THE EFFECTIVE ORDER OF VOCABULARY TEACHING METHODS

FOR YOUNG FOREIGN LANGUAGE LEARNERS

A TERMINAL PROJECT PRESENTED BY

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TO THE LINGUISTICS DEPARTMENT

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF ARTS IN LINGUISTICS

WITH THE LANGUAGE TEACHING SPECIALIZATION

UNIVERSITY OF OREGON

DECEMBER 2009

ABSTRACT

Title: Effective Vocabulary Teaching Method Order for Young Foreign

        Language Lerners

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   This research was an attempt to find an effective vocabulary-teaching method order

for young foreign language learners. An experiment was conducted during regular Korean

class sessions for seven weeks, from April 13th to May 29th, 2009. In this experiment, two

vocabulary-teaching method orders, explicit-first order and implicit-first order, were

compared for effectiveness, using a within-group design. The participants of the groups were

second graders at Willagillespie Elementary School in Eugene, Oregon. Each group had

almost thirty students. They had the same background when it came to learning Korean.

Flashcards were used for the explicit vocabulary-teaching method, while stories were used

for the implicit vocabulary teaching method. For the first three weeks, Group 1 was taught

Korean vocabulary using the explicit method at the beginning of each session, followed by

the implicit method. On the other hand, during each session, Group 2 was taught using the

implicit method first, followed by the explicit method. Both groups had a one-week break in

week four. After the break, the orders of vocabulary teaching methods were switched for each

group for the next three weeks. The amount of words that the students could recall was

measured by a multiple choice test at the end of each session. As a result of the experiment,

slight differences were found between the two orders and two groups, but it is difficult to say

which order is more effective than the other one because the difference was not remarkable. Rather, it is now assumed that the homeroom teacher's influence and the students' personalities, as well as environmental and affective factors, could be more critical to students' foreign language learning. Future study is needed to explore the effects of the homeroom teacher, the students' personalities, and environmental and affective factors on students' foreign language learning.

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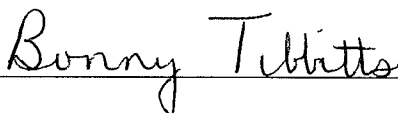MA TERMINAL PROJECT APPROVAL FORM

December 4, 2009

The examining committee appointed by the Department of Linguistics for the Terminal

Project submitted by

Soo Myung Kim

has read this terminal project and determined that it satisfactorily fulfills the program

requirement for the degree of Masters of Arts.

Thesis Title: Effective Foreign Language Vocabulary Teaching Method for Young Learners

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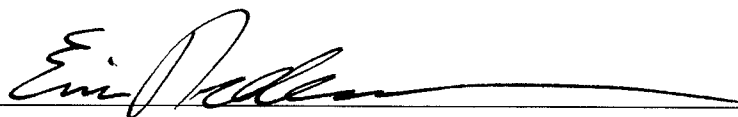
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Chapter 1 Introduction

Language teachers usually try to use a balanced approach toward teaching vocabulary, using both explicit and implicit teaching methods; however, they also seem to have a preference for one vocabulary teaching approach over the other. Some teachers are good at having students guess word meanings from context, while others feel more comfortable with presenting word meanings directly with the form. The topic of "which way works better" has been reviewed by many researchers and teachers over the years, but there have been different opinions about which overall approach is preferred as the main vocabulary-teaching method.

In the past, language teaching methodology had vacillated between emphasizing language analysis and emphasizing language use until the middle of the 20th century. However, in 1972, Hymes, an anthropological linguist, began to view language as a system for communication, and therefore focused on its sociolinguistic and pragmatic factors (Celce-Murcia, 2001). Schmitt (2000) says that this change helped shift people's focus from the accuracy, or correctness, of language to how appropriate the language was in a specific context. This view emphasized using language for meaningful communication, which is the main argument for proponents of Communicative Language Teaching (CLT).

CLT has served to put communication priority on message and fluency instead of grammatical accuracy, and emphasized practice and language use experience over explicit learning. In addition, "language chunks" were focused on rather than vocabulary words, which are smaller units. This approach also assumes that implicit vocabulary learning can occur when learners are using language for communicative purposes. Decarrico (2001) explains that the communicative approach, in the 1970s and 1980s, had people focus on implicit learning. Additionally, Brown (2007) writes "As teachers more and more perceived

their role as facilitators and guides, they became more reluctant to take the directive and sometimes intrusive steps to turn students' focus to lexical form." Therefore, little attention has been paid to explicit vocabulary teaching and learning due to the influence of the CLT approach.

Vocabulary instruction that ignores the explicit vocabulary teaching approach can cause learners to have difficulties in the retention, retrieval and generation of vocabulary that they have learned. Schmitt (2000) says "It has now been realized that mere exposure to language and practice with functional communication will not ensure the acquisition of an adequate vocabulary, so the current best practice includes both a principled selection of vocabulary, often according to frequency lists, and an instruction methodology that encourages meaningful engagement with words over a number of recyclings." Now, the need for explicit vocabulary-teaching is emerging again among researchers and teachers. Many researchers say that the importance of the explicit vocabulary-teaching approach has been overlooked by the CLT approach, but is now being highlighted again (Beck, McKeown, & Kucan, 2008; Folse, 2004; Nation & Gu, 2007).

Many researchers point out that combining explicit vocabulary teaching with incidental vocabulary learning is the best for language learners (Folse, 2004, Graves 2009, Nations 2001, Schmitt, 2000). Folse (2004) adds that learners need to both learn words from context through reading, as well as get information about words in an explicit way. Thus, most well-organized vocabulary teaching programs consist of a good mixture of explicit and incidental learning activities (Schmitt, 2000). Decarrico (2001) also emphasizes "a well-structured vocabulary program needs a balanced approach that includes explicit teaching together with activities providing appropriate contexts for incidental learning."

As already mentioned above, now it is thought that the balanced approach is ideal for language learners' vocabulary learning. In this research I tried to determine whether using

explicit vocabulary-teaching first before implicit vocabulary teaching is required, or more effective, for young foreign language learners than using implicit vocabulary-teaching followed by explicit vocabulary-teaching. The explicit approach had been devalued for quite a period of time, when communication was the focus of language teaching. At that time, teachers seemed to refer only to the incidental approach as the smart way of teaching vocabulary. Here, an experiment was conducted to compare the effects of two different orders of vocabulary instruction methods – explicit method vs. implicit method- and tried to find out which one works better for young foreign language learners' vocabulary learning. In this experiment, the use of powerpoint slides was selected as a way of to facilitate explicit vocabulary instruction. The powerpoint slides were introduced as an alternative to the more traditional use of flashcards. Each powerpoint slide consisted of picture and words. In addition, storytelling was used as a tool for implicit vocabulary instruction.

This research experiment was conducted during seven-week Korean sessions in the spring term of 2009 at Willaglliespie Elementary School, which is located in Eugene, Oregon. I had two experimental groups in this experiment. Each group consisted of about thirty second-grade students. Most of them were Americans and each group had only one male Korean student. The two Korean boys participated in each session, but they were not included in the experiment for data purposes. In the experiment for Group 1, five new Korean words were taught first, using powerpoint slides, followed by storytelling. These stories were told in English, but the new words were said in Korean instead of English during the storytelling. This procedure was followed for each session. On the other hand, Group 2 storytelling was given before the vocabulary instruction with powerpoint slides. At that time, since the five new words were said in Korean during the storytelling, before the words were taught by the teacher in an explicit way, students first had to struggle with guessing the meanings of the new foreign words. This treatment was done for the first three weeks, and then the students

were released from the experiment for a one-week break. The break was designed to refresh the students after the first three-week experimental process. After the one-week break, the teaching methods were switched for the next three weeks. That is, for Group 1 storytelling was given first, and then new words were taught with powerpoint slides. In Group 2, vocabulary teaching with slides was taught first, and then storytelling followed.

Regardless of which method was used first, the students in each group took a multiple choice test at the end of each session to measure how many words they could retain. The test (see Appendix D, p.53-58) consisted of five questions. Students were asked to match the five Korean words that were taught in each session with the five possible meanings. The test results of the two groups were analyzed using descriptive statistics. My hypothesis was that 'explicit-first vocabulary teaching' would be more effective than 'implicit-first vocabulary teaching' for young foreign language learners.

Chapter 2 Literature Review

Explicit Vocabulary Teaching vs. Implicit Vocabulary Teaching

Brown (2007) points out that one of the hot topics during the last decade has been which method, between the explicit vocabulary-teaching method and the incidental vocabulary-teaching method, works better. Traditionally, the explicit vocabulary teaching method was the most commonly used way of vocabulary instruction. The explicit vocabulary-teaching method directs attention directly to the information to be learned. Unlike the explicit vocabulary teaching method, the implicit vocabulary teaching method assumes that vocabulary learning occurs successfully when learners are exposed to reading texts which include the new vocabulary. Folse (2004) says that the implicit vocabulary teaching method exposes language learners to language to the greatest possible extent.

Explicit vocabulary teaching

Under the influence of the CLT approach, language teachers overlooked the importance of explicit vocabulary teaching for many years and focused instead on implicit vocabulary teaching. However, both ways of vocabulary teaching are important to learners' vocabulary improvement, so explicit vocabulary teaching should not be devalued. Schmitt(2000) says that learners can gain a sufficient vocabulary through the explicit method, while implicit learning from reading is also possible. Thus, it would appear that, as Folse (2004) believes, learners need to learn words not only from context, but they also need to get information about words in an explicit way. Schmitt (2000) argues that as students learn to read or as they learn something from the readings, explicit-vocabulary teaching must be used as a "prerequisite". Additionally, the explicit vocabulary teaching approach has shown good results in information retention. Schmitt (2000) indicates that a person who processes the data

or information of a word more deeply can retain that word for later use more often. Folse (2006) says one study of vocabulary-teaching methods discovered that the explicit method produces better retention than the incidental vocabulary-teaching method.

Moreover, it would appear that, as Paynter, Bodrova, & Doty (2005) conjecture, students with limited vocabularies need more explicit vocabulary teaching in their language learning. Folse (2004) claims his examination of many research studies has shown that L2 readers' very limited vocabulary knowledge often prevents them from making full use of context clues. He adds that, compared to L1 readers, L2 readers' limited vocabulary knowledge makes them guess about word meanings much more often; however, this lack of vocabulary knowledge also severely limits L2 readers' abilities to make use of the remaining context as clues for guessing.

Thus, it would appear that, as Schmitt (2000) argues, the learning of basic words cannot be delayed until after learners encounter the words incidentally; instead, they should be taught as quickly as possible, because learners can easily learn basic words explicitly. He adds that beginners need to be taught words in an explicit way in order to have a sufficient vocabulary to deal with the unknown words in context. Schmitt quotes Nation's (1993) suggestion that the direct acquisition of a great number of lexical items is imperative, especially in the early stages of learning, when learners' nascent vocabulary inventory is severely limited (p.30). Additionally, Schmitt (2000) says that the most frequent words need to be taught with the explicit vocabulary-teaching method because, necessarily, they should be ready in advance of language use. Certain important words, for example the most frequent words used in a language or technical vocabulary, make excellent targets for explicit attention. On the other hand, infrequent words in general are probably best left for incidental learning.

Implicit vocabulary teaching

Like the explicit vocabulary teaching approach, implicit vocabulary-teaching is frequently chosen by language teachers, but the learning effect of implicit vocabulary teaching does not seem to be the same as that of explicit vocabulary-teaching. Most studies show that the amount of vocabulary learning from reading is really rather small, and it is only through numerous repeated exposures, from a great deal of reading, that any significant number of words is learned (Schmitt, 2000). Nation's (2001) research shows that only small amounts of incidental vocabulary learning occur from reading. Thus, it is said being able to guess the meaning of vocabulary is a different matter from retaining it (Pressley, Levin, & McDaniel, 1987). That is, even though learners can guess the meaning of vocabulary from context, learners may not be able to retain it. Besides, Folse (2004) argues that his research shows that explicit vocabulary-instruction produced better results, in the aspect of effectiveness, than the implicit vocabulary-teaching method, such as guessing of meanings from context. He adds that the idea of teaching words in context is intuitively appealing, but he quotes Sternberg's(1987) cautionary statement that "The naturalness or typical use of a method does not imply its optimality"(p. 73). For these reasons, Schmitt (2000) says that a teacher's choice of vocabulary-teaching method should be carefully considered, using economic aspects like time and efficiency.

Storytelling: How contexts facilitate vocabulary learning

It is important for teachers to provide learners with meaningful learning experiences while teaching vocabulary. One way of improving learners' vocabulary acquisition and development is to teach vocabulary in several contexts, such as through storytelling and group work for creating a story, as well as using activities outside the classroom to extend vocabulary (Peitz & Vena, 1996). Rupley, Logan, & Nichols (1998) say activities that

connect experiences and concepts with words can foster vocabulary, improve comprehension, and keep students learning. Above all, Elley (1989) argues that telling stories to young language learners is essentially a significant source of vocabulary development.

For young learners, the relationship between storytelling and optimum language development shows a strong, positive correlation (Speaker, Taylor & Kamen, 2004). Storytelling is an effective bridge on the road to literacy, and children involved in educational programs that utilize storytelling have shown many positive behaviors in relation to increased literacy (Speaker, Taylor & Kamen, 2004). Speaker, Taylor & Kamen (2004) cite Roney's (1989) and Phillips's (2000) examination results to confirm that the vocabulary development and sentence structure complexity in a language become more advanced in children who have more experiences with storytelling (p.4).

Speaker, Taylor & Kamen (2004) also point out that when children are exposed to various stories, they are able to develop their listening skills, vocabulary, and ability to organize narrative thought. These researchers go on to argue that the language skills of the five children involved in their pilot study which analyzed each child's language ability, both before and after the storytelling program, showed improvement after the four-week program was conducted, using The College of New Jersey's preschool curriculum. They add that the preschool children showed enhancement in grammatical structure, vocabulary, length of utterance, and sentence formation with the use of storytelling. It would appear that, as Peitz & Vena (1996) argue, all of the research conducted to find the most effective way of vocabulary learning and teaching show that teaching vocabulary through storytelling has a very strong positive effect on students' vocabulary acquisition and comprehension.

Rupley, Logan, & Nichols (1998) say that vocabulary holds stories, ideas, and content together, and it promotes making comprehension accessible for children. Building vocabulary knowledge supports the learners' text comprehension, as well as their interactions with the

storyteller and the text, and "gathers up the threads of concepts" about objects and information surrounding learners. For these reasons, vocabulary instruction is an integral component for teaching children how to read both narrative and informational texts. Rupley, Logan, & Nichols (1998) advocate a balanced approach to teaching vocabulary. That is, they say that both the explicit method and the implicit method facilitate vocabulary development. Vocabulary develops when young learners have abundant experiences with learning new words, and with examples that include these words, in rich contextual settings. Rupley, Logan, & Nichols (1998) argue, "Individuals do not use restricted definitions of words as they read, but construct word meaning in terms of context for the concepts that represent their background knowledge." (p.338)

Elley's (1989) study presents, "Several identifiable features in the stories that appear to account for a large portion of variance in the likelihood that children will learn a certain word: the frequency of occurrence of the word in the story, the helpfulness of the context, and the frequency of the word in pictorial representation" (p.184). Most research on vocabulary development reports the importance of pictorial and verbal contexts in providing cues to guide the students to the meaning of an unfamiliar word (Elley, 1989). Thus it would appear that, as Elley (1989) argues, repeated encounters with words, both in story and pictorial context, are very critical factors in vocabulary development. Teachers' giving additional information about unknown words as learners encounter the words in context enhances learners' vocabulary development and retention to a great extent.

Clearly, for new learning to occur, the stories should include some unknown vocabulary beyond the learners' present vocabulary knowledge. Moreover, it is said that the unknown words should be surrounded by a helpful verbal or pictorial context, and learners should be exposed to the words several times (Elley, 1989). Peitz & Vena (1996) say that the use of pictorial context, with specific instruction for students to pay attention to words,

fosters vocabulary learning. They add that contextual clues in sentences and paragraphs help learners develop understanding of unknown words. Thus, Peitz & Vena (1996) mention that explicit teaching is necessary for new vocabulary learning and repeated exposure to vocabulary in context is also important.

Most research that looked into the effectiveness of storytelling on vocabulary learning was conducted for English learning as a first language. However, successful vocabulary learning seems to happen with similar, or even improved results in learning English as a second language. Genesee, citing McLaughlin et al.'s evaluation, discusses the effectiveness of direct instruction in vocabulary. The participants were ELLs and English L1 students. The treatment was vocabulary instruction using strategies such as how to guess the meaning from context, as well as using activities outside the classroom to improve students' understanding of vocabulary. After two years of treatment, ELLs showed a better knowledge of morphology and semantic association, and there were no differences between them and the English L1 students on the Peabody Picture Vocabulary Test. In addition, the gap in vocabulary between ELLs and English L1 students was decreased by 40 percent.

Summary

There have been many arguments among researchers and teachers concerning which method, either explicit vocabulary-teaching or implicit vocabulary-teaching, served better in the learning of vocabulary. The explicit vocabulary-teaching approach directs attention directly to the information to be learned. On the other hand, the implicit vocabulary-teaching approach assumes that vocabulary learning occurs successfully when learners are exposed to reading texts which include the new words to be learned. Despite this, it is now said that a balanced approach is ideal for vocabulary learning, but students with limited vocabularies will need more explicit vocabulary teaching in their language learning. Additionally, the

learning of basic words cannot be delayed until after learners encounter the words incidentally; instead they should be taught as quickly as possible, because learners can easily learn more through learning the basic words explicitly. Additionally, the explicit vocabulary-teaching approach shows better results for information retention than the incidental teaching approach.

Whether it is the explicit-first approach or the implicit-first approach, storytelling provides learners with a rich context, or environment, for learning vocabulary. Research conducted to find effective ways for vocabulary learning and teaching show that teaching vocabulary through storytelling has a very strong positive effect on vocabulary acquisition and comprehension. Besides, for young learners the relationship between storytelling and optimum language development shows a strong positive correlation. Repeated encounters with the words, both in the story and pictorial context are very critical factors in vocabulary development. Teachers' giving additional information about unknown words when learners are encountering the words in context enhances their vocabulary development and retention to a great extent.

Although most of the research was conducted in an English L1 setting, successful vocabulary learning still occurs with the same or more effectiveness in English learning as in a second language. So, the results from this vocabulary-teaching research with English L1 students can be applied to vocabulary learning in second language learning settings.

Chapter 3 Method

Background

The purpose of this research was to find out which order of vocabulary teaching methods is more effective in young learners' foreign language learning. Two types of methods for teaching vocabulary were chosen for this experiment, the explicit-first vocabulary-teaching method and the implicit-first vocabulary-teaching method. Flashcards and stories were used as materials for each method. Multiple choice tests were used to see how many words students could retain at the end of each session.

Nist & Joseph (2008) say that flashcards have been effectively used to help students learn new words for a long time, and they are still some of the most effective teaching aids. Flashcards are commonly used by foreign language teachers to teach vocabulary, since it is believed that they are a simple, but useful, teaching material. They are also easy to carry and handle, and are often very colorful and visual, so they can easily attract learners' attention and help learners' memory. Therefore, flashcards have been popular with most language teachers, especially teachers for young learners. The flashcards used in this experiment did not have a traditional hard-paper form, but they were prepared in the form of powerpoint slides, including pictures or photos, as well as both English and Korean words. The second method used in this experiment was storytelling. It is suggested that providing context with vocabulary learning can help learners' vocabulary retention.

This experiment focuses on which order is more effective for young learners to retain new words while learning a foreign language. 'Order' is related to whether vocabulary teaching with flashcards should be used before storytelling, or whether storytelling should be used before vocabulary teaching.

Participants

Two groups were used during this experiment. Each group had about thirty students. They were second grade students at Willagillespie Elementary School. Most of the students were Americans and each group had one Korean boy, both of whom were fluent Korean speakers and regularly attended the ESL class in their school. The two groups of students had the same background when it came to learning Korean. These students have been learning about Korean culture and language since they were in first grade. However, their learning was focused more on culture than language, they were mostly illiterate in Korean. The experiment was conducted during their class' Korean sessions. Each group experienced both teaching methods in different orders, and students had a multiple choice test at the end of each session. Even though the Korean boys joined in this experiment, they did not influence their American classmates on the test in any way. They did not say anything to their classmates during the time of each test, and they were kept apart from their American classmates. In addition, their test results were excluded.

As Brown (2007) says that since children are extremely sensitive and they are affectively fragile, teachers need to help them to overcome affective barriers to learning. In this research I thought collecting data anonymously would make young students more comfortable to answer questions on the test because they did not need to worry about their own test results. So, I did not identify participants through several experiments.

Process

The experiment was conducted for seven weeks from April 13th to May 29th, 2009. In this paper 'E (explicit method first)' indicates 'vocabulary teaching ahead of storytelling' method. For the 'E' condition, five words from a story were presented with flashcards for ten minutes at the beginning of each session. The five target words of each story were chosen by

their standard of frequency in the story, with each word usually appearing more than eight times. All of the words were nouns except for one instance "살랑살랑/sahl-lahng-sahl-lahng/," which means "softly, softly" and is an adverb. The target words offer included main characters and places in the story. The presentation included showing pictures of the target words, teaching Korean words that matched with the pictures, letting students say them aloud in Korean several times, and then discussing the pictures and letting students share their ideas and experiences concerning the pictures. For the next ten minutes of each session, the story was told in English by the experimenter. During the storytelling, five words were substituted with Korean words. For the last ten minutes of the session, students were tested on how many words they could recall.

'I (implicit method first)' indicates the 'storytelling ahead of vocabulary teaching' method. For the 'I' condition, a story was told in English by the experimenter for the first ten minutes of each session. During the storytelling, five words were substituted with Korean words. After the story was told, the target words were presented with flashcards for ten minutes. Then, for the last ten minutes, students were tested on how many words they could recall.

While Group 1 experienced the 'E' condition during the first three weeks, Group 2 experienced the 'I' condition. After a one-week break, which was designed to refresh the students after the first learning experience, each group experienced the opposite order. It was considered possible that group differences might exist as another variable, so the orders were switched in order to exclude this variable from having an influence on the results of the experiment, using a within-subjects design. Students' retention of the new words was measured by a multiple choice test. Only five target words for the session were tested on the multiple choice test. As a result, the experiment tested a total of thirty new Korean words (5 words X 6 weeks = 30 words).

Chapter 4 Results

Effect of Order
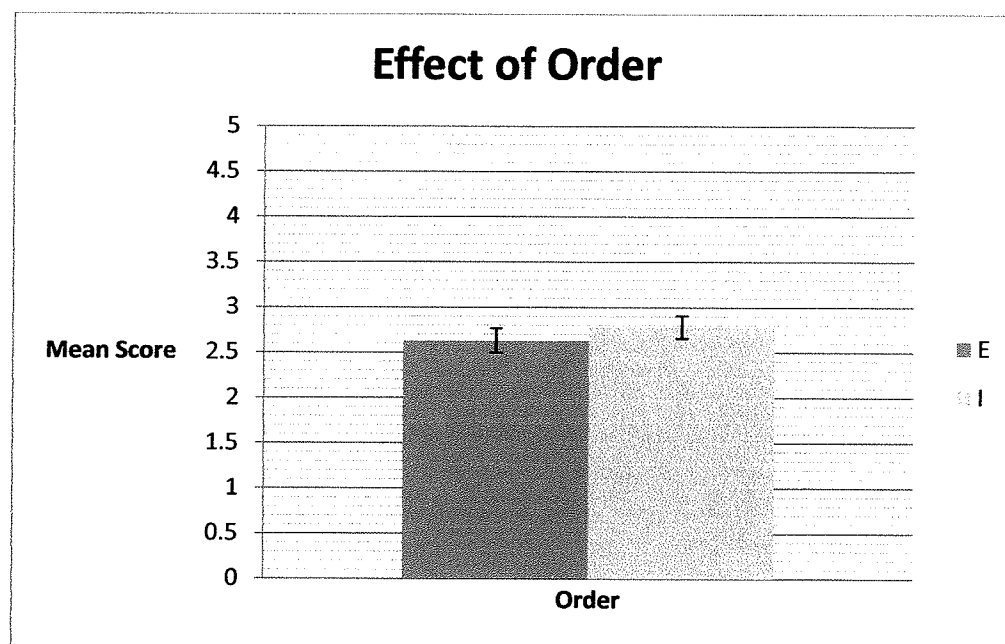
<Figure 1> Mean number correct by Order 'E' and 'I', Bars represent +/- one standard
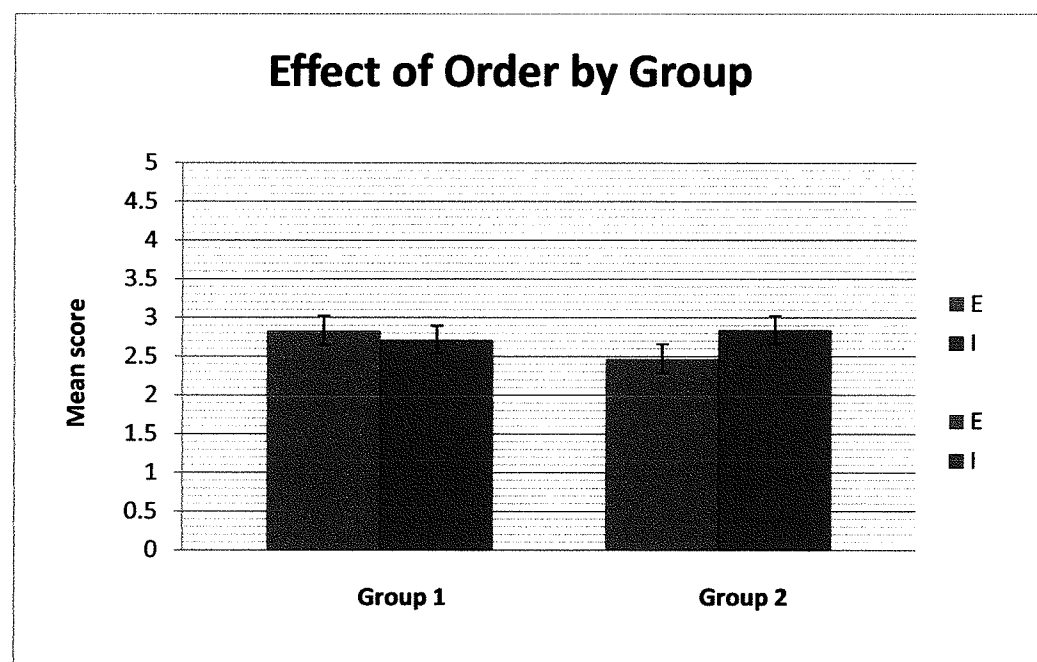
error

According to Figure 1, 'E', which means 'the explicit method first', has a lower

mean score than 'I', 'the implicit method first'. The difference of mean scores between 'I'

(M=2.78) and 'E' (M=2.63) is 0.15. Even though 'I' has a higher mean score than 'E', the

difference does not seem to be large. The standard error bars on these graphs are overlapping,

indicating that this difference is not reliable. Therefore, it cannot be said that 'I' is a more

effective vocabulary teaching order for young foreign language learners than 'E'.

Effect of Order by Group

<Table 1> Mean Scores and Standard Errors of Order 'E' and 'I' by Group

	Order	
	E	I
Group 1	M = 2.83 SE = 0.19	M = 2.72 SE = 0.18
Group 2	M = 2.47 SE = 0.19	M = 2.85 SE = 0.18

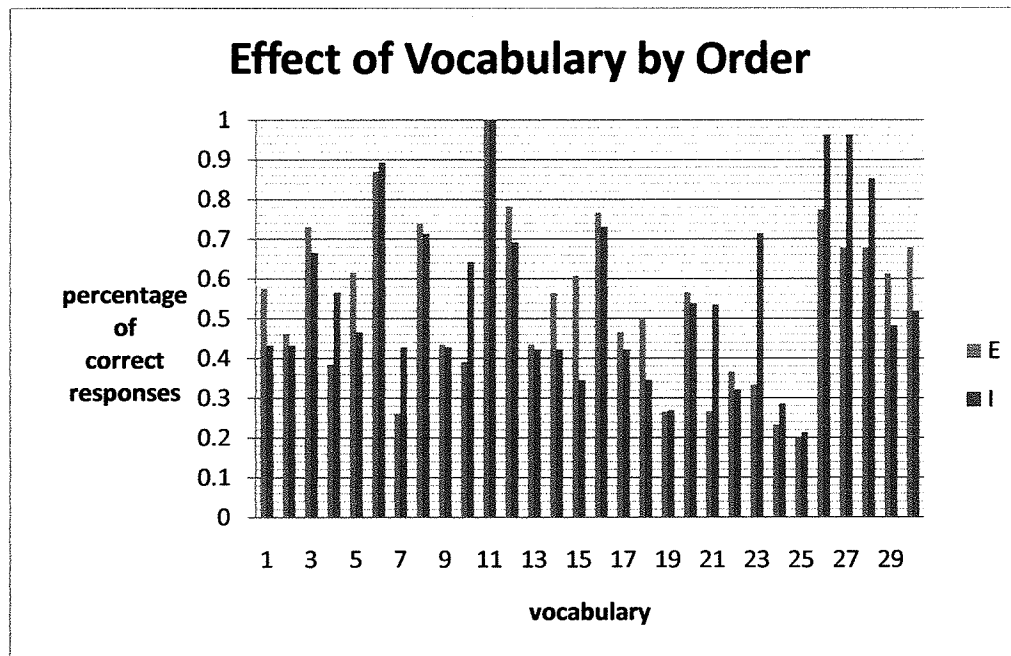(M: mean, SE: standard error)

<Figure 2> Mean number correct by Order 'E' and 'I' by Group, Bars represent +/- one standard error

Figure 2 shows us that each group seemed to have a preference for order of

vocabulary instruction. Group 1 has a higher mean score with the order 'E' (M=2.83) while

the mean score with 'I' is lower than that (M=2.72). The difference between the two scores is

0.11 and it does not show a big difference. On the other hand, Group 2 shows that there is a clearer difference (M=0.38) than Group 1 on the score between 'E' (M=2.47) and 'I' (M=2.85) even though the difference is still not large. It reflects that Group 2 demonstrated more vocabulary learning for the order 'I' than the order 'E'. Besides, the standard error bars on Group 2 are not overlapping and this suggests that this difference for Group 2 is reliable. It is supported that the order 'I' is more effective for Group 2 learners to learn foreign language vocabulary than the order 'E'.
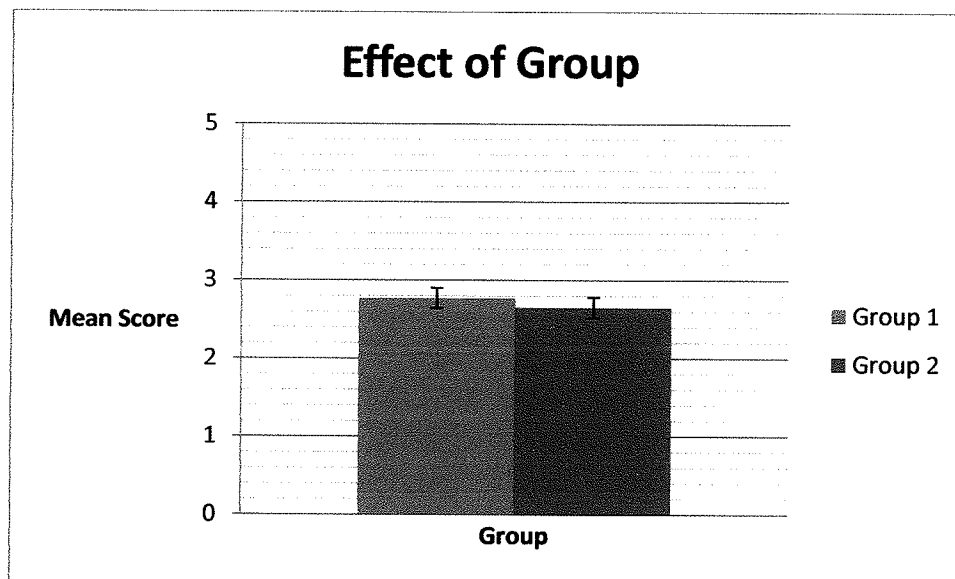
Effect of Vocabulary by Order

Effect of Vocabulary by Order

percentage of correct responses / vocabulary

<Figure 3> Percentage of correct responses on 30 vocabulary items by Order

<Figure 3> shows the percentage of correct responses for each word within each

instructional order. Five words were taught during each week. The average percentage of

correct answers is 0.54 with 'E', and 0.56 with 'I'. For vocabulary items 2, 3, 6, 8, 9, 11, 12,

13, 16, 17, 19, 20, 22, 24, 25 (see Appendix A, p.34), no difference, or very slight differences,

between the orders 'E' and 'I' were found on the graph. On the other hand, for vocabulary

items 1, 4, 5, 7, 10, 14, 15, 18, 21, 23, 26, 27, 28, 29, 30 remarkable differences between the

two orders were found on the graph. All the participants marked the correct answer for

vocabulary item 11. The largest difference between the order 'E' and the order 'I' was found

on vocabulary item 23. For this vocabulary item the percentage with 'E' is 0.33, which is

below the average, and the one with 'I' is 0.71, which is above the average. The vocabulary

items that show a higher percentage with 'E' than the average percentage (p= 0.54) are

vocabulary items 6 (p=0.87) and 11 (p=1), and the lower percentage item with 'E' is

vocabulary item 25 (p=0.2). 'I' also shows remarkable results for these three items.

Vocabulary items 6 (p=0.89), 11 (p=1), 26 (p=0.96), 27 (p=0.96), and 28 (p=0.85), with 'I',

show a higher percentage than the average percentage (p=0.56), while vocabulary item 25

(p=0.21) shows a lower percentage.

Effect of Group

Effect of Group

<Figure 4> Mean number correct by Group 1 and Group 2, Bars represent +/- one
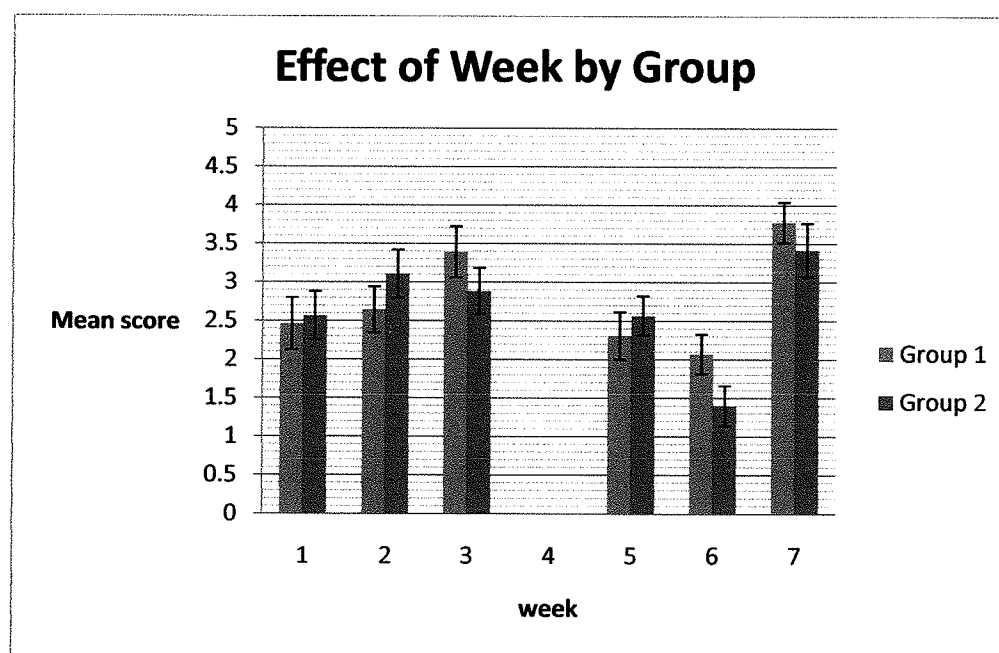
standard error

Figure 4 shows that there is a difference between the two groups. The mean scores are 2.77 for Group 1, and 2.65 for Group 2, with the difference between the two groups being 0.12. Although the difference is not remarkable, Group 1 displays a higher accomplishment level of learning new words and retaining them, whatever the order is. However, the standard error bars are overlapping, indicating that the measurement is not reliable. Therefore, it is difficult to say that Group 1 is definitely superior to Group 2 in learning new foreign words, even though Group 1 shows a higher mean score than Group 2.
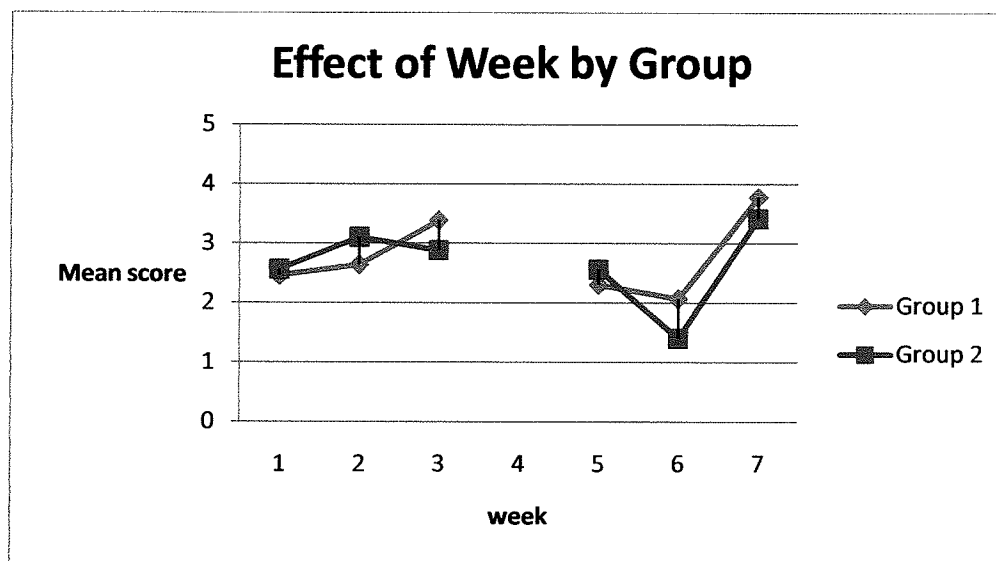
Effect of Week by Group

<Table 2> Mean Scores and Standard Errors of 6 Weeks by Group

		Weeks						
		1	2	3	4	5	6	7
Group 1	M	2.46	2.7	3.39		2.31	2.07	3.78
	SE	0.34	0.3	0.33		0.31	0.26	0.26
Group 2	M	2.57	3.11	2.88		2.57	1.4	3.42
	SE	0.31	0.31	0.3		0.26	0.26	0.35

(M: mean, SE: standard error)

<Figure 5> Mean number correct by Weeks by Group, Bars represent +/- one standard error

Effect of Week by Group

<Figure 6> Tendency lines of Means of 6 Weeks by Group

As can be seen in Figure 5, in week one, Group 2 has a higher mean score with the order 'I' (M= 2.57) than Group 1 with 'E' (M=2.46). While the difference between the groups is minor (M=0.11) in week one, the difference (M=0.47) between the groups in week two is more than four times greater than the difference shown in week one. The score of Group 2 from week one to week two jumps from 2.57 to 3.11, with the noticeable enhancement score of 0.54. In week three, the score of Group 2 somewhat decreases, but the score of Group 1 shows a remarkable improvement of 0.69. As shown in Figure 6, during the first three weeks, the mean scores tend to increase gradually.

After the one-week break, the teaching orders were switched. Therefore, it is natural that in week five the scores and the shape of the bar graphs for each group seems to be similar to those of week one. However, in week six, the scores show an overall decrease. There seems to be several reasons for this decrease, which will be discussed in the next chapter. In week seven, which was the last week, the shape of the bar graphs seems to be similar to those of week three even though the scores of week seven are higher than the ones of week three. The graph of week seven show the highest scores. Factors that may have caused these high scores will also be discussed in the next chapter.

The standard error bars of Group 1 and Group 2 in Figure 5 are overlapping in weeks one, two, three, five, and seven. This suggests that the differences between the groups are not reliable for those weeks. As a result, it is not supported that in weeks one, two, and five that Group 2 did better in learning new foreign words, or that in weeks three and seven Group 1 did better, even though in weeks one, two, and five Group 2 shows higher scores than Group 1 on the bar graph, and in weeks three and seven Group 1 displays greater scores than Group 2. On the other hand, in week six, the standard error bars of Group 1 and Group 2 are not overlapping. This indicates that the difference between the groups is reliable in week six. Therefore, it can be said that Group 1 was better at learning and retaining foreign language vocabulary in week six.

Chapter 5 Discussion

Schmitt (2000) maintains that learners can gain sufficient vocabulary through explicit vocabulary teaching and this makes further incidental learning of other vocabulary items from reading possible. Folse (2004) argues that learners need to learn words from context through reading, and they need to get information about words in an explicit way. In addition, Folse (2006) says one study of vocabulary teaching methods discovered that the explicit vocabulary-teaching method produces better retention than the incidental vocabulary-teaching method. My hypothesis was that 'E (explicit-first method)' would be more effective than 'I (implicit-first method)'. However, the results of my experiment did not suggest that my hypothesis was correct. In chapter 4 'I' had a higher mean score than 'E', but the difference was not reliable. Also, 'I' was more effective for Group 2, showing a reliable effect. However, it is difficult to conclude 'E' was more effective for Group 1. The differences between orders in each group were still slight, but in Group 2, it was seen that the difference was reliable through the non-overlapping standard error bars. Even though the difference between the two orders was not large, 'I' had a higher score than 'E'. I overlooked variation in learning style and ability. Actually, Group 2 was very excited while guessing the meanings of new words from the stories. However, when the order was changed from 'I' to 'E', it was found that their interests in learning new words decreased rapidly. We can see it from the difference between the results of week three and week five, when the scores dropped remarkably.

It was also confirmed that other factors, in addition to the teacher's teaching method, can cause students to have good or bad results. Brown (2007) says that since children are extremely sensitive and they are affectively fragile, teachers need to help them to overcome affective barriers while learning. It was found that both environmental factors and affective

factors influenced the students' learning, and their improvement while learning. In week six we can see that the scores of the two groups were lower than the ones from other weeks. In fact, the score for Group 2 was abnormally low. I am going to discuss the relationship between the concepts of new words, as well as the students' interest and test results, but in the case of Group 2 in week six, other factors may have made the score lower. On that day, the homeroom teacher forgot to bring the students to the Korean session, and instead let them play on the playground. When the wind suddenly started blowing strongly, she brought them into the classroom and found that I was waiting for them. I started the session about five minutes later, but she let me have the full time (thirty minutes) for the Korean session. The students, however, were distracted even when I gave them the sign for starting of class. Usually, we started the session by greeting each other in Korean. By doing so, they would notice that class had started and get themselves ready for listening to me. Unfortunately, on that day the greetings did not work well. They were busy cleaning up their desk or making themselves warm. Additionally, they were still excited from playing games on the playground, which they had enjoyed very much. For these reasons, they were distracted throughout the whole session.

The difference between the scores for week six and week seven shows us that whether a story is humorous, or close to the students' interests, could matter. The story of week six told of a heavenly maiden who became a human being and went back to heaven with her three children while leaving her husband on earth. The story seemed to be quite serious and sad. Also, the concept of the story, and the target words, did not look familiar to the students. This could be one of the reasons that this week had the lowest scores of any session for either of the groups. On the other hand, the story in week seven had lots of humor in it, and the students were likely to feel that the story was silly. While I was telling the story,

I could often hear them laugh loudly. Also, I could hear them guessing what would happen next, which was a sign to me that they were paying close attention to the story.

Different from other weeks, I used realia and gestures in week seven, which might have facilitated students' interactions with the story. Additionally, almost all of the target words were nouns, main characters, or places in the stories, but there was only one adverb in the target words, which appeared in the week 7 story. This adverb was '살랑살랑/sahl-lahng-sahl-lahng/', which means 'softly, softly'. I could not find a picture anywhere to describe the adverbial word '살랑살랑/sahl-lahng-sahl-lahng/', so I decided to show the word with gestures. I also had a problem finding pictures of a 'red fan' and a 'blue fan'. I could easily find a picture of a fan, but a 'red fan' and a 'blue fan' are more complex words and they are a more specific indication because the noun 'fan' has descriptive words like 'red' and 'blue'. In order to solve this problem, that of finding specific pictures that described or indicated motion or things exactly, I chose to substitute objects by using real gestures or realia. For example, I brought in two real fans, a red one and a blue one. Although these things were substitutes, they actually work better for students' retention of new words than pictures. Rupley, Logan, & Nichols (1998) argue that vocabulary develops when young learners have abundant chances to learn new words and examples, and when these words are found in rich settings. Elley (1989) claims that unknown words in a text should be surrounded by helpful context, and learners should be exposed to each word several times.

One more interesting thing was found between the two groups that deserves further study. The two groups had quite similar characteristics. They were the same age, the same grade, and attended the same school. They also had same background when it came to learning Korean; in that they had learned Korean culture since they were in the first grade, with only small amounts of Korean language instruction. Concerning the language, they only knew how to greet each other in Korean. They were mixed boys and girls, and the ratio was

almost half and half. Each group had about thirty American students, with one male Korean student. In addition, their Korean teacher was the same, and their homeroom teachers were both women of similar age.

The only difference they had was their homeroom teachers' characteristics. Interestingly, their characteristics were totally opposite. The homeroom teacher for Group 1 was very organized and strict. She was likely to put priority on cleanliness, organization, classroom rules and perfect timing. On the other hand, the homeroom teacher of Group 2 was easy-going and free. For her, creative activities, students' free ideas, carefulness, gentleness, and degree of care for each other seemed to be most important. As a result, their appearances, styles, and speaking styles typically reflected the characteristics of their teacher.

Above all, the students were likely to be a "reflective mirror" of their own teachers. Group 1 listened to me very carefully and followed the rules during the sessions as I commanded. Group 2 always looked happy, and they were busy producing their own ideas and opinions. Sometimes, I felt more at ease and more comfortable, with Group 1, in that I did not need to try to attract their attention because they were already ready to listen to me. With Group 2, sometimes I felt it was difficult to make them pay attention to me. However, sometimes I felt it was difficult to make Group 1 students say their opinions out loud. Sometimes, I felt happier when I had more interaction with students, and when I saw them try to be more involved during the sessions.

The differences between the two groups were very typical, so I could easily recognize them. Based on these differences, I would say that they also had group differences in respect to classroom behavior, and each group had their own "preferences". Group 1 seemed to prefer organized activity in a session. They were also more likely to enjoy listening to the stories after learning the new words first. In the first week, after switching the teaching method to 'I', students showed their feelings of embarrassment to me. They also seemed to

feel more comfortable relying on the teacher's directions rather than learning from their own ideas. Group 2 was definitely the opposite. They were very excited while guessing meanings of unknown foreign words. In addition, they did not seem to have anxiety about saying incorrect answers. They really did not care whether their answers were correct or not: they just enjoyed guessing meanings using their creative ideas. Interestingly, they looked bored when the teaching method was switched to 'E' for the last three weeks. I felt that their attention span actually became shorter when they were taught with the explicit method. When they listened to the stories after already being taught the foreign words, they did not try to say the meanings as excitedly as they did with the implicit method. 'E' interrupted their process of engagement.

For this experiment, I was lucky to have two groups that had opposite characteristics. Even though I was unable to support that my hypothesis was right, I have learned that learning can originate from the learners themselves. Whatever the methods order was, learners could learn something in the sessions using their own learning styles. That is, learners took the initiative in their own learning, and for their own motivation. They also had their own "mold" for learning, which was formed by interactions with their circumstances. This is far from the concept of education that is inherent in my home country. A learner's receptive role was emphasized in Korean society. It means that learners were expected to be quiet and listen to their teacher with the result that they often came to prefer taking notes while the teacher is giving a lecture instead of actively participating in a session by sharing their own ideas. With this point of view, my finding about learners' roles in their own education is very new to me, and might be a refreshing concept for Korean society to adopt.

Chapter 6 Conclusion

This research began with my realization of a problem concerning foreign language vocabulary learning. I, as an EFL learner, have had difficulties in generating English vocabulary while speaking or writing in English. I had learned new English words through guessing meanings from context, and I had been taught that vocabulary is no more than a small part belonging to the big body of 'reading'. Accordingly, it was natural that vocabulary learning was overlooked in my English learning. My guessing skills had improved; at my ability to generate various words myself had stagnated. Reading contexts were perfect surroundings for me to read articles with unknown vocabulary and dictionaries were always a great tool to help me write in English; however, these techniques were not of any help to me in conversations or discussions, when I needed to make prompt responses. As a result, I came to the conclusion that foreign language vocabulary needs to be taught in an explicit ways instead of an implicit ways, like guessing meanings from context. Furthermore, I assumed that it was better to teach foreign language vocabulary first, in an explicit way, with the vocabulary needs having to be reinforced throughout the texts. With this in mind, I planned the experiment to compare whether the 'explicit-first' order is more effective for young foreign language learners, or if the 'implicit-first' order is more effective.

As a result of this experiment, I found that my question of 'which order works better' does not matter, and that either one can work well with young foreign language learners. Rather, I discovered that other factors, like homeroom teacher's characteristics and classroom atmosphere, can affect foreign language learners' learning process and results much more. Although my hypothesis was not supported, I have learned how to conduct an experiment, and how to analyze results, through this research. I also came to know that identifying the participants within the test results is important while analyzing the data, because it allows me

to explore factors that can affect the results. Tracking individuals is also needed in order to discover participants' personal preferences, or accomplishments, while learning vocabulary. However, I missed detecting variables related to the participants. Experiments to be conducted in the future will need to be planned more carefully, and must consider hard-to-predict variables.

Finally, I was sorry that I could not discover the relationship between vocabulary items and methods. As shown in chapter 4, there seems to be a pattern concerning which vocabulary items are learned more effectively with which order, that is, which order works better with specific words in a foreign language. However, the number of vocabulary items was too small to generalize the pattern I saw. Generalizing this was out of my focus for this experiment; nevertheless, finding out a more effective order with specific vocabulary items, and defining this pattern, would be a very meaningful study. The result of such a study could be very helpful for learners, as well as foreign language teachers. It will enable learners to save time and effort when searching for an effective way to learn foreign language vocabulary. Therefore, an attempt to explore this relationship should be made in the future.

References

Beck, I. L., McKeown, M. G., Kucan, L. (2008). Creating robust vocabulary: frequently

asked questions and extended examples. New York: Guilford Press.

Britsch, S. (1992). The development of story within the culture of preschool. Berkeley:

University of California.

Brown, H. D. (2007). Teaching by Principles: An Interactive Approach to Language

Pedagogy. White Plains: Pearson Education.

Celce-Murcia, M. (2001). Teaching English as a Second or Foreign Language. Boston:

Heinle & Heinle.

Decarrico, J. (2001). Vocabulary Learning and Teaching. , Celce-MurciaMarianne, Teaching

English as Second or Foreign Language (pp. 285-299). Boston: Heinle & Heinle.

Elley, W. B. (1989). Vocabulary acquisition from listening to stories. Reading Research

Quarterly, 24(2), 174-187.

Folse, K. S. (2004). Vocabulary Myths: Applying Second Language Research to Classroom

Teaching. Ann Arbor: The University of Michigan Press.

Folse, K. (2006). The Effect of Type of Written Exercise on L2 Vocabulary Retention. *TESOL*

QUARTERLY, 40, 273-284.

Graves, M. F. (2009). Teaching individual words: one size does not fit all. New York:

Teachers College Press.

Genesee, F., Lindholm-Leary K., & Christian D. (2006). Educating English language learners:

a synthesis of research evidence. Cambridge: Cambridge University Press.

Hatch, E. & Brown, C. (1995). Vocabulary, Semantics, and Language Education. Cambridge:

Cambridge University Press.

Miller, P. J. & Mehler, R. A. (1994) The power of personal storytelling in families and kindergartens. In A. Dyson & C. Genishi (Eds.), The Need for Story: Cultural Diversity in Classroom and Community. Illinois: National Council of Teachers of English.

Nagy, W., & Herman, P. (1987). Breadth and depth of vocabulary knowledge: Implication for acquisition and instruction. In M. Mckweon & M. Curtis (Eds.), The nature of vocabulary acquisition (p. 19-36). Hillsdale, NJ: Lawrence Erlbaum Associates.

Nation, I. S. P. (2001). Learning Vocabulary in Another Language. Cambridge: Cambridge University Press.

Nation, P. (1993). Using dictionaries to estimate vocabulary size: Essential, but rarely followed procedures. Language Testing, 10(1), 27-40.

Nation, P., Gu P. Y. (2007). Focus on Vocabulary. Sydney: Macquarie University.

Nist, L., Joseph, L. M. (2008). Effectiveness and Efficiency of Flashcard Drill Instructional Methods on Urban First-Graders' Word Recognition, Acquisition, Maintenance, and Generalization. School Psychology Review, 37(3), 294-308

Paynter, D. E., Bodrova, E., Doty, J. K. (2005). For the love of words: vocabulary instruction that works, grades K-6. San Francisco: Jossey-Bass.

Peitz, P., Vena, P. (1996). Vocabulary Teaching Strategies: Effects on Vocabulary Recognition and Comprehension at the First Grade Level. Resource in Education, 31(9), 37-50.

Pressley, M., Levin, J., & McDaniel, M. (1987). Remembering versus inferring what a word means: Mnemonic and contextual approaches. In M. Mckweon & M. Curtis (Eds.), The nature of vocabulary acquisition (p. 107-128). Hillsdale, NJ: Lawrence Erlbaum Associates.

Roney, C. R. (1989). Back to the basics with storytelling. Reading Teacher. 42(7), 520-523.

Rupley, W. H., Logan, J. W., Nichols, W. D. (1998). Vocabulary instruction in a balanced
reading program. Reading Teacher, 52(4), 336-346.

Schmitt, N. (2000). Vocabulary in Language Teaching. Cambridge: Cambridge University
Press.

Speaker, K. M., Taylor D., & Kamen, R. (2004). Storytelling: Enhancing Language
Acquisition in Young Children. Education, 125(1), 3-14.

Sternberg, R. (1987). Most vocabulary is learned from context. In M. Mckweon & M. Curtis
(Eds.), The nature of vocabulary acquisition (p. 89-106). Hillsdale, NJ: Lawrence
Erlbaum Associates.
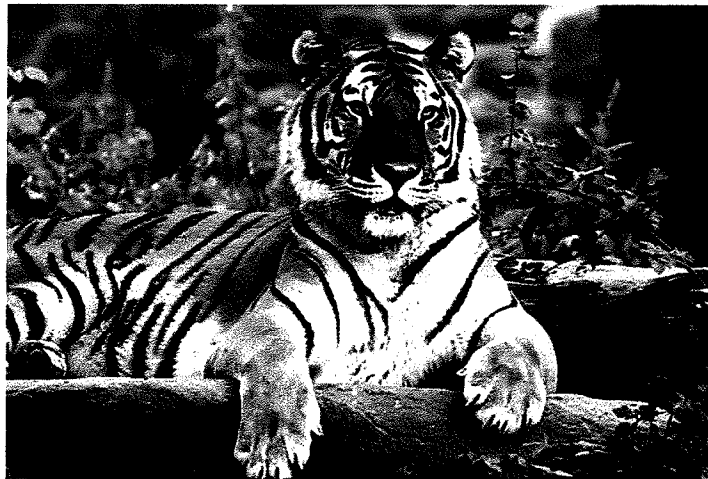
Appendices

Appendix A: Vocabulary List

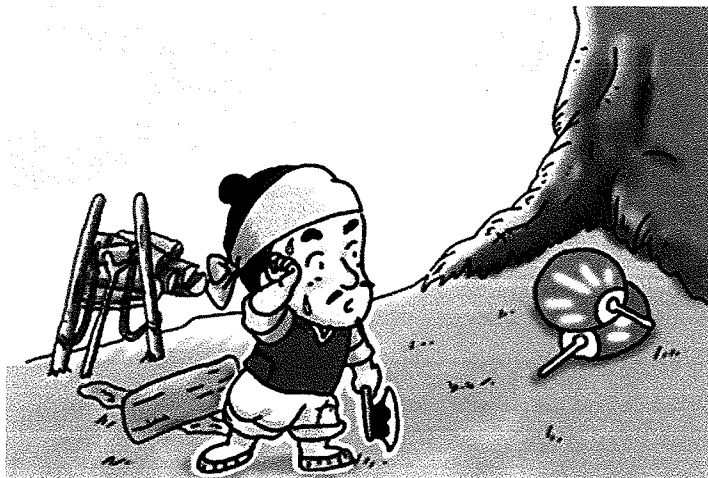| Week 1	1. 나무꾼 woodcutter 2. 호랑이 tiger 3. 엄마 mother 4. 산 mountain 5. 형님 brother
Week 2	6. 할머니 grandmother 7. 고양이 cat 8. 아빠 father 9. 꽃 flower 10. 편지 letter
Week 3	11. 왕 king 12. 소 cow 13. 하늘 sky 14. 공주 princess 15. 다리 bridge
Week 5	16. 태양 Sun 17. 나무 tree 18. 젊은이 a young man 19. 그늘 shade 20. 부자 a rich man
Week 6	21. 호수 pond 22. 사슴 deer 23. 선녀 heavenly maiden 24. 말 horse 25. 날개 wing
Week 7	26. 살랑살랑 softly softly 27. 코 nose 28. 눈 eye 29. 빨간 부채 red fan 30. 파란 부채 blue fan

Appendix B: Story List

Week	Story
1	Woodcutter and the Tiger Brother
2	Dear Juno
3	The Herdsman and the Princess
5	The Man who Bought the Shade of a Tree
6	Woodcutter and the Heavenly Maiden
7	Red Fan and Blue Fan

Appendix C: Flashcards

Week 1

Tiger
호랑이 /Ho Rang Ee/

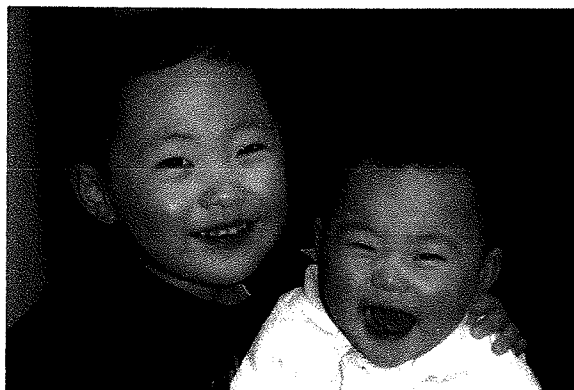# Woodcutter
나무꾼 /Na Moo Koon/

Mother
어머니 /Eo Meo Nee/

Brother
형님 /Hyeong Neem/

Mountain
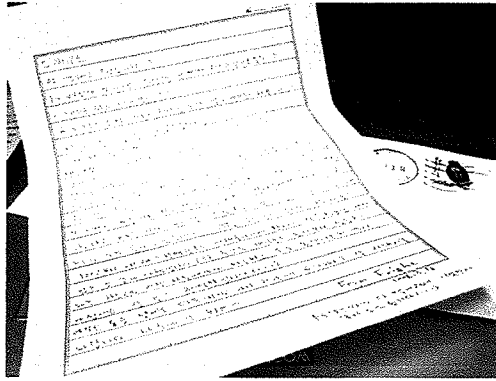## 산 /Sahn/

Grandmother
할머니 /Hal-Meo-Nee/

Father
아빠 /Ah-Ppa/

Cat
고양이 /Ko-Yang-Ee/

Flower
꽃 /Kkot/

Letter
편지 /Pyeon-Jee/

King
왕 /Wahng/

Princess
공주 /Gong-Joo/

Cow
소 /So/

Bridge
다리 /Dah-Ree/

Sky
하늘 /Hah-Neul/

Sun
태양 /Tae-yang/

Tree
나무 /Na-moo/

Shade
그늘 /Geu-neul/

Rich Man
부자 /Boo-jah/

Young Man
젊은이 /Jeol-meu-ni/

Deer
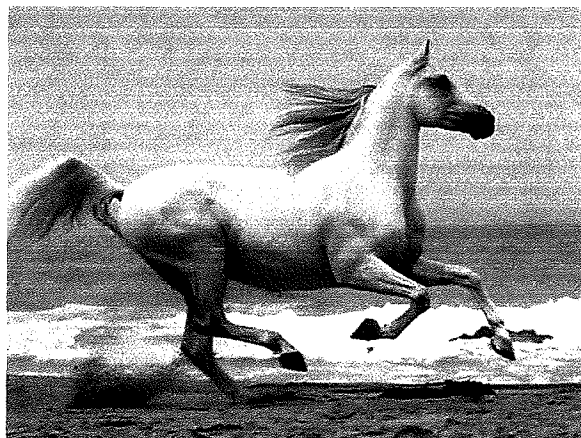# 사슴 /Sah-seum/

Heavenly Maiden
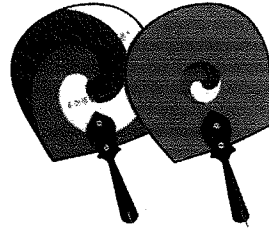# 선녀 /Seon-neyo/

Wing
날개/Nal-gae/

Pond
연못 /Yeon-mot/

Horse
말 /Mahl/

<u>Week 7</u>

Fan
부채 /boo-chae/

함죽선 – 두막동경

Eye
눈 /noon/

Nose
코 /ko/

Appendix D: Multiple Choice Tests

Week 1

1. Choose one.
(1) tiger
(2) woodcutter
(3) mother
(4) brother
(5) mountain

2. Choose one.
(1) tiger
(2) woodcutter
(3) mother
(4) brother
(5) mountain

3. Choose one.
(1) tiger
(2) woodcutter
(3) mother
(4) brother
(5) mountain

4. Choose one.
(1) tiger
(2) woodcutter
(3) mother
(4) brother
(5) mountain

5. Choose one.
(1) tiger
(2) woodcutter
(3) mother
(4) brother
(5) mountain

Week 2

1. Choose one.
(1) grandmother
(2) flower
(3) cat
(4) letter
(5) father

2. Choose one.
(1) grandmother
(2) flower
(3) cat
(4) letter
(5) father

3. Choose one.
(1) grandmother
(2) flower
(3) cat
(4) letter
(5) father

4. Choose one.
(1) grandmother
(2) flower
(3) cat
(4) letter
(5) father

5. Choose one.
(1) grandmother
(2) flower
(3) cat
(4) letter
(5) father

Week 3

1. Choose one.
(1) king
(2) princess
(3) cow
(4) bridge
(5) sky

2. Choose one.
(1) king
(2) princess
(3) cow
(4) bridge
(5) sky

3. Choose one.
(1) king
(2) princess
(3) cow
(4) bridge
(5) sky

4. Choose one.
(1) king
(2) princess
(3) cow
(4) bridge
(5) sky

5. Choose one.
(1) king
(2) princess
(3) cow
(4) bridge
(5) sky

Week 5

1. Choose one.
(1) Sun
(2) tree
(3) shade
(4) a rich man
(5) a young man

2. Choose one.
(1) Sun
(2) tree
(3) shade
(4) a rich man
(5) a young man

3. Choose one.
(1) Sun
(2) tree
(3) shade
(4) a rich man
(5) a young man

4. Choose one.
(1) Sun
(2) tree
(3) shade
(4) a rich man
(5) a young man

5. Choose one.
(1) Sun
(2) tree
(3) shade
(4) a rich man
(5) a young man

Week 6

1. Choose one.
(1) deer
(2) heavenly maiden
(3) wing
(4) pond
(5) horse

2. Choose one.
(1) deer
(2) heavenly maiden
(3) wing
(4) pond
(5) horse

3. Choose one.
(1) deer
(2) heavenly maiden
(3) wing
(4) pond
(5) horse

4. Choose one.
(1) deer
(2) heavenly maiden
(3) wing
(4) pond
(5) horse

5. Choose one.
(1) deer
(2) heavenly maiden
(3) wing
(4) pond
(5) horse

Week 7

1. Choose one.
(1) red fan
(2) blue fan
(3) softly, softly
(4) eye
(5) nose

2. Choose one.
(1) red fan
(2) blue fan
(3) softly, softly
(4) eye
(5) nose

3. Choose one.
(1) red fan
(2) blue fan
(3) softly, softly
(4) eye
(5) nose

4. Choose one.
(1) red fan
(2) blue fan
(3) softly, softly
(4) eye
(5) nose

5. Choose one.
(1) red fan
(2) blue fan
(3) softly, softly
(4) eye
(5) nose

Appendix E: Test Results

Group 1

Order Group 1	E wk1	E wk2	E wk3	wk4	I wk5	I wk6	I wk7
1	3	3	5		5	3	5
2	5	5	5		1	2	2
3	4	2	2		4	1	5
4	0	1	3		1	4	3
5	1	5	1		0	2	5
6	2	1	5		3	1	2
7	0	1	5		3	3	5
8	0	3	2		2	2	5
9	4	3	5		1	1	0
10	3	3	5		3	0	4
11	2	4	3		3	2	2
12	0	3	5		1	2	5
13	1	5	1		1	0	5
14	3	2	3		1	5	3
15	5	1	1		2	5	5
16	1	2	1		5	3	3
17	3	2	5		3	2	3
18	5	1	5		1	2	5
19	5	3	3		2	1	5
20	2	5	3		5	1	5
21	3	2	3		5	2	3
22	1	1	5		3	1	5
23	3	4	2		0	1	3
24	1				1	2	3
25	5				1	2	3
26	2				3	5	5
27						2	3
28						1	

Group 2

Order Group 2	I wk1	I wk2	I wk3	wk4	E wk5	E wk6	E wk7
1	5	1	2		5	5	2
2	5	2	5		5	0	5
3	5	2	5		2	0	4
4	1	5	1		3	5	5
5	2	3	3		4	2	5
6	3	2	5		2	0	5
7	1	0	1		2	2	5
8	2	1	2		5	1	3
9	3	5	3		3	2	3
10	3	5	2		3	1	5
11	3	5	1		2	3	5
12	3	3	3		5	1	5
13	1	2	5		0	2	3
14	0	1	4		1	0	5
15	5	5	5		2	0	3
16	3	4	3		2	3	0
17	3	5	1		2	1	1
18	0	3	5		3	3	5
19	0	3	1		0	1	5
20	5	1	3		3	2	0
21	1	5	1		2	0	1
22	1	5	2		2	0	0
23	3	3	2		5	1	5
24	1	5	2		3	3	3
25	3	3	5		2	0	5
26	0	5	3		3	1	5
27	3	1			1	1	5
28	5	2			2	0	0
29	2				2	0	0
30	5				1	2	3
31							5