures shows that the mean of the posttest scores was higher than the mean of the pretest scores. The mean difference was 11.13 between the pre- and posttest and the confidence intervals do not overlap.

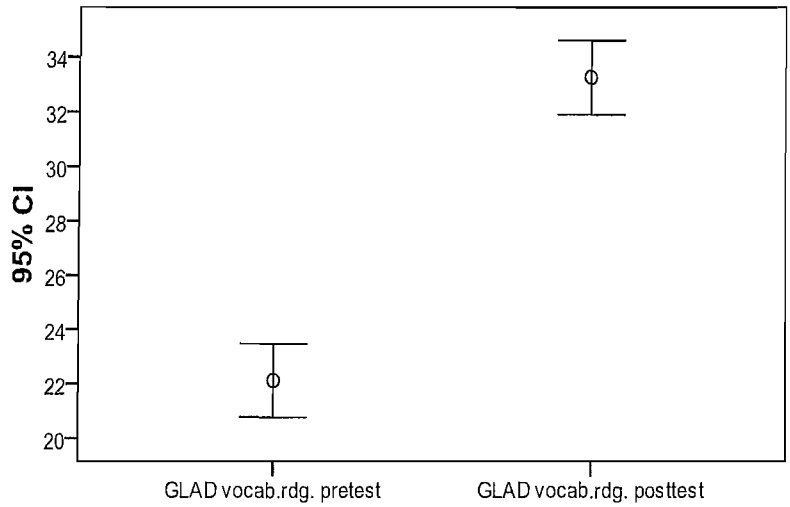


Figure 3.3. Error bar graph displaying the GLAD vocabulary mean reading results.

After using an error bar graph to display the data for initial review, I conducted a paired-samples *t*-test on the GLAD vocabulary reading. The paired-samples *t* test was conducted to evaluate whether students showed an increase in their ability to read the GLAD science vocabulary words introduced through the GLAD strategies during the intervention. The results, listed in Table 3.6, indicated that the mean for the GLAD vocabulary reading posttest ($M = 33.25$, $SD = 2.54$) was greater than the mean for the pretest ($M = 22.13$, $SD = 2.54$), $t\ (15) = -8.78$, $p < .01$, and it was statistically significant. The standardized effect size index, d, was 2.03, a large effect size.

Table 3.6. GLAD Vocabulary Reading Paired-Samples *t*-Test and Statistics.

Paired Samples Statistics

		Mean	*N*	Std. Deviation	Std. Error Mean
Pair 1	GLAD vocab.rdg. pretest	22.13	16	2.54	.63390
	GLAD vocab.rdg. posttest	33.25	16	2.54	.63390

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	*t*	*df*	Sig. (1-tailed)
Pair 1	GLAD vocab.rdg. pretest - GLAD vocab.rdg. posttest	-11.13	5.07116	1.26779	-13.82723	-8.42277	-8.78	15	$p < .01$

The second set of results taken from the GLAD vocabulary protocol focused on the student's ability to recite the definition of the vocabulary word. Initial pretest scores for the sixteen student participants on the GLAD vocabulary definition pretest ranged from 12 to 20 with a mean of 14.44 and posttest scores ranged from 12 to 30 with a mean of 19. These descriptive statistics are listed in Table 3.7.

Table 3.7. GLAD Vocabulary Definition Descriptive Statistic.

	N	Minimum	Maximum	Mean	Std. Deviation
mean.GLAD.vocab.def.	16	12.00	25.00	16.72	3.79460
GLAD vocab.define.pretest	16	12.00	20.00	14.44	2.39400
GLAD vocab. define.posttest	16	12.00	30.00	19.00	5.85400

An error bar graph displaying the values shows in Figure 3.4 and highlights the differences in means along with the 95% confidence interval. The error bar graph of the repeated-measures shows that the mean of the posttest scores was higher than the mean of the pretest scores. The mean difference was 4.56 between the pre- and posttest and the confidence intervals do not overlap.

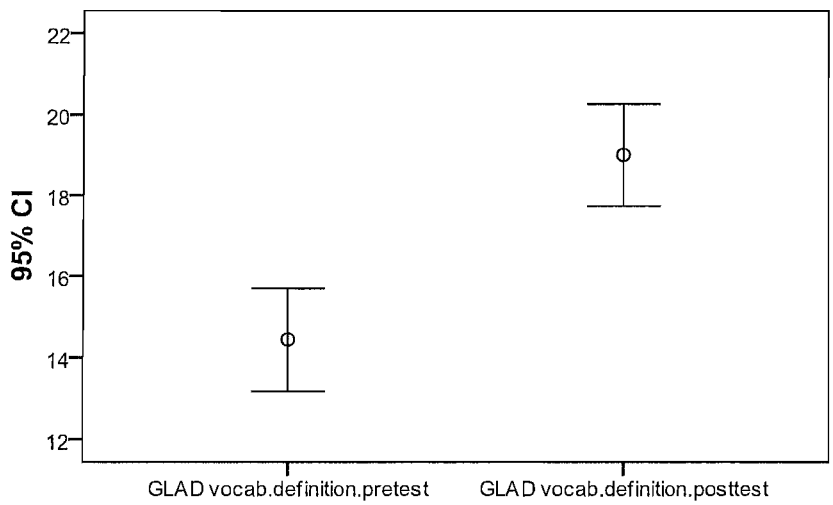


Figure 3.4. Error bar graph displaying the GLAD vocabulary definition results.

After using an error bar graph to display the data for initial review, I conducted a paired-samples *t*-test for the GLAD vocabulary definitions data. The paired-samples *t* test was conducted to evaluate whether students showed an increase in their ability to define the GLAD science vocabulary words introduced through the GLAD strategies during the intervention. The results, shared in Table 3.8, indicated that the mean for the GLAD vocabulary definitions posttest ($M = 19$, $SD = 2.34$) was greater than the mean for the pretest ($M = 14.44$, $SD = 2.34$), $t\,(15) = -3.86$, $p < .01$, and this result is statistically significant. The standardized effect size index, *d*, was 1.02, a large effect size.

Table 3.8. GLAD Vocabulary Definitions Paired-Samples *t*-Test and Statistics.

		Paired Samples Statistics			
		Mean	*N*	Std. Deviation	Std. Error Mean
Pair 1	GLAD vocab.definition.pretest	14.44	16	2.34	.59155
	GLAD vocab.definition.posttest	19.00	16	2.34	.59155

		Paired Samples Test							
		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	*t*	*df*	Sig. (1-tailed)
Pair 1	GLAD vocab.definition.pretest - GLAD vocab.definition.posttest	-4.56	4.73242	1.18311	-7.08423	-2.04077	-3.86	15	$p < .01$

ELLOPA

Results were obtained from 16 ELLOPA rating profile sheets, one for each student, with the pre- and posttest ratings recorded in two areas, vocabulary (speaking) and listening comprehension. Students were rated on a rubric ranging from junior novice low, the lowest level of English proficiency, to junior novice mid, junior novice high and junior intermediate low, the highest score on the ELLOPA rating scale. Three students received a rating of Junior novice high for the pre- and posttest and 12 students received a rating of junior intermediate low on the pre- and posttest in the area of vocabulary. Only one student showed a difference in rating between scores with a junior novice high for the pre-test and junior intermediate low for the posttest in vocabulary. All of the student ratings for the ELLOPA in the area of vocabulary are displayed in Figure 3.5.

In the area of listening comprehension, 13 students received a junior intermediate low rating for their pre- and posttests. Two students were rated as junior novice high on the pre- and posttest and one student received a rating of junior novice mid for the pretest and junior novice high for the posttest. All of the student ratings are displayed in Figure 3.5 for the ELLOPA in the area of listening comprehension.

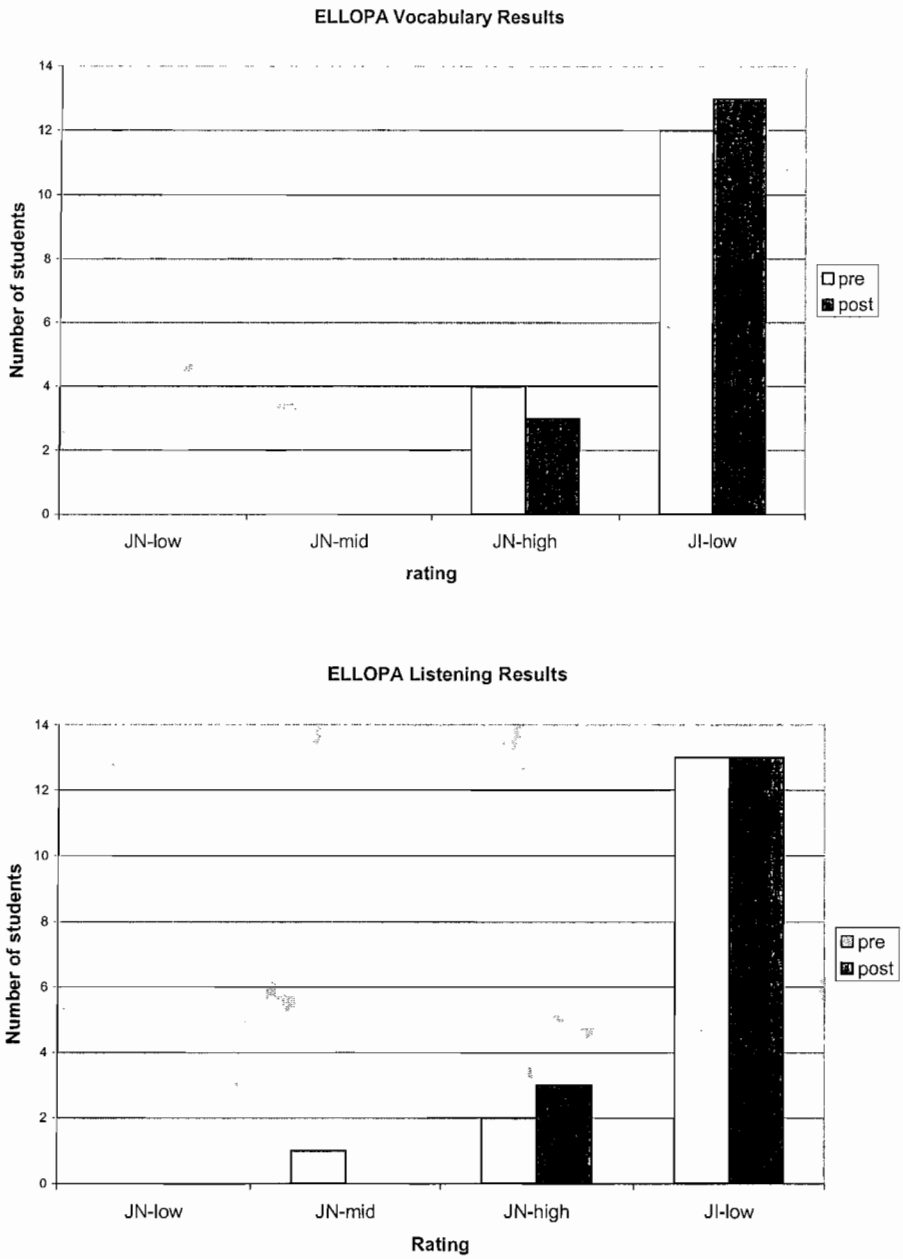


Figure 3.5. Bar graphs displaying the ELLOPA vocabulary and listening results.

Qualitative Data Results

Qualitative data were collected from the teacher interviews, Web-based teacher questionnaires and the GLAD lesson observation checklists. The three qualitative instruments were developed by the researcher and included questions to extract information and verify results with regard to the strategies. The qualitative data were coded and analyzed for patterns. Patterns were evident with regard to the implementation of the GLAD strategies and effectiveness of identified strategies. Each pattern is described independently below and then summarized in the following chapter.

GLAD Lesson Observations

Results from the direct observations were obtained from the 12 GLAD lesson observation checklists the researcher completed, one from each scheduled classroom observation. The observational data were analyzed throughout the collection process and categorized into four areas: (a) number of times, or frequency, each strategy was referred to or used during the lesson; (b) effectiveness, or fidelity, of the implemented strategies; (c) evidence of strategies in the classroom; and (d) use of target vocabulary words through strategy implementation.

Results from the first area provided information on the frequency of use for each strategy by specifically identifying the number of times the strategies were either referred to or used during the observed lessons. Results revealed that the TPR strategy was used or implemented 74 times, the CCD strategy 50 times, 10/2 strategy 43 times, sentence

patterning chart 29 times, the inquiry chart and chant each being used 14 times, and the big book used 10 times during the 12 observations. These results are also reported in Table 3.9, with the strategies listed in descending order for the number of times they were referenced or used during the first- and second-grade lesson observations.

Table 3.9. The Number of Times Each GLAD Strategy Was Used during Direct Observations

GLAD Strategy	Total number of observations	Actual number of times used during observations
TPR	12	74
CCD	12	50
10/2	12	43
SPC	12	29
Inquiry Chart	12	14
Chant	12	14
Big book	12	10

Results indicate that the TPR (total physical response) strategy, was used 24 more times than the CCD (cognitive content dictionary), the second most used strategy, and 21 more times than the 10/2, the third most used strategy. In review, the 10/2 strategy is when the teacher, after 10 minutes of direct instruction, allows students 2 minutes to orally process their understanding of concepts with a partner. Findings also suggest that the TPR was used 64 more times than the least used strategy, the big book, meaning that it may have been easier to use repeatedly in a lesson than the big book. In addition, the SPC (sentence

patterning chart), was used more than twice as many times as the Inquiry chart (a chart designed to access student background knowledge), and chant strategies, and nearly three times as often as the big book.

Results from the second area of pattern identification had to do with the effectiveness of implementation of the strategies. I determined the effectiveness by observing student behavior while the teacher was implementing the GLAD strategies through the science unit and to what degree the strategies were implemented with fidelity. Because the teachers implemented the GLAD strategies in a whole group setting I was able to observe the behavior of all students in the class, but focused primarily on the native Korean-speaking students and their response to each strategy as determined by their engagement.

To better organize my data for conclusive results and analysis I developed a spreadsheet with the columns: not used, implemented but not effective, implemented and somewhat effective, or implemented and very effective. I then collectively recorded answers from the 12 checklists in each column. The results revealed that the TPR strategy was very effective when implemented, and the CCD and 10/2 strategies were either very effective or somewhat effective when they were implemented. The chant strategy produced results indicating that when implemented it was somewhat effective. These four strategies, the TPR, CCD, 10/2 and chant, were identified as being either very effective or somewhat effective when implemented during 75% (9/12) of the observations.

Results also revealed that 25% of the time the big book strategy was implemented it was somewhat effective and 8% of the time very effective, however during 67% of the time while I observed in classrooms it was not used. These results, with regard to implementation effectiveness and fidelity, are displayed in Table 3.10. As indicated by the results listed in the table, in 10 out of 12 observations, or 83% of the time I observed, the SPC and inquiry chart strategies were not used.

Table 3.10. Effectiveness of Strategy Implementation

GLAD Strategy	Not used	Implemented not effective	Implemented somewhat effective	Implemented very effective
TPR	3/12 (25%)	0/12 (0%)	1/12 (8%)	8/12 (67%)
CCD	3/12 (25%)	0/12 (0%)	4/12 (33%)	5/12 (42%)
10/2	2/12 (17%)	1/12 (8%)	4/12 (33%)	5/12 (42%)
SPC	10/12 (83%)	0/12 (0%)	0/12 (0%)	2/12 (17%)
Inquiry Chart	10/12 (83%)	0/12 (0%)	1/12 (8%)	1/12 (8%)
Chant	3/12 (25%)	0/12 (0%)	8/12 (67%)	1/12 (8%)
Big book	8/12 (67%)	0/12 (0%)	3/12 (25%)	1/12 (8%)

Results from the third area revealed the evidence of strategies used in the classroom. I recognized that performing two observations in each classroom during the 7 week science units might lead to observing on days where the teacher was not using a particular strategy that they had been using throughout the unit. To capture some of this missed data, I recorded whether I observed evidence of strategies in the classroom, and whether they were used during the time of my observation. For example, if I observed the

CCD or SPC hanging in the classroom partially filled out, or recorded on, but they were not used during the time I was observing in the classroom, I recorded this information on the observation checklist.

The results, noting the evidence of the strategies in the classroom, are listed in Table 3.11. Three strategies, the CCD, 10/2 and chant strategies, had evidence in classrooms 100% of the time. Evidence of the CCD, 10/2 and chant strategies were observed 33% of the time in classrooms when the strategies were not being used, and 66% of the time when they were used during the observation. The TPR and inquiry chart strategies did not have evidence in the classrooms during 25% of the observations, nor was there evidence of the big book strategy 33% of the observed time. There was, however, evidence of the big book 58% of the time and inquiry chart 67% of the time in classrooms when the strategy was not being used during the observation.

Table 3.11. Evidence of Strategies in the Classroom

GLAD Strategy	No evidence of strategy	Evidence in the classroom / not used during observation	Evidence in the classroom / used during observation
TPR	3/12 (25%)	1/12 (8%)	8/12 (67%)
CCD	0/12 (0%)	4/12 (33%)	8/12 (67%)
10/2	0/12 (0%)	4/12 (33%)	8/12 (67%)
SPC	7/12 (58%)	3/12 (25%)	2/12 (17%)
Inquiry Chart	3/12 (25%)	8/12 (67%)	1/12 (8%)
Chant	0/12 (0%)	4/12 (33%)	8/12 (67%)
Big book	4/12 (33%)	6/12 (50%)	2/12 (17%)

No evidence was observed of the SPC strategy in classrooms during 58% of the observations, yet 25% of the time there was some evidence of the strategy when it was not used during the observation.

Results from the fourth area revealed the use of target vocabulary words through strategy implementation during the lesson observations. Because teachers were asked to teach twelve targeted vocabulary words during the unit, one way to evaluate whether or not they taught the words was through direct observation. If during the observation a teacher used the target vocabulary words, or not, I recorded it on the checklist under the specific strategy that was being implemented at the time the vocabulary words were presented. By doing so I could easily see if there were certain strategies that teachers used more than others when teaching the target vocabulary words.

Results compiled from the 12 observation checklists reveal that during 9 of the 12 observations, target vocabulary words were used through the CCD, 10/2 and chant strategies, and during 8 of the 12 observations target vocabulary was used through the TPR strategy. Target vocabulary words were also used with the SPC (2/12), Inquiry chart (2/12) and big book (3/12) strategies, as noted in Table 3.12.

During 10 of the 12 classroom observations target vocabulary was not used through the SPC (10/12) or inquiry chart strategies or through the big books (9/12).

Table 3.12. Target Vocabulary Used with GLAD Strategies

GLAD Strategy	Target vocabulary used during observation	Target vocabulary not used during observation
TPR	8/12 (67%)	3/12 (25%)
CCD	9/12 (75%)	3/12 (25%)
10/2	9/12 (75%)	3/12 (25%)
SPC	2/12 (17%)	10/12 (83%)
Inquiry Chart	2/12 (17%)	10/12(83%)
Chant	9/12 (75%)	3/12 (25%)
Big book	3/12 (25%)	9/12 (75%)

Teacher Interviews

Group interview data were collected and analyzed from two focused interviews, one with the first-grade teachers and a separate interview with the second-grade teachers. The interviews averaged around 45 minutes and teachers answered 11 questions. Prior to being analyzed the data from both interviews needed to be combined and organized, so I typed the handwritten notes from both interviews and displayed the answers to each of the interview questions in a table. Then, I coded the data, discovered themes and further analyzed the results for patterns.

Initial results from the interview data emerged in two themes, strategy implementation and vocabulary learning. Strategy implementation included the frequency with which strategies were used and results reveal that four of the seven GLAD strategies, the TPR, big book, chant, and 10/2 strategy, were used "a lot" or "over and over" or "all of the time," as shared by the teachers.

Two strategies, the SPC and inquiry chart, were "not used much" or "minimally used" or "used only a little" according to teachers. Results from the interviews reveal that all seven of the strategies had been implemented during the unit because the teachers used the lesson materials that had been provided to them for the study, and they added the picture file cards and journaling to their strategies.

Vocabulary learning was the second theme and results from the interviews reveal that the target vocabulary words were introduced in many ways including during the science experiment, on the CCD chart, and when the words would come up. It was also shared that students did have frequent exposures to vocabulary words during the science unit through the chants and TPR target words and at other times during the day, outside of the context of science.

In addition, certain activities seemed to support the receptive language and expressive vocabulary of students. The big book, chants, and TPR strategies, along with highlighting the target words on the charts and use of science kit books, were strategies that seemed to support the receptive language. This was because these strategies encouraged students to read words or listen to what was being read or shared. Teachers reported the interactive journals, homework, and using the vocabulary words in sentences as activities that seemed to support the expressive vocabulary of students. This was because these particular strategies encouraged students to write responses or use spoken language to share their answers. Teachers also identified that they taught word meanings through the CCD

and TPR strategies and assessed students through the science notebooks, interactive journals and homework activities. When asked how successful the teachers thought the students were at learning vocabulary, they shared that students were very successful at learning the words but do not know how deeply they mastered the meaning and retention of the words.

Web-Based Teacher Questionnaire

Results were collected from six Web-based questionnaires. All of the teachers who participated in the study, with the exception of one first-grade teacher, completed the 10-item questionnaire. Initial results were compiled electronically by grade level using the results feature on the Web site where the questionnaire was created. I reviewed the data from the 10 questions, combining data from each grade level, and noted specific themes that emerged from the answers. Results were compiled in three areas and included what strategies the teachers actually used, how frequently they used them, and information on their effectiveness or implementation fidelity.

Results from the questionnaire suggested that all of the teacher respondents used the inquiry chart (6/6), 10/2 (6/6), big book (6/6) and chant (6/6) strategies, and some of the teachers used the SPC (5/6), TPR (5/6) and CCD (4/6) strategies during this unit.

In addition to knowing what strategies the teachers used, results were also compiled to reveal how frequently each strategy was used. In review of the results, the TPR (5/6),

10/2 (5/6) and chant (5/6) strategies were used frequently by 83% of the teachers and the big book (6/6) strategy by 100% of the teachers as shown in Table 3.13. The CCD (3/6) strategy was frequently used by 50% of the teachers and the inquiry chart (2/6) was frequently used by 33% of the teachers. Results also suggest that during the unit 33% of the teachers used the SPC (2/6) and inquiry chart (2/6) sometimes and another 33% used these strategies once or twice. Out of the seven strategies, the CCD (1/6) and SPC (1/6) strategies were the only strategies that some teachers identified as not used.

Table 3.13. Frequency of GLAD Strategy Use

GLAD Strategy	Used frequently	Used sometimes (3 or more)	Used once or twice	Not used
TPR[a]	83% (5/6)	0% (0/6)	0% (0/6)	0% (0/6)
CCD	50% (3/6)	16% (1/6)	16% (1/6)	16% (1/6)
10/2	83% (5/6)	16% (1/6)	0% (0/6)	0% (0/6)
SPC*	0% (0/6)	33% (2/6)	33% (2/6)	16% (1/6)
Inquiry Chart	33% (2/6)	33% (2/6)	33% (2/6)	0% (0/6)
Chant	83% (5/6)	16% (1/6)	0% (0/6)	0% (0/6)
Big book	100% (6/6)	0% (0/6)	0% (0/6)	0% (0/6)

[a]Only five of six teachers scored this strategy.

Results from the questionnaire also deciphered information on the strategies that teachers thought were effective in teaching the vocabulary words. The teachers defined the strategies as being effective if they were conducive to introducing or teaching the vocabulary words. Results indicate that 100% of teachers thought the TPR (6/6), Chant (6/6), and big book (6/6) strategies were effective and 83% of teachers thought the CCD (5/6) was also an effective strategy for teaching the vocabulary words. Only 66% thought

the 10/2 (4/6) strategy was effective and 50% thought the SPC (3/6) and inquiry chart (3/6) strategies were effective in teaching the vocabulary words. When asked if there were strategies that the teachers found that were not effective in teaching vocabulary they identified the SPC (2/6), inquiry chart (2/6), and 10/2 (1/6) strategies. Results from the questionnaire with regard to the strategies that were effective in teaching the vocabulary words are also displayed in Table 3.14.

Table 3.14. GLAD Strategy Effectiveness for Teaching Vocabulary

GLAD Strategy	Effective	Not effective	Not used
TPR[a]	100% (5/6)	0% (0/6)	0% (0/6)
CCD	83% (5/6)	0% (0/6)	16% (1/6)
10/2	66% (4/6)	16% (1/6)	0% (0/6)
SPC	50% (3/6)	33% (2/6)	16% (1/6)
Inquiry Chart[a]	50% (3/6)	33% (2/6)	0% (0/6)
Chant	100% (6/6)	0% (0/6)	0% (0/6)
Big book	100% (6/6)	0% (0/6)	0% (0/6)

[a]Only five of six teachers scored this strategy.

In addition to the strategies, results on the vocabulary target words and how they were presented were also accumulated. All of the teachers (6/6) acknowledged on the questionnaire that: (a) words were introduced during the unit; (b) words were presented in context; (c) words were presented individually; (d) students had opportunities to say the words; (e) students had opportunities to read the words; (f) students had opportunities to write the words; (g) students were taught the meaning of the words; and (h) students had frequent exposure to words during the unit.

Validity Check Sample Results

The purpose of the validity check sample was to determine if, in the event growth was evident in the treatment group, it could be associated with the implementation of the intervention or was growth that would have taken place in the context of regular instruction, without the targeted GLAD words and strategies. The ELL coach and one first-grade classroom teacher at the validity check sample site confirmed that teachers had not been trained in GLAD and were not using the strategies in the school. As a result, qualitative data from the GLAD lesson observation checklists, teacher interviews, and Web-based teacher questionnaires were not collected from teachers at the validity check sample school site since they were not implementing GLAD. In addition to the confirmation received from school staff, I did not observe any use of the strategies when visiting the school or evidence of the strategies in classrooms when picking up students for testing. Quantitative data were collected on students, however, with pre- and posttest scores from the ROWPVT, EOWPVT, and ELLOPA. Only posttest results were collected on the GLAD vocabulary word card assessment from students in the check sample. It is important to note that the validity check sample was very small ($N = 3$).

Initial pretest scores for the three student participants in the check sample on the ROWPVT ranged from 55 to 90 with a mean of 67 and posttest scores ranged from 61 to 90 with a mean of 78.33. The mean average gain for students on the ROWPVT was 11.33 compared to students in the treatment group who showed a pretest mean of 92.56, posttest

mean of 96.69, and mean average gain of 4.13 on the ROWPVT. Although the validity check sample students demonstrated a larger mean average gain on the ROWPVT, their posttest mean scores at the end of the study (78.33) were 14.23 points lower than the initial pretest scores of students in the treatment group (92.56).

Students in the validity check sample were assessed on the EOWPVT and pretest scores ranged from 62 to 93 with a mean of 74 and posttest scores ranged from 59 to 95 with a mean of 73.33, with a mean average gain of -.67. The scores reveal that the students in the check sample scored lower on the posttest than on the pretest. Students in the treatment group showed a pretest mean of 86.13 a posttest mean of 87.81 and mean average gain of 1.69 on the EOWPVT. The gains on both the ROWPVT and EOWPVT were not similar between the treatment group participants and those in the validity check sample.

Students were scored on the ELLOPA, a language proficiency measure, with a progressive rating rubric ranging from junior novice low (low English proficiency), junior novice mid, junior novice high and junior intermediate low (highest score on the rubric). The results reveal that two students in the validity check sample scored at a junior novice mid level, and one student at a junior intermediate low level, in the area of vocabulary (speaking). Posttest results from the ELLOPA show that students had the same score as their pretest, thus growth was not evident on the vocabulary (speaking) assessment. In comparison to students in the treatment group, three scored at a junior novice high, and 12

at a junior intermediate low, also receiving the same scores on their pretest and posttests. Only one student in the treatment group demonstrated growth with a pretest score of junior novice high and posttest score of junior intermediate low. Although the vocabulary (speaking) scores were higher overall for the treatment group students, when compared to those in the check sample, (with the exception of one student in the treatment group), the students in both samples did not demonstrate growth as measured by the ELLOPA rating scale.

In addition to vocabulary, the students were rated on the ELLOPA for listening comprehension and results show that two of the students in the check sample scored at the junior novice mid level on the pre- and posttest and one student scored at the intermediate low level for their pre- and posttest. Simply stated, the students scored the same not only on their pretest and posttests but also had the same score on their listening comprehension and vocabulary (speaking) test. When compared to the students in the treatment group, results identify that 13 students scored at a junior intermediate low, two students scored at the junior novice high and these fifteen students had the same pre- and posttest scores. One student scored at a junior novice mid level for the pretest and junior novice high for the posttest demonstrating growth. Aside from this one student the rest of the students in the treatment group, similar to the check sample, did not demonstrate growth.

The scores for the two ELLOPA areas of listening comprehension and vocabulary (speaking) show that students in the check sample, and those in the treatment group, had

the same scores on their individual pre- and posttests for both areas. Although these similarities were evident between groups, it is important to note that overall the students in the treatment group had higher scores than those in the check sample for the pretests and posttests.

Students who participated in the validity check sample completed the GLAD vocabulary word card assessment posttest only, and received posttest scores in the two areas of reading and word definitions. Results for the check sample students reveal that on the reading posttest the student mean score for reading the words cards was 21, compared to 33.25, the mean score on the posttest for students in the treatment group. In addition, the results for the check sample students reciting the definition of the GLAD vocabulary words was 13, and students in the treatment group had a mean score of 19. These scores show that the students in the treatment group had a higher mean score for both the reading and word definition tests when compared to the students in the check sample. Implications of these and the other scores that compare the students in the validity check and treatment group sample will be further discussed in the following conclusions section.

CHAPTER IV

CONCLUSIONS

In this section, I provide explanations for the qualitative and quantitative findings and demonstrate how these findings answer the initial research questions. Conclusions drawn from each section will initially be discussed independently, then collectively, to answer the questions.

Quantitative Data Conclusions

All of the quantitative measures were used to determine growth in the receptive language or expressive vocabulary of students. The ROWPVT, ELLOPA listening scores and reading scores on the GLAD vocabulary protocol helped to determine receptive language growth. The EOWPVT, ELLOPA vocabulary (speaking) scores and vocabulary word definition portion of the GLAD vocabulary word card assessment helped to determine student growth in the expressive language. Through a repeated-measures design I evaluated the effects of the GLAD strategy intervention on the English receptive language and expressive vocabulary development of native Korean-speaking students.

ROWPVT

In review of the ROWPVT results, the mean of the posttest was higher than the mean of the pretest, with a mean difference of -4.13. Results from the *t*-test highlight that the true value of the difference lies between -8.54 and .29, and $p = .0325$. Thus, my findings were statistically significant and I can conclude that the implementation of the GLAD strategy intervention increased the receptive language of students ($t(15) = -1.99$, $p < .05$). As a result, I reject the null hypothesis and draw the conclusion that the GLAD vocabulary intervention increased the receptive language of native Korean-speaking students in the first- and second-grade.

EOWPVT

In review of the EOWPVT results, the mean of the posttest was barely higher than the mean of the pretest with a difference of -1.69. Results from the *t*-test highlight that the true value of the difference of means lies between -5.22 and 1.84, is likely to be zero, and $p = .1625$. Thus, my findings were not statistically significant and I conclude that the implementation of the GLAD strategies did not increase the expressive language students ($t(15) = -1.02$, $p > .05$). As a result, I accept the null hypothesis and draw the conclusion that the GLAD vocabulary intervention did not increase the expressive language of native Korean-speaking students in the first- and second-grade.

In comparison to the ROWPVT scores the students had higher means on the receptive test than on the expressive test. I found it surprising, however, that the lowest

difference in scores was on the EOWPVT because so many of the GLAD strategies encourage use and development of the expressive vocabulary.

GLAD Vocabulary Word Card Assessment

The GLAD vocabulary word card assessment produced results in the areas of reading and word definitions. In review of the results, the GLAD vocabulary reading posttest had a higher mean than the pretest with a difference in mean of 11.13. Results from the *t*-test highlight that the true value of the difference of means lies between 8.42 and 13.83, and $p < .01$. My findings were statistically significant and I can conclude that the GLAD strategy intervention increased the student's ability to read the targeted science vocabulary words ($t(15) = -8.78, p < .01$). Thus, I can reject the null hypothesis.

The second set of results, the GLAD vocabulary word definitions, also had a higher mean on the posttest than the pretest with a difference in mean of 4.56. Results from the *t*-test highlight that the true value of the difference of means lies between 2.04 and 7.08, and $p < .01$. My findings were statistically significant and I can conclude that the GLAD strategy intervention increased the student's ability to define the targeted science vocabulary words ($t(15) = -3.86, p < .01$). As a result I can reject the null hypothesis.

Conclusions drawn from the GLAD vocabulary word card assessment would be that when teachers identify twelve target words prior to teaching the science unit, incorporate them into the regular curriculum through the GLAD strategies, and follow a

lesson plan similar to what was prescribed in the study, students are successful at improving in their ability to read and define at least these specific targeted vocabulary words. It is important to note that the posttest was given to students at least a week after they had finished the science unit. I draw the conclusion that students learned the words in depth well enough to recall the reading and definition of the words a week after the interventions.

ELLOPA

Results for the ELLOPA were collected in two areas, vocabulary and listening comprehension. In review of the results in both areas, most of the students maintained the same level of English proficiency throughout the study as determined by their pre- and posttest scores. I conclude that the GLAD strategy intervention did not increase the expressive language of students as identified by the vocabulary rating on the ELLOPA scale. In addition, I conclude that the GLAD strategy intervention did not increase the receptive language of students as identified by the listening comprehension rating on the ELLOPA scale.

Possible explanations for this could be that the ELLOPA rating scale only has four levels to be used with primary students. In the event a student may score higher that the junior intermediate low level, the highest proficiency level on the ELLOPA, I could have used the student oral proficiency assessment (SOPA) scale that extends another five levels.

Because the study involved primary students I only used the ELLOPA rating scale and did not make accommodations to use the extended scale during the study. As a result, some students with high levels of English proficiency prior to the study topped the scale during the pretest and, not surprisingly, the posttest by receiving the highest rating possible. This could account for several students showing the same pre- and posttest scores at the top of the scale because there was a ceiling to their growth.

Quantitative Summary

In review of the receptive language results, two measures were used and produced different results. The ROWPVT produced findings that were statistically significant however the ELLOPA listening measure produced findings that were not statistically significant. In addition the expressive vocabulary results from the two measures of the EOWPVT and ELLOPA vocabulary (speaking) produced findings that were not statistically significant. I conclude that the GLAD strategy intervention had a measurable impact on the receptive language of students but *did not* have a measurable impact on the general expressive vocabulary of students.

The GLAD vocabulary word card assessment, however, did produce findings that were statistically significant in both the receptive and expressive areas. As a result, I conclude that when twelve vocabulary words are carefully selected from the curriculum,

intentionally taught and implemented through a variety of strategies, it is possible that receptive language and expressive vocabulary growth may occur on targeted vocabulary.

Qualitative Data Conclusions

Patterns emerged in the qualitative results about the GLAD strategies in the areas of: (a) use and frequency; (b) effectiveness, or fidelity, of implementation; (c) strategy evidence; and (d) the use of the target vocabulary words. Conclusions can be drawn in these areas and supported from the qualitative results collected from the direct observations, Web-based questionnaire and teacher interviews.

GLAD Strategy Use and Frequency

Triangulated results reveal that the teachers used most if not all seven of the GLAD strategies throughout the science unit, however some strategies were used more frequently than others and throughout the day instead of just during science. Although all of the strategies had been used, two strategies were identified as being frequently used. According to the observation results, the TPR strategy was implemented more frequently than any other strategy during the study and confirmed by questionnaire and interview results that the TPR strategy was frequently used. It was identified that the strategy was used frequently with transition words, for example, the teacher would say the word and the students would give the gesture and definition of the word before moving to the next activity. The 10/2 strategy was also frequently used according to the questionnaire,

observation and interview results. One conclusion I could draw from these findings may be that the TPR and 10/2 strategies were easier to implement and more versatile than the other strategies, so the teachers used them more frequently.

The CCD, big book and chant strategies all had similar findings between the interview and questionnaire results with regard to frequency of use, but these results differed from what was collected in the observation data. For example, the CCD strategy was used frequently during observations, however, questionnaire and interview results did not identify it as a frequently used strategy but rather a strategy that was used throughout the day.

One reason for these differences may be related to the item design on the questionnaire. When questionnaire items were designed the synonymous term for the CCD, the picture dictionary, was listed instead as one of the answers teachers could select if used. Although the email that contained the questionnaire link reminded teachers that the term picture dictionary was the same as CCD, some teachers later reported that they hadn't read that part of the email prior to taking the questionnaire. This may have influenced the results on the questionnaire with regard to the frequency of use of the CCD strategy because teachers shared they did not mark it because they did not recognize the strategy labeled as picture dictionary.

In addition, it is possible that the teachers used the CCD chart repeatedly during the observations, as well as other GLAD strategies, in an effort to please the researcher. It is

also possible that I happened to observe on days where the CCD strategy was already planned in the block lesson to be used more frequently than the other strategies and as a result I observed it more than I would have if I had selected a different day. The frequency of use of the CCD strategy during the observations, regardless of the reasons, may have contributed to the discrepancy with the questionnaire and interview results.

Another difference was evident in triangulated results for the big book strategy. The big book strategy was only used ten times during the twelve observations however results from the interviews identified it as being used most of the time and unanimously voted as being used frequently on the questionnaire. One reason for the discrepancy in frequency of use for the big book strategy could have to do with the design of the strategy itself. With the big book, the teachers could not use it as repetitively during one lesson, like the other strategies, without it becoming boring or overused. For example, during a 45-minute observation the chances of a teacher reading the big book 3 or 4 times would not be realistic or good practice. Thus reading it one time in a lesson would be understandable and would explain why it was not used as frequently as some of the other strategies especially in review of the observational results.

Similar to the big book, the chant strategy was only used 14 times out of the 12 observations but results from the questionnaire and interviews identified the chant as a strategy that was frequently used throughout the science unit. It is possible that the chant, like the big book, would be a strategy that would be difficult to use several times

throughout a lesson and may prevent it from being used frequently during an observation. Thus it would not display similar results to the other measures.

Finally, it may be that the big book and chant were memorable experiences for the teachers, so in self-report data they recalled using these strategies more frequently than they recalled using some of the others.

In review of strategies that were not used frequently during the study, there were consistent results. Triangulated results reveal that the inquiry chart and sentence patterning chart strategies were used only a few times during the study. Explanations for this may be that the inquiry chart and sentence patterning charts were used later in the unit. The teachers reported that they followed the GLAD science lesson plans for the implementation of the strategies for the study and the lessons incorporated the inquiry chart and sentence patterning chart later on, so teachers did not have time to use them throughout the unit like several of the other strategies introduced early in the unit.

GLAD Strategy Effectiveness

When drawing conclusions about the effectiveness of the strategies, some strategies did appear to be more effective, or implemented with fidelity, than others. Based on the triangulated results of the qualitative data the TPR and CCD strategies were found to be very effective when implemented; the chant, 10/2 and big book strategies were somewhat

effective; and the SPC and inquiry chart were either not effective or not observed to determine the level of their effectiveness in teaching the vocabulary words.

It is possible and worth noting that the level of effectiveness of the strategies may have been determined differently between me and the teachers, which could influence results. For example, whereas I scored the level of effectiveness of strategies based on the interactive behavior of students and to what degree the strategies were implemented with fidelity during the observed lesson, teachers may have determined the effectiveness based on whether the strategy was effective in teaching the vocabulary words over time.

The strategies identified as being the most effective, or implemented with fidelity, the TPR and CCD, are designed around the target vocabulary words which could help to explain why they were observed to be more effective at teaching the vocabulary words than other strategies. It was apparent during implementation and through teacher feedback that it was easier to teach the targeted vocabulary through these strategies.

In explaining the results of the strategies that were observed to be either not effective or implemented with fidelity or not used to a degree where their level of effectiveness and fidelity could be determined, I conclude that the infrequency of use of these strategies may have influenced whether they were perceived as being effective or not effective. The SPC and inquiry chart were the least used strategies throughout the study as noted earlier. Initially after viewing the results that these two strategies scored low, I entertained the possibility that the teachers may not have been sure how to implement the

strategies so they chose not to use them during the study. This assumption was not confirmed by the self-perception reported results, for the teacher feedback supported that they believed they followed the unit plans that were provided to them and that they used these strategies 'once or twice.'

GLAD Strategy Evidence

Results indicated that the teachers used the GLAD strategies throughout the day and not exclusively during science. Although my qualitative data collection was initially designed to collect most of the evidence of strategy implementation during science, I was interested in capturing any additional data that would display that these strategies may be used at other times during the day. Triangulated results support that evidence was present in the classrooms and strategies were used outside of the context of science. There was also evidence that some strategies did not appear to be used as much as others. One explanation for why there was evidence for some of the strategies and not others could be that there was evidence but it was not easily observable at the time I was in the classroom. During the observations I considered evidence to be the work in progress of the charts that I had provided to the teachers to use during the unit. If I observed the chart in the classroom and it had been used or partially used and was hanging in the classroom it was considered evidence.

Feedback from the teachers showed that they had evidence of strategy implementation outside of the teacher-provided materials prepared for a whole group strategy implementation. For example, students had used strategies in their science notebooks or interactive journals and this evidence supported that these strategies could be used although it may not involve the use of the teacher-provided materials.

I also draw the conclusion that the CCD, 10/2 and chant strategies were used throughout the entire unit because I observed evidence of these strategies both during the lessons when they were implemented, and when the strategies were not being implemented. For example, the CCD, chants and 10/2 strategy cards were posted during every observation whether or not they were used. I also draw the conclusion that the evidence from the big book and inquiry charts means that they were used with students even though I may not have directly observed them being used during the observations.

GLAD Target Vocabulary Use

Results identified how the target vocabulary words were introduced or taught and reveal that the CCD, 10/2, chant and TPR strategies were the primary strategies used to teach vocabulary. One explanation for these findings could be that these strategies are more conducive to incorporating the vocabulary words, using the word in context, and providing a definition of the word when they are used as compared to some of the other strategies. For example, the TPR strategy uses a target word, its definition, and matched

with an action, so students can learn both the target word and their meaning. The target words are also listed in the first column of the CCD and include a definition of the target word and students use the word in a sentence on the chart. The chants frequently repeat the target words, use the word in context, and allow teachers to highlight the words during the lesson. In addition students are encouraged through the 10/2 strategy to discuss the words using their own language to communicate understanding to a peer. Because these strategies also support students learning the word more in depth it could be one reason why they were most commonly used to teach the target words.

Two strategies, the SPC and inquiry chart, were not used to teach the target vocabulary words in 10 of 12 observations. One explanation for this could be that these strategies were not planned into the lesson or used on the day of the observation, thus they could not be observed for the teaching of the target words. Another explanation could be that the strategy design was more conducive to the teaching of other ideas rather than a specific focus on vocabulary. For example, the inquiry chart is used to encourage students to develop questions related to the topic they are studying and the SPC encourages the use of a variety of kinds of words such as adjectives, nouns, verbs, and the creation of sentences that may not include the target vocabulary words.

Qualitative Summary

The emerging patterns in the qualitative results helped to identify specific GLAD strategies that were observed to be effective at supporting English language vocabulary development in this study. These patterns revealed that three of the seven GLAD strategies were present in at least three of the four patterned areas. The CCD, 10/2 and TPR strategies, as identified by the triangulated results, were used frequently, were effective when implemented with fidelity, and were used to teach the target vocabulary words. In addition, these strategies were used throughout the day and not exclusively in the context of science. As a result it is difficult to determine exactly how much time was actually spent implementing the strategies over the course of the study and draw conclusions on how much time would be needed for students to learn and retain new vocabulary words.

The patterns clearly identified GLAD strategies that were not successful at supporting English language vocabulary development. The sentence patterning chart and inquiry chart strategies, as identified by the triangulated results, were not frequently used, and when used did not appear as effective, or implemented with fidelity, as the other strategies for teaching the targeted vocabulary words.

Validity Check Sample

Although the check sample was small, there are conclusions that can be drawn from the compared results. Students in the check sample at the beginning of the study had higher mean scores on their expressive language test (EOWPVT) than on their receptive

(ROWPVT), both pre- and posttests. This contrasted to the scores from the treatment group where students scored higher on their receptive language test (ROWPVT) than their expressive (EOWPVT) for the pre- and posttests. Some possible explanations for this difference at the beginning of the study could be that the differences in English proficiency levels between the two groups may have contributed to diverse initial results.

Similar to the students who participated in the treatment group, the three validity check students did not show growth on the ELLOPA. Their results stayed the same as determined by pre- and posttest results. It was explained in the previous section that there was a ceiling that may have hindered the growth on this measure. However, because two of the check sample students were rated in the junior novice mid range they still had two levels of English proficiency to demonstrate growth in the event there was growth without the intervention, but none was observed. Alternatively, the students in the treatment group appeared as though they were similar to those in the check sample, when the ceiling may have prevented them from demonstrating growth on this measure because of their high pretest scores.

There were differences between the check sample and treatment group with the receptive and expressive language assessments. The check sample showed mean gains on the receptive test but produced negative results on the expressive test whereas the treatment group showed mean gains on both measures.

The check sample and treatment group students were also compared on a curriculum dependent measure, the GLAD vocabulary word card assessment, however conclusions can only be drawn from the posttest data since pretest data was not collected. Students in the treatment group had significantly higher mean scores in the two areas of reading and word definitions, compared to the check sample students at the end of the study. These comparison results supports that the students who received the target vocabulary in their grade level science instruction through the GLAD strategy intervention made gains in the areas of reading and word definitions compared to their validity check sample peers who did not receive the intervention.

Answers to Research Questions

I aligned the quantitative and qualitative results in order to effectively answer the two research questions. The first question addressed whether the implementation of the GLAD strategies increased the English receptive language and expressive vocabulary development of native Korean-speaking students. I conclude from the quantitative findings that the general receptive language of native Korean-speaking students *did* increase as a result of the GLAD strategy intervention. I also conclude that the general expressive vocabulary of students *did not* increase, within the power of this small sample size to detect, with one exception. In the event that specific vocabulary words were taken directly from the curriculum, intentionally taught through a variety of strategies, and used

repeatedly throughout the day, there was a strong possibility of expressive vocabulary growth on the targeted words.

The second question considered whether in the event of significant growth taking place, what specific GLAD strategies were observed to support the vocabulary growth of native Korean-speaking students. Because receptive language and expressive vocabulary did increase when words were intentionally taught and taken from the curriculum, the qualitative findings suggest that the cognitive content dictionary, 10/2 and total physical response strategies were observed to be most effective in expanding the vocabulary of native Korean-speaking students in the first- and second-grade.

Recommendations for Future Research

This study added to the literature on effective English language vocabulary development strategies used with primary native Korean-speaking ELL students. The findings are similar to those in the vocabulary intervention study conducted by Carlo et al. (2004), where students received explicit instruction for 10–12 target words over the course of 15 weeks and improved in their knowledge of words that were explicitly taught.

Findings from the Carlo et al. study also suggested that direct vocabulary instruction should include repeated use of the words, introducing words in the context of engaging material, and through hands-on activities. These findings are also similar to this study where three interactive GLAD strategies that were used with direct vocabulary

instruction were identified as supporting the expanding vocabulary of students because they were used frequently, were effective when implemented, and were used to teach the target vocabulary words. These three strategies were hands-on and used to make the science curriculum more engaging. They also provided the venue for the target words to be used repeatedly during the unit.

In recognizing the vocabulary growth in students under these experimental conditions, it would be important for additional researchers in the field to replicate studies, like Carlo et al. (2004), with different language groups. With the increasing ELL population in schools and diversity in native languages, replicating vocabulary research that has been identified as statistically significant in the field with different language groups is needed to help guide current educators.

It is also apparent from my findings that the target vocabulary words that were explicitly taught through the interactive strategies developed and maintained the form-meaning link. Although posttests were conducted a week after the unit had ended, students were still able to read the words and recall the definitions of the target words as they were used in the science context. This recollection of the word and definition demonstrates that a form-meaning link was created, which, according to Schmitt (2008) is one of the first steps in acquiring vocabulary.

In response to my findings, future research needs to be accomplished with the form-meaning link and differentiating whether the pre-selection and focus of academic words

from the curriculum or the interactive GLAD strategies created more of an impact on students learning vocabulary. It would also be helpful to know if, perhaps, both are needed in order to effectively create the form-meaning link. By initiating this research it can directly impact the field of educators who work with all students, not just ELL, in determining where to direct their time and attention in planning effective vocabulary instruction.

Future research may also be strengthened in this area by adding to the work accomplished in this study. Specifically, including a larger sample size and, perhaps, random assignment. Another possibility may be to conduct a multi-case or two group comparison, along with validity / reliability checks on the GLAD-specific or curriculum dependent instruments.

In addition, careful attention needs to be directed in research to the GLAD strategies and their implementation. The three GLAD strategies that were identified as being effective in the findings encouraged incidental and intentional learning approaches. As previously shared the students received intentional vocabulary instruction, and incidental opportunities with words through repetition and exposure to words throughout the day across content areas. Nation (2001) supports that the intentional and incidental learning approaches are effective when used in conjunction to enhance vocabulary development for ELLs. Thus GLAD trainers should highlight in their training how the GLAD strategies can be used in intentional and incidental ways together to strengthen the

vocabulary development of students. Teachers using these strategies need to understand how they can best be utilized to teach words and word meaning through combined approaches that create sustainable word knowledge in students.

Further research should be conducted on students by language group and the use of these strategies to determine their effectiveness in English language vocabulary development with students at the elementary level. This work should be performed by language group because these strategies could be effective with one type of language that may not work well with other languages in developing English. Knowing that thousands of elementary schools employ these strategies yet there is little research to support them suggests an area that needs to be better addressed.

In addition, findings from this study also shed light on the vocabulary assessments. Specifically, expressive vocabulary norm-referenced measures did not show statistically significant results, however in the area of receptive language and through the curriculum dependent measures vocabulary growth was statistically significant. In review of how classroom teachers collect formative assessment data and use it to inform their instruction, it is common practice for teachers at the elementary level to identify target words, or other information they plan to teach in an upcoming unit, and administer pre- and posttests to students to evaluate their learning. My decision to develop the vocabulary word card assessment, with words taken directly out of the curriculum, mirrors this classroom practice. It raises the question, however, whether teacher created assessments developed to

assess vocabulary usually produce significantly different findings from norm-referenced expressive vocabulary measures and, if so, what are the ramifications of these differences in making decisions about students.

Aside from the needs of additional research to be conducted with vocabulary words, instructional strategy effectiveness and assessments, additional research needs to be conducted with the native Korean-speaking population in the area of English language vocabulary development. Although Korean is not the dominant minority language in the United States, it is a growing language being spoken in schools. Because Korean is an alphabetic phonemic language, it is different than other Asian languages such as Chinese or Japanese. Having research to draw from that is specific to this alphabetic language that has a different orthography and phonemes than other alphabetic languages would be useful to educators who work with Korean-speaking students. Along with Koreans it is important that research is conducted with different language groups in the area of English vocabulary development. With limited research conducted with diverse language groups, educators are forced to draw from best practices based on other populations that may not relate well to the linguistic needs of the students they are trying to serve. Additional research will help recognize strategies that specifically address the linguistic needs of students that may differ by language.

Making the transition from research to practice with any consistency across the field is a huge undertaking. The findings in this study and recommendations for future

research could have an impact on those who work in the educational community with native Korean-speaking students, if effective transfer from research to practice could be achieved. In transitioning from what was learned in this study and putting it into practice it is clear that teachers (a) need to select strategies that are interactive or hands-on to teach the pre-selected vocabulary words directly from the curriculum and (b) combine intentional and incidental approaches to effectively increase the English receptive language and expressive vocabularies of native Korean-speaking students in the first- and second-grade.

APPENDIX A

GLAD TEACHER RESOURCES

GLAD Materials
1st Grade: Balance and Motion
Block One

Blackline Masters

1. Block One GLAD Lesson Outline
2. 12 Focus Vocabulary List
3. 1st Grade Learning Expectations
4. Cognitive Content Dictionary (CCD)
5. Balance and Motion Yes, Ma'am Chant(Teacher Edition)
6. Balance and Motion Yes, Ma'am Chant (Student Edition)
7. Sentence Pattern Chart

Charts/Resources:

1. Inquiry Chart
2. Cognitive Content Dictionary Chart
3. Sentence Pattern Chart
4. Sentence Pattern Chart Parts of Speech Photos
5. Chant: Balance and Motion Yes, Ma'am
6. Picture File Cards: Balance and Motion Yes, Ma'am
7. Big Book: A Book About Balance
8. Big Book: A Book About Motion
9. 10:2 sign (please post in classroom)

Block One: 1st – Balance and Motion
GLAD Lesson Outline
5 Sessions
Approximate Time Block – One Hour

12 Focus Vocabulary

- **Balance**: When something is in a stable position and not falls over.
- **Balance point**: The place on which an object balances.
- **Counterweight**: Adding mass to a system to change its center of gravity.
- **Force:** A push or a pull.
- **Mobile**: System of balanced beams and objects.
- **Stable**: A state in which object does not fall over.
- **Linear motion**: Motion in straight lines.
- **Rotational motion**: Motion around a point or line; spinning.
- **Motion:** The act of moving.
- **Axis:** A straight line around which something rotates.
- **Spin**: To move by turning around an axis.
- **Roll**: To move by turning over and over.

Session	Strategies	Materials
Session 1 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart ❑ Cognitive Content Dictionary: ***Balance*** ❑ Big Book: A Book About Balance	○ Inquiry Chart ○ CCD Chart ○ Big Book: A Book About Balance **Post in the classroom: Inquiry chart, CCD**

Session 2 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Balance* (Con't)** ❑ Big Book – Revisit A Book About Balance then discuss key vocabulary and concepts ❑ Chant: *Balance and Motion Yes, Ma'am* o Chant o Highlight words in stanza 1: balanced, stable, counterweights, mobiles o Post PFCs o Chant	o Posted charts: Inquiry Chart, CCD o Big Book: A Book About Balance o Chant: Balance and Motion Yes, Ma'am o Picture File Cards (PFC) to tape onto the chant **Post in the classroom: Chant**
Session 3 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Motion*** ❑ Big Book – A Book About Motion ❑ Chant: *Balance and Motion Yes, Ma'am* o Chant o Highlight words in stanza 2: spinner, axis, spins o Post PFCs o Chant	o Posted charts: Inquiry Chart, CCD, Balance and Motion Yes, Ma'am chant o Big Book: A Book About Motion o Picture File Cards (PFC) to tape onto the chant
Session 4 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Motion (cont.)*** ❑ Big Book – Revisit A Book About Motion then discuss key vocabulary and concepts on page pages 1-3 ❑ Chant: *Balance and Motion Yes, Ma'am* o Chant o Highlight words in stanza 3: roller, rolling o Post PFCs o Chant	o Posted charts: Inquiry Chart, CCD, Balance and Motion Yes, Ma'am chant o Big Book: A Book About Motion o Picture File Cards (PFC) to tape onto the chant

Session 5 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary - ***review*** ❑ Big Book – Revisit A Book About Motion then discuss key vocabulary and concepts on page pages 4-7 ❑ Chant: *Balance and Motion Yes, Ma'am* o Chant ❑ Sentence Pattern Chart (Farmer in the Dell) Noun- **students**	o Posted charts: Inquiry Chart, CCD, Balance and Motion Yes, Ma'am chant o Big Book: A Book About Motion o Sentence Pattern Chart **Post in the classroom: Sentence Pattern Chart**

Block One: Balance and Motion
1st Grade
Cognitive Content Dictionary (CCD)

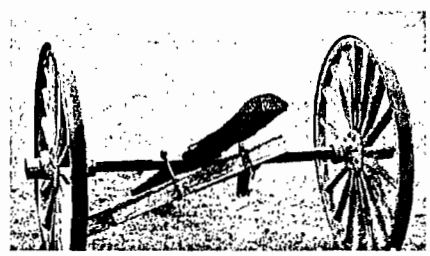
Word	Prediction	Meaning	Picture/Sketch	Sentence
Balance		When something is in a stable position and not falls over.		
TPR:				
Motion		The act of moving.		
TPR:				

Tip: Use the vocabulary word as the "signal word" with definition and TPR (**T**otal **P**hysical **R**esponse)

Balance & Motion Yes Ma'am Chant

Is this balanced?	Yes, Ma'am.
Is this balanced?	Yes, Ma'am.
How do you know?	It is stable and not falling over.
How do you know?	It has counterweights.
Give me some examples.	Crayfish, arches, mobiles
Is this a spinner?	Yes, Ma'am.
Is this a spinner?	Yes, Ma'am.
How do you know?	It turns on a central axis.
How do you know?	It spins, twirls, or whirls.
Give me some examples.	Tops, zoomers, twirlers
Is this a roller?	Yes, Ma'am.
Is this a roller?	Yes, Ma'am.
How do you know?	It has wheels and spheres.
How do you know?	It has axles that support the wheels.
Give me some examples.	Rolling: wheels, cups and spheres.

Picture File Cards for Balance and Motion



Balance and Motion
Sentence Patterning Chart

Adjective	Noun	Verb	Prepositional Phrase
	students	(key vocabulary to keep in mind as students provide verbs)	
		Spin	
		Roll	
		Push	
		Pull	
		Balance	
		Rotate	
		Twirl	
		Twist	

GLAD Materials
1st Grade: Balance and Motion
Block Two

Blackline Masters

8. Block Two GLAD Lesson Outline
9. 12 Focus Vocabulary List
10. Cognitive Content Dictionary (CCD)
11. Two Motions Bugaloo Chant (Teacher Edition)
12. Two Motions Bugaloo (Student Edition)
13. Sentence Pattern Chart- Here/There Chant Frame

Charts/Resources:

10. Chant: Two Motions Bugaloo
11. Here/There Chant Frame - Whole Class
12. Here/There Chant Frame - Small Group
13. Picture File Cards for chant

Block Two: 1st – Balance and Motion
GLAD Lesson Outline
5 Sessions
Approximate Time Block – One Hour

12 Focus Vocabulary

- Balance: When something is in a stable position and not falls over.
- Balance point: The place on which an object balances.
- Counterweight: Adding mass to a system to change its center of gravity.
- Force: A push or a pull.
- Mobile: System of balanced beams and objects.
- Stable: A state in which object does not fall over.
- Linear motion: Motion in straight lines.
- Rotational motion: Motion around a point or line; spinning.
- Motion: The act of moving.
- Axis: A straight line around which something rotates.
- Spin: To move by turning around an axis.
- Roll: To move by turning over and over.

Session	Strategies	Materials
Session 1 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart ❑ Cognitive Content Dictionary: ***Force*** ❑ Big Book: Revisit A Book About Balance then review key vocabulary and concepts ❑ Chant: Revisit *Balance and Motion Yes, Ma'am* ❑ Revisit Sentence Pattern Chart – add key verbs if not noted already (i.e. spin, rotate, turn, push, pull, balance, roll) ❑ Chant: *Two Motions Bugaloo*	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book: A Book About Balance o Chant: *Balance and Motion Yes, Ma'am* o Sentence Pattern Chart **New Material** Chant: *Two Motions Bugaloo*

Session 2 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Linear Motion*** ❑ Big Book – Revisit A Book About Motion then review key vocabulary and concepts ❑ Chant: *Two Motions Bugaloo* o Highlight words in stanza 1 and 2: motion, linear and rotational motions, motions o Post PFCs o Chant ❑ Revisit Sentence Pattern Chart ❑ Here/There Chant- Fill out the chant as a class o Add TPR (total physical response) o Chant	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book: A Book About Motion o Chant: *Balance and Motion Yes, Ma'am* o Sentence Pattern Chart o Chant: *Two Motions Bugaloo* **New Materials** o Picture File Cards o Here/There Chant Frame – Poster size
Session 3 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Rotational Motion*** ❑ Big Book – Revisit A Book About Motion ❑ Chant: *Two Motions Bugaloo* o Highlight words in stanza 3: rotational motion, spinning o Post PFCs o Chant ❑ Here/There Chant – Small Group o Revisit the class Here/There Chant with TPR o Have students work on Here/There chant in small groups o Share	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book: A Book About Motion o Chant: *Balance and Motion Yes, Ma'am* o Sentence Pattern Chart o Chant: *Two Motions Bugaloo* **New Material** o Picture File Cards (PFC) to tape onto the chant o Here/There Chant Frame – 11x17 one for each small group

Session 4 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Review all the words*** ❑ Big Book – Revisit A Book About Motion ❑ Chant: *Two Motions Bugaloo* ❑ Here/There Chant- Revisit the class chant with TPR ❑ Here/There Chant – Finish then have each small group share their chant with TPR	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book: A Book About Motion o Chant: *Balance and Motion Yes, Ma'am* o Sentence Pattern Chart o Chant: *Two Motions Bugaloo* o Here/There Chant
Session 5 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary - ***review all the words*** ❑ Big Book – Revisit A Book About Balance then discuss key vocabulary and concepts ❑ Chant: *Balance and Motion Yes, Ma'am* ❑ Chant: *Two Motions Bugaloo* ❑ Revisit Sentence Pattern Chart ❑ Revisit Class Here/There chant ❑ Ear to Ear Reading: Have the students pair up and read the two chants	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book: A Book About Balance o Chant: *Balance and Motion Yes, Ma'am* o Sentence Pattern Chart o Chant: *Two Motions Bugaloo* o Picture File Cards (PFC) to tape onto the chant o Here/There Chant

Block Two: Balance and Motion
1st Grade
Cognitive Content Dictionary (CCD)

Word	Prediction	Meaning	Picture/Sketch	Sentence
Force TPR:		A push or pull.		
Linear Motion TPR:		Motion in straight line.		
Rotational Motion TPR:		Motion around a point or line; spinning.		

Tip: Use the vocabulary word as the "signal word" with definition and TPR (**T**otal **P**hysical **R**esponse)

Two Motions Bugaloo **(Teacher Edition)**

I'm studying motion and I'm here to say.
Things can move in many ways.
Sometimes in a line, sometimes in a loop.
Sometimes things like to move in a swoop.

Linear and Rotational Motions too!
Doing the Two Motions Bugaloo!

Linear motion is moving in a line.
Going in one direction all the time.
Sometimes moving towards, sometimes away.
Never in one place is it going to stay!

Driving, flying, and walking too!
Doing the Linear Motion Bugaloo!

Rotational motion is spinning around.
It happens in the air and on the ground.
Pedaling in a circle, you can ride a bike.
Watching helicopter rotors is what some like.

Spinning, turning, and pedaling too!
Doing the Rotational Motion Bugaloo!

**Focus on the key vocabulary through discussion, revisiting of the CCD, and then highlight the key words. Then tape the Picture File Cards (PFCs) to the chant.

Lyrics © 2005 by Jesse Rench Pasco School District Educational Use Only
Adapted from "I'm a Crustacean" by Andy Brechtel
Adapted by K. Gooding and H. Im-Hamper EPS 2009

GLAD Materials
2nd Grade: Changes
Block One: January 2009

Blackline Masters

14. Block One GLAD Lesson Outline
15. 12 Focus Vocabulary List
16. Vocabulary List: Changes Lessons 1-17
17. 2nd Grade Learning Expectations
18. Cognitive Content Dictionary (CCD)
19. Is This Matter? Yes, Ma'am Chant (Teacher Edition)
20. Is This Matter? Yes, Ma'am Chant (Student Edition)
21. Sentence Pattern Chart

Charts/Resources:

14. Inquiry Chart
15. Cognitive Content Dictionary Chart
16. Sentence Pattern Chart
17. Sentence Pattern Chart Parts of Speech Photos
18. Chant: Is This Matter? Yes, Ma'am
19. Picture File Cards: Is This Matter? Yes, Ma'am
20. Big Book: The Important Book About Matter
21. 10:2 sign (please post in classroom)

Block One: 2nd – Changes
GLAD Lesson Outline
5 Sessions: January 2009
Approximate Time Block – One Hour

12 Focus Vocabulary

- Matter: Anything that has weight and takes up space.
- Properties: Something about an object that helps tell what it is.
- Solid: A substance takes up space and has its own shape.
- Liquid: A substance that has no shape but has volume. A liquid takes the shape of its container.
- Gas: A substance that has no shape or volume. A gas spreads out to fill the surrounding space.
- Observe: To watch or look at something
- Describe: To explain something
- Change: To become or make something different
- Evaporation: The process by which a liquid becomes a gas (change from liquid to gas)
- Condensation: Water vapor cools and change back to a liquid (change from gas to liquid)
- Mixture: Combination of two or more substances in which each substance keeps its own properties

Dissolve: To make or become part of a liquid mixture

Session	Strategies	Materials
Session 1 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart ❑ Cognitive Content Dictionary: ***Matter*** ❑ Big Book: *The Important Book About Matter*	o Inquiry Chart o CCD Chart o Big Book: The Important Book About Matter **Post in the classroom: Inquiry chart, CCD**

Session 2 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Matter* (Con't)** ❑ Big Book – Revisit then discuss key vocabulary and concept on page 1 ❑ Chant: *Is This Matter? Yes, Ma'am* o Chant o Highlight words in stanza 1: Matter, states of matter , solids, liquid, and gas o Post PFCs. o Chant	o Posted charts: Inquiry Chart, CCD o Big Book o Chant: Is This Matter? Yes, Ma'am o Picture File Cards (PFC) to tape onto the chant **Post in the classroom: Chant**
Session 3 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Evaporation*** ❑ Big Book – Revisit then discuss key vocabulary and concept on page 2 ❑ Chant: *Is This Matter? Yes, Ma'am* o Chant o Highlight words in stanza 2: Solid, properties, shape and volume, change, dissolve o Post PFCs o Chant	o Posted charts: Inquiry Chart, CCD, Is This Matter? Yes, Ma'am chant o Big Book o Picture File Cards (PFC) to tape onto the chant
Session 4 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Evaporation (cont.)*** ❑ Big Book – Revisit then discuss key vocabulary and concept on page 3 ❑ Chant: *Is This Matter? Yes, Ma'am* o Chant o Highlight words in stanza 3: Liquid, describe, change, shape of the container, evaporate o Post PFCs o Chant	o Posted charts: Inquiry Chart, CCD, Is This Matter? Yes, Ma'am chant o Big Book o Picture File Cards (PFC) to tape onto the chant

Session 5 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary - ***review*** ❑ Big Book – Revisit then discuss key vocabulary and concept on page 4 ❑ Chant: *Is This Matter? Yes, Ma'am* o Chant o Highlight words in stanza 4: Gas, no shape or volume, fills the surrounding space o Post PFCs o Chant ❑ Sentence Pattern Chart (Farmer in the Dell) Noun- **matter**	o <u>Posted charts:</u> Inquiry Chart, CCD, Is This Matter? Yes, Ma'am chant o Big Book o Picture File Cards (PFC) to tape onto the chant o Sentence Pattern Chart **Post in the classroom: Sentence Pattern Chart**

Block One: Changes
2nd Grade
Picture Dictionary/ Cognitive Content Dictionary (CCD)

Word	Prediction	Meaning	Picture/Sketch	Sentence
Matter TPR:		Anything that has weight and takes up space. o Solid o Liquid o Gas		
Evaporation TPR:		The process by which a liquid becomes a gas (change from liquid to gas)		

Tip: Use the vocabulary word as the "signal word" with definition and TPR (**T**otal **P**hysical **R**esponse)

Is This Matter? Yes, Ma'am Chant *(Teacher Edition)*

Stanza 1: (PFC: bath)
Is this matter? Yes, Ma'am!
Is this matter? Yes, Ma'am!
How do you know? It takes up space.
What are the states of matter? It's solid, liquid, and gas.
Give me some examples. Everything in our world!

Stanza 2: (PFC: sugar, gravel, tablet dissolving)
Is this a solid? Yes, Ma'am!
Is this a solid? Yes, Ma'am!
What are its properties? It has a definite shape and volume.
Can solids change? Yes! It can dissolve in water and become a liquid.
Give me some examples. Sugar, powder, and gravel.

Stanza 3: (PFC: water, ice cube tray, boiling water)
Is this a liquid? Yes, Ma'am
Is this a liquid? Yes, Ma'am!
How would you describe it? Liquid takes the shape of the container.
Can liquids change? Yes! It can evaporate and become a solid or gas.
Give me some examples. Salt water, vinegar, and juice.

Stanza 4: (PFC: balloon, breathe)
Is this a gas? Yes, Ma'am!
Is this a gas? Yes, Ma'am!
How do you know? It has no shape or volume but fills the surrounding space.
What does a gas do? Gas can be seen or heard when it interacts with other materials.
Give me some examples. Helium in balloons and oxygen we breathe.

**Focus on the key vocabulary through discussion and highlight.
Then tape Picture File Cards (PFCs) to chant.

Holly Im-Hamper
Everett Public School 2008

Changes

Sentence Patterning Chart

Adjective	Noun	Verb	Prepositional Phrase
	Matter		

Block Two: 2nd – Changes
GLAD Lesson Outline
5 Sessions
Approximate Time Block – One Hour

12 Focus Vocabulary

- Matter: Anything that has weight and takes up space.
- Properties: Something about an object that helps tell what it is.
- Solid: A substance takes up space and has its own shape.
- Liquid: A substance that has no shape but has volume. A liquid takes the shape of its container.
- Gas: A substance that has no shape or volume. A gas spreads out to fill the surrounding space.
- Observe: To watch or look at something
- Describe: To explain something
- Change: To become or make something different
- Evaporation: The process by which a liquid becomes a gas (change from liquid to gas)
- Condensation: Water vapor cools and change back to a liquid (change from gas to liquid)
- Mixture: Combination of two or more substances in which each substance keeps its own properties
- Dissolve: To make or become part of a liquid mixture

Session	Strategies	Materials
Session 1 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart- Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Condensation*** ❑ Big Book: Revisit The Important Book About Matter and review key vocabulary and concepts ❑ Chant: Revisit *Is This Matter? Yes, Ma'am* ❑ Revisit Sentence Pattern Chart ❑ Chant: *States of Matter Bugaloo*	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book o Chant: *Is this Matter? Yes, Ma'am* o Sentence Pattern Chart **New Material** Chant: *States of Matter Bugaloo*

Session 2 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: **Dissolve** ❑ Big Book – Revisit then review vocabulary and concepts ❑ Chant: *States of Matter Bugaloo* o Chant o Highlight words in stanza 1 and 2: properties, matter, volume, density, vapors, solids, their shapes don't change o Post PFCs. o Chant ❑ Revisit Sentence Pattern Chart ❑ Here/There Chant- Fill out the chant as a class o Add TPR (total physical response) o Chant	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book o Sentence Pattern Chart o Chant: *Is this Matter? Yes, Ma'am* o Chant: *States of Matter Bugaloo* **New Materials** o Picture File Cards o Here/There Chant Frame – Poster size
Session 3 **Ongoing Strategies:** ✓ **TPR** ✓ **10:2**	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: Mixture ❑ Big Book – Revisit then review vocabulary and concepts ❑ Chant: States of Matter Bugaloo o Chant o Highlight words in stanza 3: liquids, their shape does change, matter, volume, density, vapors o Post PFCs. o Chant ❑ Revisit Sentence Pattern Chart ❑ Here/There Chant – Small Group o Revisit the class Here/There Chant with TPR o Have students work on Here/There chant in small groups o Share	**Post in the classroom:** o **Inquiry Chart** o **CCD Chart** o **Big Book** o **Sentence Pattern Chart** o **Chant: Is this Matter? Yes, Ma'am** o **Chant: States of Matter Bugaloo** o **Class Here/There chant** **New Material** o **Picture File Cards (PFC) to tape onto the chant** o **Here/There Chant Frame – 11x17 one for each small group**

Session 4 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary: ***Review all the words*** ❑ Big Book – Revisit then discuss key vocabulary and concepts ❑ Chant: *States of Matter Bugaloo* o Chant o Highlight words in stanza 4: gases, expands to fill space, matter, volume, density, vapors o Post PFCs. o Chant ❑ Here/There Chant- Revisit the class chant with TPR ❑ Here/There Chant – Finish small group version then have each group share their chant with TPR	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book o Sentence Pattern Chart o Chant: *Is this Matter? Yes, Ma'am* o Chant: *States of Matter Bugaloo* o Class Here/There chant
Session 5 **Ongoing Strategies:** ✓ TPR ✓ 10:2	❑ Inquiry Chart – Revisit and revise as needed ❑ Cognitive Content Dictionary - ***review all the words*** ❑ Big Book – Revisit then discuss key vocabulary and concepts ❑ Chant: *Is this Matter? Yes, Ma'am* ❑ Chant: *States of Matter Bugaloo* ❑ Revisit Sentence Pattern Chart ❑ Revisit Class Here/There chant ❑ Ear to Ear Reading: Have the students pair up and read the two chants	**Post in the classroom:** o Inquiry Chart o CCD Chart o Big Book o Sentence Pattern Chart o Chant: *Is this Matter? Yes, Ma'am* o Chant: *States of Matter Bugaloo* o Class Here/There chant

Block Two: Changes
2nd Grade
Picture Dictionary/ Cognitive Content Dictionary (CCD)

Word	Prediction	Meaning	Picture/Sketch	Sentence
Condensation		Water vapor cools and change back to a liquid		
TPR:		(change from gas to liquid)		
Dissolve		To make or become part of a liquid mixture		
TPR:				
Mixture		Combination of two or more substances in which substance keeps its own properties		
TPR:				

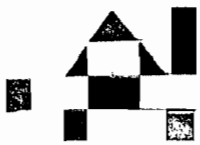
Tip: Use the vocabulary word as the "signal word" with definition and TPR (Total Physical Response)

States of Matter Bugaloo (Teacher Edition)

I'm a scientist, and I'm here to say
We observe solids and liquids everyday
Each has its special properties
That gives it special abilities

Matter, volume, density too
Hardness, fluidity, vapors goo
We're doing the scientific BUGALOO

Solids are so fascinating, many people say
We sort them by color as we play
Some roll, some stack, but their shapes <u>don't</u> change
Some float, some sink, isn't that strange!!



Matter, volume, density too
Hardness, fluidity, vapors goo
We're doing the scientific BUGALOO

Liquids are so interesting, many people say
We <u>compare</u> how they flow as we play
Some thick, some thin, their shape <u>does</u> change
Some mix, some won't, isn't that strange!

Matter, volume, density too
Hardness, fluidity, vapors goo
We're doing the scientific BUGALOO

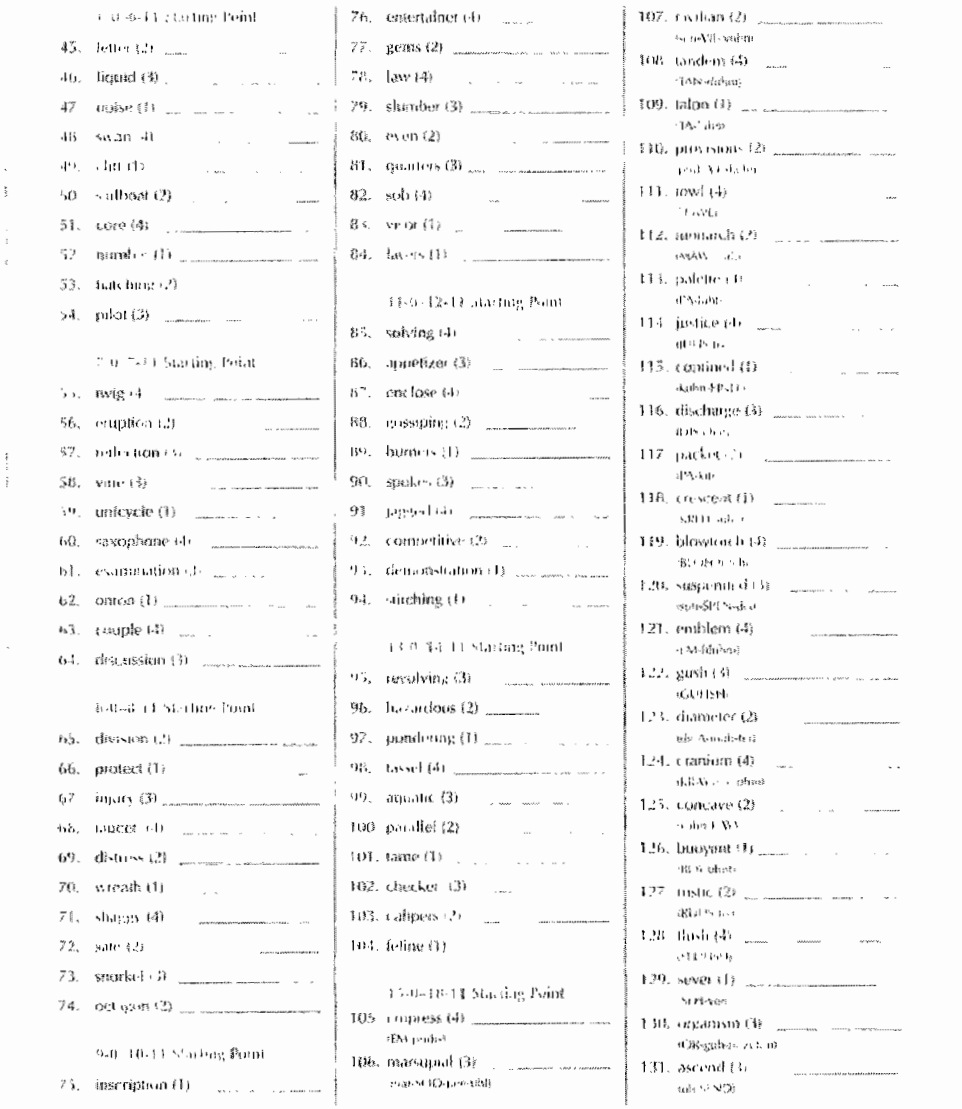
Gases are so intriguing, many people say
We run through them as we play
Some visible, some transparent, it expands to fill space
Some you smell, some you feel
Gas is everywhere, isn't that unreal!

Matter, volume, density too
Hardness, fluidity, vapors goo
We're doing the scientific BUGALOO

**Highlight the key vocabulary when revisiting the chant.
Then tape Picture File Cards (PFC) to chant.

APPENDIX B

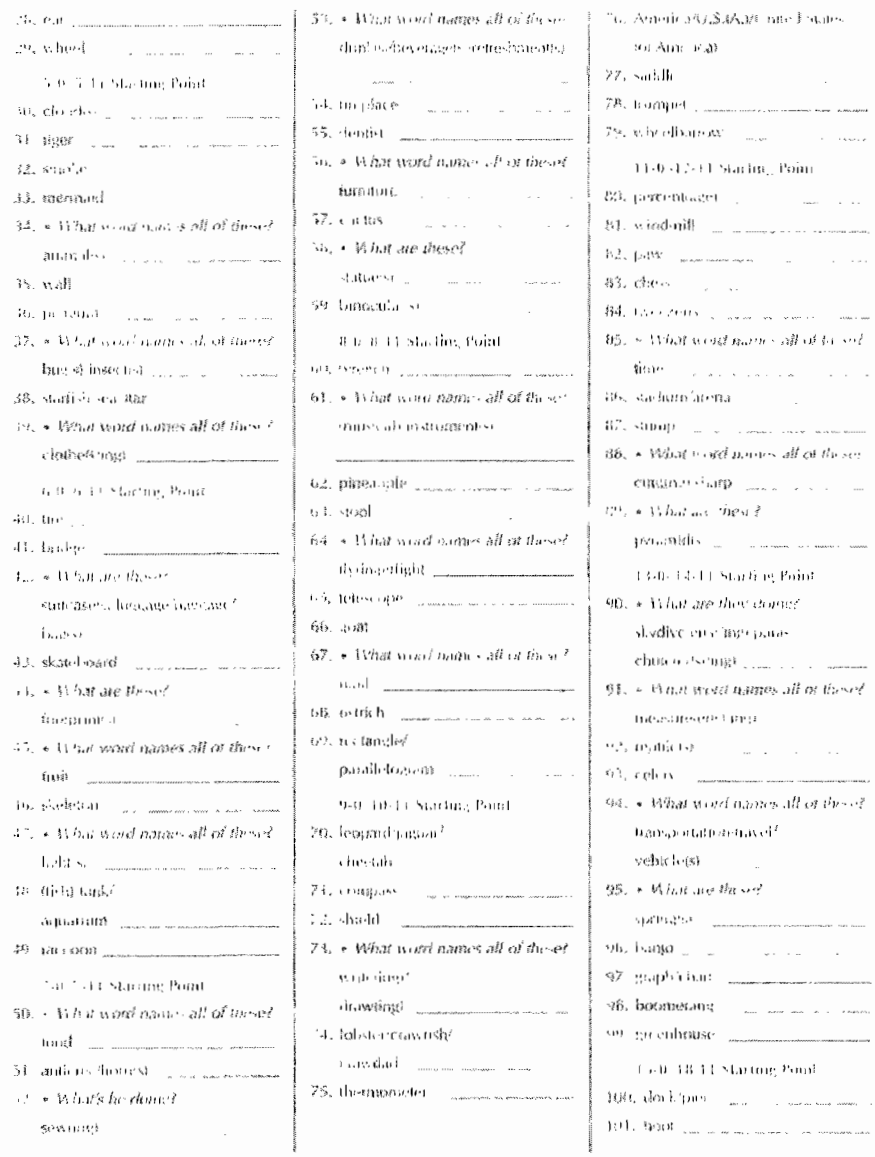
RECEPTIVE ONE WORD PICTURE VOCABULARY TEST SAMPLE PAGE



Basal: 8 consecutive correct responses. Ceiling: 6 incorrect out of 8 consecutive responses.

APPENDIX C

EXPRESSIVE ONE WORD PICTURE VOCABULARY TEST SAMPLE PAGE



APPENDIX D

GLAD VOCABULARY WORD CARD ASSESSMENT FIRST GRADE

Balance	**Balance point**
Counterweight	**Force**
Mobile	**Stable**
Linear motion	**Rotational motion**
Motion	**Axis**
Spin	**Roll**

APPENDIX E

GLAD VOCABULARY WORD CARD ASSESSMENT RATING SCALE

FIRST GRADE

Grade 1: Balance and Motion—Vocabulary

Vocabulary Word	Definition
Balance	When something is in a stable position and does not fall over
Balance Point	The place on which an object balances
Counterweight	Adding mass to a system to change its center of gravity
Force	A push or a pull
Mobile	System of balanced beams and objects
Stable	A state in which object does not fall over
Linear motion	Motion in straight lines
Rotational motion	Motion around a point or line; spinning
Motion	The act of moving
Axis	A straight line around which something rotates
Spin	To move by turning around an axis
Roll	To move by turning over and over

Student:_____

Teacher:_____

APPENDIX F

GLAD VOCABULARY WORD CARD ASSESSMENT SECOND GRADE

Matter	Properties
Solid	Liquid
Gas	Observe
Describe	Change
Evaporation	Condensation
Mixture	Dissolve

APPENDIX G

GLAD VOCABULARY WORD CARD ASSESSMENT RATING SCALE

SECOND GRADE

Grade 2: Changes—Vocabulary

Vocabulary Word	Definition
Matter	Anything that has weight and takes up space
Properties	Something about an object that helps tell what it is
Solid	A substance takes up space and has its own shape
Liquid	A substance that has no shape but has volume. A liquid takes the shape of its container
Gas	A substance that has no shape or volume. A gas spreads out to fill the surrounding space.
Observe	To watch or look at something
Describe	To explain something
Change	To become or make something different
Evaporation	The process by which a liquid becomes a gas (change from liquid to gas)
Condensation	Water vapor cools and changes back to a liquid (change from gas to liquid)
Mixture	Combination of two or more substances in which each substance keeps its own properties
Dissolve	To make or become part of a liquid mixture

Student:_____

Teacher:_____

APPENDIX H

EARLY LANGUAGE LISTENING AND ORAL PROFICIENCY ASSESSMENT

(ELLOPA)

An Early Language Listening & Oral Proficiency Assessment (ELLOPA)

Immersion English Learner Script

Developed by the Center for Applied Linguistics, 2002

Overview: This interactive listening and speaking assessment is designed for children ages 5-8 learning a second language in a school setting. Two children at a time participate in a series of language games where they interact with an English-speaking cow puppet (or other puppet), _____ (Mrs. Cow). The puppet speaks only English. Along with an adult interviewer and rater who speak some English (if necessary) during the session, the puppet explains the games to the children in English. Following the natural development of language, the assessment focuses first on the students' listening skills and secondly on speaking skills. The games are The Magic Bag, Talking with Mrs. Cow, How Plants Grow, and *Goldilocks and The Three Bears*. The games take about 20 minutes to complete.

Who is this assessment for? These ELLOPA game activities are appropriate for most children in Grades K-2 who have studied English in an immersion program. The topics covered include typical curriculum areas for early elementary language classes: family members, colors, numbers, size, food, animals, weather, and more. Any language class that covers a similar curriculum, regardless of program model (foreign language in the elementary school - FLES, total and partial immersion, or two-way immersion), will find this assessment useful.

Opening: Greet the children. Give them nametags with their names on them, and introduce yourself, the rater, and Mrs. Cow, the puppet.
Tell the children the purpose of the interview. Place the Activity Page in front of the children. As you go through the games, use the Activity Page to make smooth transitions and to help the students know where they are by pointing to the picture of each activity before you begin it.

> Hi! My name is ___ and this is____. Today we want to play some games in English with you. We are going to speak to you in English, and we want you to respond to us in English. Okay? This is Mrs. Cow and she is going to help us play the games. She doesn't speak (children's native language).

Game 1: Magic Bag

Length of Time for Game 1: 5-7 minutes (less time for students with higher proficieny)

Mrs. Cow greets the students in the target language and asks them what their names are.

Hi! My name is Mrs. Cow. What is your name?

Mrs. Cow then points to the picture on the Activity Page, identifying Game 1. Mrs. Cow places in front of the students the Magic Bag, containing geometrical objects of various shapes and colors. Mrs. Cow asks one child to open the bag and put everything out on the table.

The first game we are going to play is Magic Bag. I have a bag here. (*Use student's name*), please open it and take out everything.

Ask the children to point to different colors.

Point to something that is _____(green, yellow, blue, brown, purple, red, black, white).

Ask them to point to different objects.

Point to _____ (the circle, the triangle, the rectangle, the square, the pyramid, the cube, the sphere). Or use, 'where is _____?'

Put all of the _____ (green, orange, red, yellow, purple) ones together.

Ask the children to name different colors.

What color is this object?

Ask them to name different objects.

What do you call this object? What is this/are these? (Point to the various shapes)

How many _____ are there?

You know how to add, right? Okay, I have _____ _____ and ____ _____. How many are there? (_____ plus _____ is _____.)

Do you know how to subtract? If I take away ____ ____, now, how many are there? (_____ minus _____ is _____.)

Are there more _____ or more _____?

What shapes are not on the table?

What is your favorite color?

Mrs. Cow tells the students they have done well and that it is time to put the shapes back into the bag. She thanks them.

Very good. Now we are going to put all of the shapes back in the bag, and we are going to count them. _____ will go first, and then _____ will continue. Thank you.

Game 2: Talking with Mrs. Cow

Length of time for Game 2: 5–7 minutes

Mrs. Cow points to the picture on the Activity Page, identifying Game 2. She explains that she is going to ask them some questions in the target language and they are going to answer the questions in the target language.

Good. Now, Mrs. Cow has some questions she'd like to ask you, but she can't speak _____, so she would like you to answer in _____ (the target language).

Mrs. Cow asks some of the following questions related to the Game 2 Pictures (or other questions related to the pictures). Point to the corresponding picture or part of the picture for each of the questions.

> What is the weather like today? Is _____ (sunny, cold, hot, windy)? Is it _____ (sunny, raining, snowing)?
>
> What are the names of the four seasons? What is your favorite season of the year? What is the weather like in that season?
>
> _____, look at_____. How is he/she _____? Please describe her/him to me. What is he/she wearing?
>
> What do you like to do in school? What is your favorite class? Why?
>
> ¿Would you like to tell me what you are studying in your classes?

Make the transition to Game 3.
Very good. Thank you. Do you like your science class? Are you/have you studied plants? Now we are going to look at some pictures. Please look at them and tell me what is happening in each of the pictures.

Game 3: How Plants Grow

Length of time for Game 3: approximately 5 minutes

Instructions: The objective of Task 3 is to give the students an opportunity to describe a process using sentence-level speech.

Show them the four pictures demonstrating how a tree grows and have them take turns describing what is happening in each picture. The following questions may be used to prompt the students if they are hesitant in responding:

Use specific questions **only if** students cannot describe on their own or they get stuck.

Picture 1 Girl and man planting a small tree.

Can you tell me what is happening in this picture? What are the little girl and her father doing?

Picture 2: Girl watering tree

What is the little girl doing?

Picture 3: Sun shining on the small tree

What is happening in this picture?

Picture 4: Grown tree

What is this?

What do plants need in order to grow?

More proficient students may be able to answer additional questions

What is inside of a seed?

What is this part of a plant called? (Point to different parts)

What are the different parts of a tree?

How long does it take for a tree to grow big and tall?

Do you have a favorite tree? What is it? Why is it your favorite?

Have you studied plants in your science class? What did you learn in class?

What are some foods/products that come from plants?

Game 4: *Goldilocks and The Three Bears*

Length of time for Game 4: Approximately 5 minutes

Getting ready to tell the story

(For students with Jr. Novice-Mid to Jr. Intermediate-Mid levels of proficiency)

Ask students if they know the story, *Goldilocks and The Three Bears.* Prepare ahead of time, by placing the magnetic story figures on a board. Use some of the following questions/commands related to the Game 4 figures and story scene to be sure that the students are familiar with the objects before they are asked to place objects on the board or retell the story. [Use Magnetic Play Set, Smethport Specialty Co.]

Ask students to identify some of the objects

(Point to/show me/touch) the papa bear.

(Point to/show me/touch) the mama bear.

(Point to/show me/touch) the baby bear.

(Point to/show me/touch) Goldilocks.

(Point to/show me/touch) _____ (a chair, a table, a door, a bed, the bowl, the spoon, a book, the stairs, etc.).

To review, ask the students to name some of the objects:

Who is this? (Point to the characters.)

What is this? (Point to a bowl, chair, bed, door, stairs, etc.)

Is this a _____ or a_____? (Give choices if necessary.)

What are these? Which one is big? medium-sized? little?

Placing objects in the story scene (for lowest level students): As you go through the story, ask the children to pick up various items that are in front of them and place them in specific places in the story scene and ask some of the questions below.

(Student's name), take/pick up_____ and put _____ over/under/in the_____.

For more proficient students:
To encourage more student-student interaction, invite the students to ask each other to place some of the magnetic pieces in the story scene.

Now (student's name), you are going to be the teacher. Tell (student's name) to take an object from the table and put it somewhere in the picture.

Questions to ask after placing objects in the story scene:

Where are the bears going?

What is Goldilocks doing here? (Point to a specific scene/action.)

What are the bears doing here? How do you think they feel?

More proficient students may be able to answer additional questions:

Where do you think the bears will go next? Why? (Point to the bears in the living room with the broken chair.)

What happened upstairs?

How do you think Goldilocks felt when she woke up? How would you feel? Where did she go?

When Goldilocks ran away, do you think she ever came back? Why?

Retelling a story
Use a picture book of *The Three Bears*
(For students with Jr. Intermediate-High/Jr. Advanced levels of proficiency)

Explain to the students that they will work together to retell the story by taking turns. One student tells the story on one or two pages while the other student listens. Then they switch. Continue alternating until the story is finished. If the narrating student hesitates, prompt him/her, using questions such as those listed above or ask the other student if s/he can help. Be sure that the students have equal opportunities to tell the story. [Use story pictures with text covered.]

IMPORTANT NOTE: Before asking any questions, allow the students to tell as much of the story as they can on their own to elicit sentence-level or paragraph-level speech, if possible. **If students know past tense verbs, use past tense verbs for the prompts to elicit past tense in their language production.**

(Use student's name), can you start? What is happening/happened?

Good now (use student's name), it is your turn. Continue the story please. [Students keep taking turns until they finish the story.]

Thank the students for telling the story and continue with the Wind down to give them opportunity to complete the assessment successfully at an easier level.

Wind down

Length of time for Wind down: less than 1 minute

To wind down the interview give the students a few TPR commands, ending with applause for their good work.

Now stand up.

Touch _____ (your ears, your nose, your eyes, your shoulders).

Put your hands on your head.

Put your hands under the table.

Raise your right hand.

Please sit down.

Put your hands together. Clap. Very good.

Clap your hands too and congratulate the students. Let them know that you are finished playing the games. Thank the students for their participation and offer them a sticker or other small object as a treat.

Thank you very much children. We are all finished with the games. You played beautifully and may pick out a little gift before you leave. Good-bye.

Rating the interviews

How are the students rated? The students are rated holistically on the ELLOPA Rating Profile, a scale that measures oral fluency, vocabulary (speaking), language control (grammar), listening comprehension, communication strategies, and cultural awareness.

Materials

Hands-on items for *La Bolsa Mágica* activity and *Los Tres Cochinitos*.

- ✓ Puppets: Mrs. Cow and Tom Cat

La Bolsa Mágica (formas geométricas)

- ✓ Activities Page
- ✓ *Goldilocks and the Three Bears or The Three Little Pigs* (Magnetic Play Sets, Smethport Specialty Co.)
- ✓ Game 2 Pictures

Cultural items needed for optional Game #5

Cat puppet, plastic hamburger, Statue of Liberty, baseball, U.S. flag, book written in English, postcard with "¡Hola!" written on it, a flag of a English-speaking country that the children are acquainted with

Supplies for test administrators --

- ✓ Rating scale for rater
- ✓ Rating sheet for each pair of students
- ✓ Name tags for students and interviewers
- ✓ Stickers or pencils (or other small treat) to give students for completing the game activities
- ✓ Video camera and blank videotapes
- ✓ Tape recorder and blank cassette tapes

Comments and questions are most welcome! Please send feedback to: Lynn Thompson at the Center for Applied Linguistics, 4646 40th St. NW, Washington, DC 20016 (lynn@cal.org, tel. 202-362-0700)

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APPENDIX I

ELLOPA RATING SCALE REVISED

Cow Talk - Early Language Listening and Oral Proficiency Assessment (ELLOPA) Rating Profile* © 2002 CAL

Beg.	Junior Novice-Low	Junior Novice-Mid	Junior Novice-High	Junior Intermediate-Low
	ORAL FLUENCY –Produces isolated words and/or high frequency expressions such as *good morning* and *thank you.* –Tends to use native language almost exclusively.	–Uses a limited number of isolated words, two- to three-word phrases, and/or longer memorized expressions within predictable topic areas. –May attempt to create sentences, but is not successful. Uses gestures or native language to expand meaning when attempting to create with language. Long pauses are common.	–Uses high-frequency expressions and other memorized expressions with reasonable ease. –Signs of originality are beginning to emerge. –Creates some sentences successfully, but is unable to sustain sentence-level speech.	–Maintains simple conversations at the sentence level by creating with the language although in a reactive, limited manner. –Handles a limited number of everyday social and academic interactions.
	LANG. CONTROL (GRAMMAR) (Speaking) –May use memorized, high–frequency phrases accurately. –Lacks an awareness of grammar and syntax.	–May use memorized expressions with verbs and other short phrases accurately, but inaccuracies are common. –Does not successfully create at the sentence level with conjugated verbs.	–Creates some sentences with conjugated verbs, but in other attempts to create sentences, verbs may be lacking or unconjugated. –Many grammatical inaccuracies are present.	–Verbs are conjugated in present tense, but may be inaccurate. –Other grammatical inaccuracies are present. –Begins to self–correct.
	VOCABULARY (Speaking) –Uses words in very specific topic areas in predictable contexts. –May use a few memorized, high frequency expressions.	–Uses specific words in a limited number of topic areas, high–frequency expressions, and other memorized expressions. –Frequently searches for words.	–Uses vocabulary centering on basic objects, places, and family, adequate for minimally elaborating utterances in predictable topic areas. –May use native language or gestures when attempting to create with language.	–Has basic vocabulary for making statements and asking questions to satisfy basic social and academic needs, but cannot elaborate or provide explanations. –May use false cognates or resort to native language when attempting to communicate beyond the scope of familiar topics. –May use some common idiomatic expressions.

	LISTENING COMPREHENSION –Recognizes isolated words and high–frequency expressions such as *hello, good morning, thank you.*	–Understands predictable questions, statements, and commands in familiar topic areas *with strong contextual support* (gestures, objects, visuals, or previously presented material) though at a slower than normal rate of speech and/or with repetitions.	–Understands simple questions, statements, and commands, some new sentences with strong contextual support, and simple narratives in familiar topic areas. May require repetition, slower speech, or rephrasing.	–Understands familiar and new sentence–level questions and commands in a limited number of content areas with strong contextual support for unfamiliar topics. –Follows conversation at a fairly normal rate.
	COMMUNICATION STRATEGIES –Primarily relies on speaker's facial expressions, gestures, and non-verbal clues to aid comprehension. –May mimic words or phrases or sing songs in target language without comprehending words. –May use native language, gestures, and facial expressions to convey message or invent words by mixing target and native language sounds.	–Relies heavily on visuals, other contextual clues, and familiar expressions in the target language to assist in comprehension. –Uses manipulatives, visuals, and non-verbal clues to convey message. May use native language to expand meaning, change topic, or interpret for clarification. May invent words by using target language pronunciation for a native language word. May use a memorized expression in the target language inappropriately (e.g., How old are you? I'm fine.). After hearing a word in the target language, may repeat it or may even listen for a word and then repeat it in the conversation.	–May draw on background experiences to assist in comprehension. May attempt to clarify meaning in the target language by interpreting phrases in the native language, by asking questions in the native language, or by selecting substitute words. Relies heavily on visuals for comprehension of new topics, but less for familiar ones. –Relies on repeated language structures, non-verbal clues, and visuals to convey message. May use a new word in conversation rather than just repeating it. May resort to native language to expand meaning or change topic.	–Visuals and context may be important for comprehending new topics, but student relies less on these clues, especially in familiar topic areas. – May use paraphrasing, questioning, circumlocution, and other strategies to avoid breakdown in communication. Attempts to self–correct are primarily for meaning when communication does break down. May also resort to native language for urgent communication. May demonstrate more of the basic interpersonal communication skills than cognitive academic language proficiency.
	CULTURAL AWARENESS			
□ 1. Can sing a song in the target language.	□ 2. Can distinguish objects that are typically found in a culture of the target language from objects typically found in U.S. culture.	□ 3. Can talk in English about some holidays and customs found in a culture of the target language.	□ 4. Uses some gestures and body language from a culture of the target language.	□ 5. Uses some culturally appropriate vocabulary and idiomatic expressions in the target language. □ Other observations of Cultural Awareness from ELLOPA interview

*The ELLOPA rating profile is based on the COPE/SOPA Rating Scale (CAL, 2000), the pre-SOPA rating scale (Torres & Frazier, 1998), the *ACTFL Proficiency Guidelines* (1986, 1999), and the *ACTFL Performance Guidelines for Young Learners* (1998).

APPENDIX J

GLAD LESSON OBSERVATION

Teacher Name:_____ Grade Level:_____

Date Observed:_____ Name of Observer_____

Content Area: ☐ Reading ☐ Writing ☐ Math ☐ Science ☐ Other_____

Unit / topic:_____

GLAD STRATEGIES OBSERVED:

Circle answers for the score, evidence and frequency columns

✓ (check if observed)	Score Strategies			Evidence of Strategies				Frequency of Strategies		
___10/2 or 5/1	1	2	3	E	ER	V	VN	A	B	C
___Picture Dictionary	1	2	3	E	ER	V	VN	A	B	C
___TPR	1	2	3	E	ER	V	VN	A	B	C
___Sentence Patterning Chart	1	2	3	E	ER	V	VN	A	B	C
___Inquiry Chart	1	2	3	E	ER	V	VN	A	B	C
___Big Books	1	2	3	E	ER	V	VN	A	B	C
___Chants	1	2	3	E	ER	V	VN	A	B	C

Score Strategies:

1 = Implemented, not effective

2 = Implemented, somewhat effective

3 = Implemented very effective

Frequency of Strategies:

A = Used once or twice

B = Used sometimes (3 or more times)

C = Used frequently

Evidence of Strategies:

E = Evidence of this strategy in the classroom (may not have been used during observation)
ER = Evidence of this strategy in the classroom (used or revisited during this observation)
V = Targeted vocabulary used during the observation
VN = Targeted vocabulary not used during the lesson

Comments:

APPENDIX K

INTERVIEW PROTOCOL

Total participant time required: approximately 60 minutes for each grade level

OVERALL QUESTION TO ANSWER IN INTERVIEW DISCUSSIONS:

Did the teacher implement the GLAD strategies and if so, what specific strategies did they find to be effective at expanding the vocabulary of native Korean-speaking students.

A general guide for leading the teacher interviews is identified below. Before the teachers are interviewed, the informed consent process will be conducted as described in the human subjects protocol.

I. Introduction (10 minutes)
1. Welcome teacher participants.
2. Explain the general purpose of the grade level group interview and process.
3. Explain discussion guidelines (each person will respond to all questions, with only one person sharing at a time).
4. Discuss the importance and expectation of confidentiality.
5. Inform the grade level group that the information they provide will be analyzed and they will be referred to as a (first- or second-grade) teacher, and they will remain anonymous; names will not be used.

Before we begin with the interview questions I would like to remind you that in our group discussion confidentiality cannot be guaranteed, since there is no way to control what is said in or outside the group. I would also like to remind you to answer each question as openly and accurately as possible. If you need clarification or a question repeated please do not hesitate to ask. Because I will not be using a recording device (tape recorder) during the interview, I may ask you to repeat information or respond at a slower pace for note taking. Let's begin.

II. Questions (45 minutes)
1. Please share what you did to prepare, in advance, for teaching this unit. Include the process of selecting the vocabulary words.
2. Did you use GLAD strategies with this unit and if so, please share the GLAD strategies that you used during this unit along with how often you used the strategy. (example: unit consisted of 5 daily lessons and 10/2 was used twice in each daily lesson for a total of 10 times during the unit).

3. If possible, can you share why some strategies were not used?
4. Please share in detail how you introduced the vocabulary words to students during the unit.
5. Explain activities that allowed students to have opportunities to read and / or listen to the vocabulary words?
6. Explain activities that allowed students to have opportunities to write and / or say the vocabulary words.
7. Explain how you taught the meaning of the vocabulary words.
8. Did students have frequent exposure to vocabulary words during the unit and if so, explain.
9. Did you administer the pre- and post-assessments to students before / after the unit?
10. Explain how and when you collected evidence of student work for informal assessment.
11. In your observation of student interactions and work during the unit, please share your thoughts on how successful they were at learning the vocabulary words.

III. Closing (approx. 5 minutes)
    1. Closing comments and thank the teachers.

APPENDIX L

WEB-BASED TEACHER QUESTIONNAIRE

Teacher Questionnaire

1. GLAD Teacher Questionnaire by Sara Hahn (2008)

50%

Please respond to all items in the questionnaire. There are ten items total and there are no right or wrong answers. Completing the questionnaire is your consent, as a teacher, to participate. Taking part in the questionnaire is voluntary. The questionnaire is confidential; so please answer each question to the best of your ability. Thank you for taking the time to complete this questionnaire.

Next

Teacher Questionnaire

2. Default Section

100%

1. What grade level do you teach?

First Grade

Second Grade

2. While teaching this unit, how often did you use the GLAD strategies?

Most of the time

Some of the time

Not at all

3. Prior to teaching the unit (please check all that apply):

I helped to select the unit vocabulary words

I planned the unit with my grade level team

I determined what GLAD strategies I would teach

I administered the pre-assessment to students

Other

Other (please specify)

4. Please select all of the GLAD strategies that you utilized during this unit (check all that apply).

Inquiry Chart

10/2

Big Books

Picture Dictionary

Chants

Sentence Patterning Chart

Total Physical Response (TPR)

None

Other (explain below)

Other (please specify)

5. Which answers best describe the reason(s)why some strategies were not used during this unit?

I do not know all of the strategies to use them

I know what the strategy is, but unsure how to implement

I know the strategy but did not need it for this unit

I know the strategy but chose another strategy instead

I used all of the strategies

Other

Other (please specify)

6. Please identify the frequency of use for each GLAD strategy for this unit.

	Used Frequently	Used Sometimes (three or more times)	Used once or twice	Not Used
Inquiry Chart				
10/2				
Big Books				
Picture Dictionary				
Chants				
Sentence Patterning Chart				
Total Physical Response (TPR)				
None				

Other (please specify)

7. When you reflect on the unit and strategies you used, what GLAD strategies do you think were effective for teaching the vocabulary words?

	Effective	Not Effective	Didn't use this strategy
Inquiry Chart			
10/2			

Big Books

Picture Dictionary

Charts

Sentence Patterning Chart

Total Physical Response (TPR)

None

Other (explain below)

8. In review of the unit vocabulary words specifically identified before the unit, please answer the following in relation to the teaching of these words:

	Yes	No	Unsure
Words were introduced during the unit			
Words were presented in context			
Words were presented individually			
Students had opportunities to say the words			
Students had opportunities to read the words			
Students had opportunities to write the words			
Students were taught the meaning of the words			
Students had frequent exposure to words during unit			

9. Did you administer the vocabulary protocol before and after the unit to students?

Yes

No

Other

Other (please specify)

10. What informal assessment tools did you use during the unit to collect evidence that students were learning vocabulary words? (check all that apply)

Anecdotal notes or written log

Collected copies of student work

Observed student interactions

Observed individual students working

Students responded appropriately to questions

Other (describe below)

Other (please specify)

Prev Done

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