

A PILOT STUDY IN LEARNING ENGLISH PHRASAL VERBS

by

Yunseong Cheon

B.A., Korea University, 2000

M.A., The Academy of Korean Studies, 2002

Submitted to the Graduate Faculty of
Arts and Sciences in partial fulfillment
of the requirements for the degree of
Master of Arts in Linguistics
with specialization in Applied Linguistics

University of Pittsburgh

2006

UNIVERSITY OF PITTSBURGH
FACULTY OF ARTS AND SCIENCES

This thesis was presented
by
Yunseong Cheon

It was defended on
July 28, 2006
and approved by

Alan Juffs, Associate Professor, Department of Linguistics

Dawn McCormick, Lecturer, Department of Linguistics

Claire B. Siskin, Lecturer, Department of Linguistics

Thesis Director: Dr. Alan Juffs, Associate Professor, Department of Linguistics

Copyright © by Yunseong Cheon

2006

A PILOT STUDY IN LEARNING ENGLISH PHRASAL VERBS

Yunseong Cheon, M.A.

University of Pittsburgh, 2006

This paper investigates the effect of learning conditions on phrasal verbs in adult ESL learners. It aims to find more effective learning conditions for phrasal verbs taking into account the influence of proficiency and the learner's first language. The study, which was designed as an experimental study, includes the following procedures: a pre-test/treatment/post-test. The experiment was conducted using Arabic and Korean learners, and they were divided into two proficiency levels (high and low levels) according to the results of the pre-test. The interaction between the learning condition (translation versus context), the proficiency level, and first language was studied. The semantic properties of phrasal verbs (transparent versus idiomatic phrasal verbs) were also examined. The study suggests that the context learning condition was more beneficial to Arabic participants whereas the translation learning condition was more beneficial to Korean participants.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	viii
1. INTRODUCTION.....	1
2. LITERATURE REVIEW	3
2.1. Context and Vocabulary Learning.....	3
2.2. Phrasal Verbs and Idiomaticity.....	5
3. METHODOLOGY	7
3.1. Study Design.....	7
3.2. Subjects and Setting.....	7
3.3. Materials	8
3.4. Procedures	12
3.5. Scoring and Data Analysis	14
3.6. Research Questions.....	14
4. RESULTS AND ANALYSIS	16
4.1. Pre-test Results.....	16
4.2. The Effect of Learning Conditions.....	19
4.3. The Effect of Proficiency Level and Native Language	21
4.4. The Semantic Properties of Phrasal Verbs.....	24
5. DISCUSSION.....	28
6. CONCLUSIONS.....	33
7. SUGGESTIONS FOR FUTURE RESEARCH	35
APPENDIX A	37
APPENDIX B	40
APPENDIX C	43
BIBLIOGRAPHY	45

LIST OF TABLES

Table 1. The Number of Participants	8
Table 2. Experimental Procedures	13
Table 3. Descriptive Statistics of Pre-test Results	16
Table 4. The Number of Correct Answers of Target Phrasal Verbs.....	17
Table 5. The Lists of Unknown Phrasal Verbs in Each Language Group.....	18
Table 6. Descriptive Statistics for the Learning Conditions	19
Table 7. The Percentage of Correct Answers by Group and by Post-test.....	21
Table 8. Descriptive Statistics for the Proficiency Level in Each Language Group	22
Table 9. The Correct Answers of Target Phrasal Verbs (Arabic Participants).....	24
Table 10. The Correct Answers of Target Phrasal Verbs (Korean Participants).....	25
Table 11. The Phrasal Verbs by Learning Conditions (Arabic Participants)	26
Table 12. The Phrasal Verbs by Learning Conditions (Korean Participants).....	27

LIST OF FIGURES

Figure 1. Learning phase of the context version.....	10
Figure 2. Learning phase of the Arabic translation version.....	10
Figure 3. Training phase of the Korean translation version.....	11

ACKNOWLEDGEMENTS

I would like to thank my thesis committee for their precious time and advice. Alan Juffs, my thesis director, supported me academically in every step of my research project and I appreciate him for his generosity and guidance. Claire Siskin helped me to develop the instructional tool and generously allowed me to use the Language Media Center for my research. I could not have conducted my study without her support. Dawn McCormick gave me precious comments on my thesis and carefully read my draft. In addition, I would like to thank the student participants and Khalifa Lahniche who gave his time to translate the Arabic materials into English. I also owe thanks to my friends who encouraged and supported me in completing my thesis. Finally, I owe a great debt to my parents and my grandmother. They have been the foundation on which I built my life.

1. INTRODUCTION

The importance of multiword expressions to gain fluency in language learning has been asserted by many researchers (Wood, 2004; Folse, 2004). In particular, mastering them is considered an essential part of speaking skills. Comprehending the meaning of multiword expressions is essential, yet, it is not only in speaking or productive skills but also in listening or receptive skills. One of the reasons is that there are many layers and kinds of multiword expressions such as idioms, fixed expressions, phrasal verbs, prefabs etc (Moon, 1997; Wray, 2002). Amongst them, the present study narrowly focuses on phrasal verbs, which are considered a proper feature in English.

Phrasal verbs are usually found in grammar courses in the ESL/EFL curriculum, but they also appear in vocabulary textbooks. Since they are composed of the content word (verb) and the function word (particle), they can be dealt with either in vocabulary as multiword expressions, or in grammar, with regard to the transitivity and the separability. The present study will focus on the lexical aspects of phrasal verbs and their semantic properties. Many phrasal verbs do not have transparent meanings, so it is hard to know the whole meaning by combining the meanings of the components, verbs, and particles. Such idiomatic meanings make learners feel that they are difficult to learn and to use, although learners of English recognize their importance.

Even though the importance and the difficulty of learning phrasal verbs are recognized, there is little research on testing the factors that affect learning phrasal verbs so far. Thus, the

present study aims to investigate the effect of the learning conditions as well as the semantic properties on learning and retaining phrasal verbs. In order to narrow the scope of the study, two learning conditions, which are the context and the translation learning, will be investigated among Arabic and Korean speakers studying English.

2. LITERATURE REVIEW

2.1. Context and Vocabulary Learning

One of the common beliefs about lexical acquisition is that using context clues to guess the meaning of words is a good strategy. This is reflected in ESL/EFL vocabulary textbooks as well as being explored by some researchers. Cooper (1999) examined what is the most successful and common strategy to learn idioms by using a ‘think aloud’ protocol. His study shows that successful learners use an inferring strategy to learn idioms. The findings of this study can be interpreted as follows: using context can be a successful strategy in the teaching and learning of multiword expressions. However, with regard to the role of context in vocabulary learning, the results of the previous research are inconsistent. Hulstijn (1992) found that the learners who inferred the meaning of target words remembered them better than the learners who were given the meaning of target words. This study shows that inferring helps learners retain the meaning of words, yet the inferring of incorrect meanings from context was a drawback, especially when there were no context clues.

On the other hand, there are empirical studies (Prince, 1996; Qian, 1996) which show results that contradict those of Hulstijn (1992). These studies suggest that presenting words in context does not have a more positive effect on learning vocabulary than the presentation of words in isolation. Particularly, Prince (1996) compared the use of context and translation in learning words for French EFL learners. He compared these two conditions in the learning phase

as well as in the recall phase for two groups of learners, the advanced and the weak learners. For the context learning group, isolated sentences, including the target words, were given, and the subjects of the translation learning group were asked to write down the meaning of target words. After the treatment, he split each learning group into two recall conditions respectively and conducted an immediate post-test. He found that the advanced learners in the translation learning condition achieved more than those in the context learning condition. Although the overall scores of the weak learners were worse than the advanced learners, those in the translation condition showed slightly better scores than those in the context learning condition. Another empirical study by Qian (1996) obtained a similar result with regard to the effect of isolated vocabulary learning. He divided the learners into two groups; one group was given the L2 synonyms for the target words, and another group was taught the words by inferring the word's meaning from context. He concluded with an immediate recall test as well as two delayed recall tests, and found that the superiority of the isolated learning condition was maintained though the forgetting patterns of the two learning conditions were not different during three recall tests.

Another generally assumed effect of inferring from context is that it helps to retain knowledge. We can expect that the more context clues given, the better the chance of retaining the target words. With regard to the relationship of contextual richness to that of retention, Mondria and Wit-de Boer (1991) conducted experiments with French learners. They investigated whether contextual richness had influence on the predictability and retention of words based on Schouten-van Parreren's claim. The claim is that words are best learned when the meaning is inferred from the context, and the context has a clearly positive effect on retention. Mondria and Wit-de Boer gave subjects eight types of contexts, which were sentences including the target word. They conducted an experiment in which the hypothesis stated that the more often a word is

correctly inferred, the more often it is remembered. Yet the results showed that there was no correlation between inferring and retention of meaning.

In conclusion, the previous studies suggest that the use of context in learning vocabulary cannot guarantee its superiority in learning and acquisition. Nevertheless, as inferring from context is one of the most common strategies in vocabulary and reading courses, it will be meaningful to investigate the effect of context in learning phrasal verbs. Based on the results of the previous studies, it is expected that inferring the meaning of phrasal verbs from context will also not show the prominence in phrasal verbs.

2.2. Phrasal Verbs and Idiomaticity

It is generally admitted that phrasal verbs are thought to be one of the difficult items for learners of English as a second or foreign language. The reason is that some phrasal verbs have an idiomatic meaning, which is usually defined as the fact that “the meaning of the complex unit does not result from the simple combination of those of its constituents” (Arnaud & Savignon, 1997, p.161).

Dagut and Laufer (1985) found that Hebrew learners of English significantly preferred one-word expressions to phrasal verbs, while English native speakers did not. This is not surprising since learning phrasal verbs is more complex than learning single words because of their idiomatic meaning. With regard to the meaning of idiomatic phrasal verbs, Liao and Fukuya (2004) found that learners chose fewer figurative phrasal verbs than literal phrasal verbs on a multiple-choice test. They explained that this avoidance is due to the semantic difficulty of figurative phrasal verbs. From these findings, we can reason that the semantic properties of

phrasal verbs, i.e. transparent (or literal) versus idiomatic (or figurative), should be considered in the learning conditions.

In conclusion, the previous studies indicate that idiomatic phrasal verbs might be harder to learn than transparent phrasal verbs for ESL learners. Therefore, it will be necessary to investigate the effect of semantic properties of phrasal verbs and to examine the effective learning condition for idiomatic phrasal verbs.

3. METHODOLOGY

3.1. Study Design

This experimental study was designed to test the effectiveness of two different learning conditions, which are inferring the meaning of targeted phrasal verbs from context and the presentation of L2 – L1 pairs of phrasal verbs, for Arabic and Korean speakers. The framework of this study was adopted from Prince (1996), and sentential context was used in the context learning design. Prince (1996) investigated the direction of translation, which was from L1 to L2 or from L2 to L1, but no significant difference was found between them. Thus, this study only considered the direction from L2 to L1. In addition, this study was conducted not in a classroom, but in a laboratory setting.

3.2. Subjects and Setting

All sessions of this study took place in the PC lab of the Robert Henderson Language Media Center at the University of Pittsburgh. All of the subjects were studying at the English Language Institute for the Summer term of 2006. The study began with 34 students, but was completed by 26 of them. There were 11 Arabic speakers and 16 Korean speakers. Participants ranged in age from 18 to 35 years old, and all of the participants have had prior, formal instruction in English, mostly at the secondary school and college levels. The subjects were aware that they were

participating in a research study, and they were informed about the purpose and procedures of the research. They also knew that their test scores would neither be disclosed nor affect their grades. They were told that they would take a test on the phrasal verbs that they learned and exercised from the computer programs, since this study was designed as intentional vocabulary learning (Husltijn, 2003).

Participants in each language group were randomly assigned to one of four treatment groups according to their proficiency level. These four groups are presented in Table 2.

Table 1. The Number of Participants

Language	Treatment	N (pre-test)	N (post-test1)	N (post-test2)
Arabic	CL – TR	4	2	2
	CL – CR	5	5	2
	TL – TR	4	3	3
	TL – CR	4	4	3
Korean	CL – TR	4	4	4
	CL – CR	4	4	4
	TL – TR	5	4	4
	TL – CR	4	4	4
Total		34	30	26

Note. CL (context learning), CR (context recall), TL (translation learning), TR (translation recall).

3.3. Materials

Although research on multiword expressions has increased in the second language acquisition, as well as in the corpus linguistics in recent years, there are few previous studies that measure the frequency of phrasal verbs. Therefore, the target phrasal verbs in this study were randomly selected from *the American Heritage Dictionary of Phrasal Verbs* (2005), and *NTC's Dictionary*

of *Phrasal Verbs* (1993). When selecting the phrasal verbs, their semantic properties were considered, and 9 idiomatic and 10 transparent phrasal verbs were selected.

In the pre-test, the test items were 20 target phrasal verbs and 30 distractor phrasal verbs. The pre-test was basically designed as a check-list test, which requires test-takers to check whether or not they know the words. This type of test has been used as one of the most popular placement tests, although it has a weak point in that learners do not overtly demonstrate their knowledge of the tested words (Nation, 2001). Thus, the present study added a column for writing the meaning, and the subjects were asked to show their knowledge of the verbs in their native language. The 49 test items were presented in alphabetical order (see Appendix A).

As was briefly mentioned before, the treatment material was created by using a rapid application software tool, *Revolution*, and there were three versions, i.e. context, Arabic translation and Korean translation. All three of the versions consisted of 44 screens divided into two parts, the exposure part and the training part, and the 20 targeted phrasal verbs were used in each part. The present study was originally designed to adjust the list of the target phrasal verbs used in the treatment according to the pretest results, but due to administrative setbacks and the time limitation of developing the learning program, the list of phrasal verbs was maintained. When analyzing the influence of the phrasal verbs, the known items were excluded from the data.

A tutorial screen, which demonstrates how to use the program, preceded each part. Each screen of the program was shown for 15 seconds in the exposure part and for 20 seconds in the test part. When the time per screen ends, “Your time is up” is shown, and the card turns over automatically.

In the context version, the users can see the sentence context which includes the targeted phrasal verb. The sentences were created by providing the contextual clues which allow the

learners to infer the meaning of the target phrasal verbs. A glossary is provided for some words which seemed to be difficult for learners in the low proficiency level, thus helping the learners to comprehend the meaning of the whole sentence. In Figure 1, an example screen of the context learning program is presented.

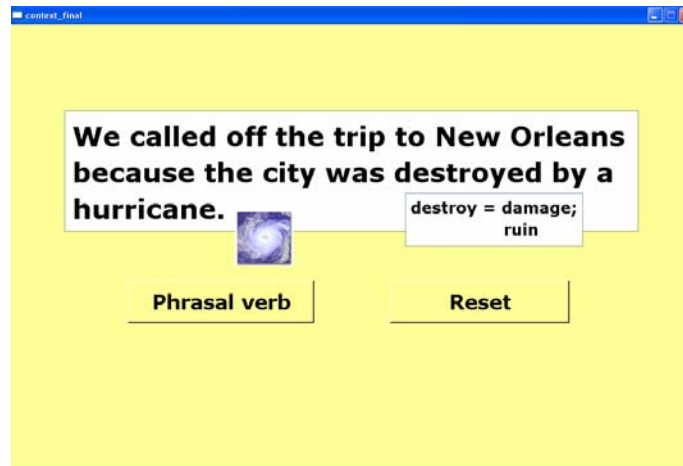


Figure 1. Learning phase of the context version

As the exposure part of the translation version, each target phrasal verb was presented on a separate screen. The learners could see the translated L1 equivalent expression by clicking the “translation” button, and could repeat this procedure by clicking the “reset” button on the same screen.



Figure 2. Learning phase of the Arabic translation version

In the training part, the subjects confirmed their knowledge by solving the multiple-choice exercises. The order of phrasal verbs was randomly scrambled in the training part, and put in alphabetical order in the exposure part to prevent the subjects from choosing the answers according to alphabetical order. Among many possible exercise types, the reason for choosing a multiple-choice test among the other possible test types is that it has an advantage of making learners focus on the particular meaning of an item which may have more than one meaning (Nation, 2001). In the training part, three options were given, while false synonyms were avoided because this test was not intended to trick the learners. The task was to drag a question mark to one of the three options shown under the phrasal verbs. If the users chose the correct option and put the question mark on it, “Correct!” showed below the option. Otherwise, no feedback was shown, and the users had to try again to find the correct answer. In Figure 3, an example screen of the Korean translation version is presented.

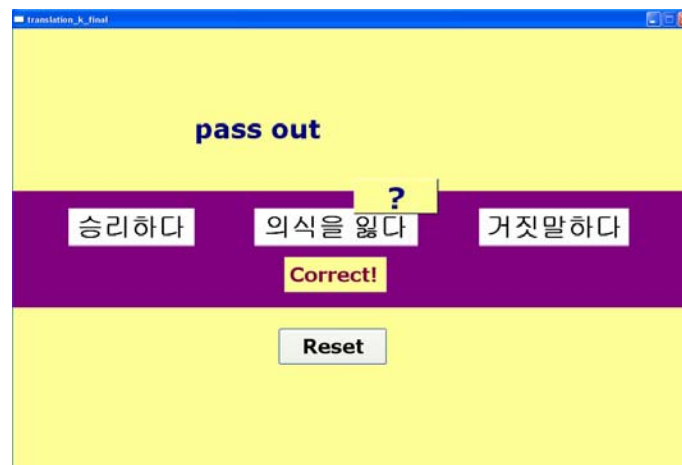


Figure 3. Training phase of the Korean translation version

Both translation versions, Arabic and Korean, were exactly identical except for the translated expressions. For the Arabic version, a bilingual speaker of Arabic and English

translated the items into Arabic. The context version's procedures on the test were the same as in the translation version.

Lastly, the post-test materials were designed as written tests. There were two versions of the post-test materials: the translation and the context versions. In the translation version of the post-test, the subjects were given a list of 20 targeted phrasal verbs and were required to translate them into their native language within the 15 minutes provided. In addition, the phrasal verbs were presented in alphabetical order (see Appendix B-1). In the context version of the post-test, the subjects saw 20 sentences with blanks that needed to be filled in with targeted phrasal verbs by choosing the proper one from the examples (see Appendix B-2). The order of the test items was scrambled to prevent subjects from choosing the answers automatically, and 15 minutes were given for this test.

3.4. Procedures

This study was conducted through three time sessions: the pre-test, the treatment and immediate post-test, and the delayed post-test sessions. Prior to the treatment, a 20-minute written pre-test was administered (see Appendix A). The purpose of the pre-test was to determine the learners' proficiency levels and to see their knowledge of phrasal verbs. According to the pre-test results, the participants in each language group were randomly assigned to one of four groups respectively. The participants in each group used the computer programs in the main treatment session. There were three versions of the program, which were designed with a rapid application development software tool, *Revolution*. The three versions were context, Arabic translation, and Korean translation versions.

The main treatment was conducted one week after the pre-test, and the immediate post-test was conducted on the same day of the treatment. During the first 20 minutes of the treatment session, the participants were given the computer program to learn the targeted phrasal verbs. Before starting, they were informed that after the learning session they would take a test of what they had learned from the program. The programs were designed to run during a fixed time frame, so an individual participant could not finish their learning session earlier. After the learning session, they watched part of an animated movie for 20 minutes, in which the targeted phrasal verbs were not included to distract their attention from the previous learning phrase. After this phase, the participants took an immediate post-test. The post-tests consisted of two kinds of materials, and each person was given one of them. The delayed post-test was conducted two weeks after the immediate post-test using the same materials.

Table 2. Experimental Procedures

Week	Test/Treatment	Group	Activity
1	Pre-test	All	Giving the translation in L1
2	Treatment	Context	Inferring the meaning from sentence context
		Translation	Exposure to the L1 translation
	Post-test 1	Context	Completing the sentence context by choosing and writing the phrasal verbs
		Translation	Giving the meaning of phrasal verbs in L1
4	Post-test 2	Context	Completing the sentence context by choosing and writing the phrasal verbs
		Translation	Giving the meaning of phrasal verbs in L1

3.5. Scoring and Data Analysis

The results of the pre-test and the post-tests were scored according to the number of correct answers. The total possible number of correct answers was 49 for the pre-test and 19 for the post-tests, since one target item was missing in the pre-test material. The raw scores were used in the statistical analysis, and the percentage was also considered in calculating the rate of retention.

In the beginning of the present study, a four-way analysis of variance (ANOVA) was supposed to be used as a statistical test on the assumption that more than 40 subjects would participate in this study. However, this study began with 34 participants, 30 people participated in the immediate post-test, and only 26 participants remained in the delayed post-test. Due to small sample size and the abnormal sampling distribution, a non-parametric statistical test was used to analyze the results. Wilcoxon signed ranks tests were used because this is the non-parametric equivalent of a t-test, and it does not require the normal distribution of the samples (Bulter, 1985).

3.6. Research Questions

The research questions and hypotheses that examined in this study are as follows:

Research Question 1. How, and to what extent, do the different learning conditions have an effect on learning and retention of phrasal verbs?

Hypothesis 1. Relying on the results of the previous empirical studies (Prince 1996; Qian 1996), the learners in the translation condition will learn more than those in the context condition. However, the retained knowledge will be superior in the context learning groups.

Research Question 2. What effect does proficiency have on the learning and retention of phrasal verbs?

Hypothesis 2. The learners in the high proficiency level will not be affected by the learning conditions, though the results of the translation condition might be slightly superior to those of the context condition.

Research Question 3. How and to what extent does a learner's native language effect the learning and retention of phrasal verbs?

Hypothesis 3. Relying on the results of Fender (2003), the contextualized learning will be more effective for Arabic learners due to their orthographic knowledge in Arabic and processing skills. However, for Korean learners, translation will be more effective due to their learning experience.

Research Question 4. How and to what extent do the semantic properties of phrasal verbs effect the learning and retention of phrasal verbs?

Hypothesis 4. It might be harder to obtain the meaning of idiomatic phrasal verbs in the context learning condition than in the translation condition. Although the translation condition does not give more contextual cues, the idiomatic meaning of phrasal verbs will be clear to learners.

4. RESULTS AND ANALYSIS

4.1. Pre-test Results

As mentioned in the previous chapter, the pre-test was performed in order to determine the learners' proficiency levels and to see their existing knowledge of phrasal verbs. The results of pre-test showed that the participants of each language group were from quite different proficiency groups, so the high proficiency level of each language group was not identical. The median score of each language group was used as a base score to split the participants into two proficiency levels. The median of Arabic participants was 4 out of 49, and that of Korean participants was 10 out of 49. In addition, the range of each language group was also different, and the dispersion of Korean participants more various than that of Arabic participants. The descriptive statistics (means, medians, standard deviations, and ranges) of pre-test results for each language group are reported in Table 3.

Table 3. Descriptive Statistics of Pre-test Results

Group	Central tendency		Dispersion			
	Mean	Median	Low	High	Range	SD
Arabic	4.47	4.00	0	10	10	3.375
Korean	10.18	10.00	1	28	27	6.738

Note. The scores are out of 49.

Furthermore, the number and the range of unknown phrasal verbs were different in each language group. In Table 4, the numbers of correct answers of target phrasal verbs in the pre-

and post-tests are reported. By the way, it was surprising that the target phrasal verbs such as “call off” and “go against” were well known to the Korean participants, though they were supposed not to be known to the participants. In addition, some distracter phrasal verbs were not known to the participants, though they were supposed to be well known to the participants. For instance, most participants did not give correct answers to “apply to” and “take after.” Interestingly, with regard to “apply to”, a quite number of participants provided the meaning of “apply for” instead of “apply to.”

Table 4. The Number of Correct Answers of Target Phrasal Verbs

Phrasal Verbs	Arabic			Korean		
	Pre	Post1	Post2	Pre	Post1	Post2
act up	0	8	3	0	6	8
add up	1	14	9	8	11	11
brush aside	0	5	1	0	8	3
call off	1	5	1	4	7	9
chip in	0	7	1	2	11	8
come along with	1	8	6	7	13	12
die down	0	5	2	1	6	3
fall out with	1	8	5	2	12	8
fill in	3	11	8	13	13	14
go against	1	7	7	11	14	11
hand down	0	8	5	0	10	6
look into	4	6	5	6	9	8
pay back	7	13	10	9	14	15
pass out	0	3	2	1	8	5
run into	0	6	4	1	10	6
rush off	0	4	1	0	8	2
tell off	0	5	3	0	5	2
turn down	3	4	4	4	8	3
use up	0	6	6	5	9	10

According to the pre-test results, a quite number of target phrasal verbs were already known to the participants. There were some phrasal verbs known to one participant, but they were counted as unknown phrasal verbs. However, “come along with” and “fall out with” were excluded from the list of unknown phrasal verbs for Arabic speakers. Because they consist of three words, they seemed to be salient in the context post-test condition. When these conditions were considered, 6 phrasal verbs were already known to Arabic participants, and 11 were to Korean participants. The lists of unknown phrasal verbs are presented in Table 5. These known phrasal verbs were ruled out from the post-test scores, so the raw scores of Arabic participants were out of 13 and those of Korean participants were out of 8.

Table 5. The Lists of Unknown Phrasal Verbs in Each Language Group

Arabic		Korean	
Idiomatic	Transparent	Idiomatic	Transparent
act up	add up	act up	die down
brush aside	die down	brush aside	hand down
call off	go against	pass out	rush off
chip in	hand down	run into	
pass out	rush off	tell off	
run into	use up		
tell off			

In sum, the pre-test results showed that the Arabic and the Korean participants were different in their previous vocabulary knowledge, so the post-tests results were separately performed by each language group. The post-test scores will be reported in the next section.

4.2. The Effect of Learning Conditions

The first research question was how, and to what extent, the different learning conditions have an effect on learning and retaining phrasal verbs. The descriptive statistics of the results of the pre-test and the two post-tests are presented in Table 6. The pre-test scores are out of 49 and the post-tests scores are out of 19. Though the known phrasal verbs were not ruled out from the post-test scores, we can find that the immediate post-test scores are higher than the pre-test scores. Thus, we can reason that the participants knew fewer distracter phrasal verbs in the pre-test. One interesting result from the context learning-translation test group shows a lower score in the delayed post-test (9.33) than the pre-test results (9.88). It might be interpreted that the participants in this group were already acquainted with the distracter phrasal verbs rather than the target phrasal verbs.

Table 6. Descriptive Statistics for the Learning Conditions

Test	Learning	Pre	Post 1	Post 2	
Context	Context	Mean	6.00 (12.24%)	10.38 (54.60%)	8.83 (46.49%)
		SD	6.04	4.75	4.79
	Translation	Mean	8.13 (16.58%)	11.13 (58.55%)	10.00 (52.63%)
		SD	3.79	4.32	3.42
Translation	Context	Mean	9.88 (20.15%)	12.83 (67.54%)	9.33 (49.12%)
		SD	8.20	4.99	4.63
	Translation	Mean	5.70 (11.63%)	9.88 (51.97%)	6.86 (36.09%)
		SD	5.38	5.08	3.67

Note. 1. Pre = pre-test, Post1 = immediate post-test, Post2 = delayed post-test

2. The percentage of pre-test is out of 49 and post-test is out of 19.

Since Table 6 is not sufficient to know to what extent learning occurred in the target phrasal verbs, another descriptive analysis was performed. In this case, the raw scores of Arabic

and Korean participants were converted into percentages and they were grouped by four treatment conditions.

Table 7. The Percentage of Correct Answers by Group and by Post-test

Test	Learning		Post 1	Post 2
Context	Context	Mean	39.42%	31.57%
		(n=9)	(n=6)	
	Translation	SD	24.60	18.28
		Mean	49.39%	39.90%
Translation	Context	(n=6)	(n=6)	
		SD	32.33	24.01
	Translation	Mean	71.15%	45.43%
		(n=8)	(n=7)	
Translation	SD	17.05	20.01	
	Mean	37.27%	19.39%	
Translation	(n=7)	(n=7)		
	SD	25.19	12.22	

As we see in Table7, the participants of the context learning-translation test condition had the highest rate of correct answers than the other groups in both post-tests, and it was prominent in the immediate post-test. Although the rate of the translation learning-context test group is not prominent, we can find that the rate of the participants who learned and tested in the different conditions is higher than the participants in the identical conditions. Another interesting point is that the translation learning-translation test condition showed the lowest rate in both post-tests. It suggests that this condition is not beneficial in learning and retaining phrasal verbs.

Overall, the results show the tendency for an interaction between the learning and the test conditions. When the learning condition and the test condition were not identical, the rates on the post-tests were higher than those on the identical conditions. It is of particular interest that the translation learning-translation test condition showed lowest rate in the delayed post-test.

4.3. The Effect of Proficiency Level and Native Language

The second research question is what the effect of proficiency is on learning and retaining phrasal verbs. As we saw in the pre-test results in Table 3, the mean scores of the Arabic

participants were lower than the Korean participants, and the proficiency level in each language group was not identical. Thus, the participants were separated by proficiency level within each language group. The scores of Arabic participants are out of 13, and the scores of Korean participants are out of 8 phrasal verbs.

On the other hand, a non-parametric statistical tests were performed, but no meaningful results were obtained because of the small sample size. So the following results are based on the descriptive statistics in Table 8.

Table 8. Descriptive Statistics for the Proficiency Level in Each Language Group

Language	Learning	Level		Post 1	Post 2
Arabic	Context	High (n=2)	Mean	8.50 (65.38%)	6.00 (46.15%)
			SD	3.54	1.41
		Low (n=5, 2)	Mean	5.00 (38.46%)	3.50 (26.92%)
			SD	3.46	0.71
	Translation	High (n=3, 4)	Mean	5.00 (38.46%)	3.25 (25.00%)
			SD	3.56	2.63
	Low (n=3)	Mean	7.00 (53.85%)	5.33 (41.00%)	
		SD	4.58	4.51	
Korean	Context	High (n=4)	Mean	5.50 (68.75%)	3.25 (40.63%)
			SD	1.73	2.50
		Low (n=3)	Mean	2.25 (28.13%)	1.25 (15.63%)
			SD	2.22	1.26
	Translation	High (n=3)	Mean	6.00 (75.00%)	3.67 (45.88%)
			SD	1.00	1.53
	Low (n=5)	Mean	2.40 (30.00%)	1.20 (15.00%)	
		SD	1.67	0.84	

The results of descriptive statistics in Table 8 show that the high proficiency level had higher scores in both post-tests. Except the low proficient Arabic participants in the translation condition, the high proficient participants in each condition gained higher scores than low

proficient participants. The superiority of high proficient participants was sustained in the delayed post-test. The exceptional scores of the low proficient Arabic participants in translation condition seem to be due to one extraordinary participant. Though he was included in the low proficiency level because his pre-test score was 4, he gained good scores in the delayed post-test (10) as well as in the immediate post-test (12). When this outlier was ruled out in the low proficiency group, the means of both post-tests were lower than the high proficiency group in the same learning condition. The mean score of the immediate post-test was 4.50 (34.61%) and the delayed post-test was 3.00 (23.08%), and these scores are lower than the scores of low proficiency group in the context learning condition. Since the sample size in each unit is too small to generalize the results, we can interpret that the high proficient participants learn more than the low proficient participants. It is the same as Prince's (1996) study.

Interestingly, the highest score of the Arabic group was obtained in the context learning condition, while the highest score of the Korean group was in the translation learning condition. This result suggests that there could be a correlation between first language and learning condition in the high proficiency level. Here, we need to recall the third research question: How, and to what extent does a learner's native language effect the learning and retention of phrasal verbs? When we rule out the outlier in the Arabic low proficient group in the translation condition, the Arabic participants learned more in the context learning condition, while Korean participants gained higher scores in the translation learning condition. On the other hand, the participants in the translation learning condition showed lowest scores in the delayed post-test regardless of their first language. It indicates that the translation learning condition was not beneficial in the retention of vocabulary knowledge in this present study.

4.4. The Semantic Properties of Phrasal Verbs

The last research question was how, and to what extent the semantic properties of phrasal verbs effect the learning and retention of phrasal verbs. Among the 20 phrasal verbs used in the main treatment, the known phrasal verbs and a missed one in the pre-test were excluded for this analysis. In Table 9 and Table 10, the numbers of correct answers to the target phrasal verbs in each language group are presented.

Table 9. The Correct Answers of Target Phrasal Verbs (Arabic Participants)

Phrasal Verbs	Post 1			Post 2		
	High	Low	Total	High	Low	Total
act up	4	4	8	2	1	3
brush aside	3	2	5	0	1	1
call off	3	2	5	1	0	1
chip in	3	4	7	0	1	1
pass out	1	2	3	1	1	2
run into	4	2	6	2	2	4
tell off	2	3	5	1	2	3
<i>Mean</i>			5.57			2.14
add up	6	8	14	5	4	9
die down	2	3	5	2	0	2
go against	3	4	7	3	4	7
hand down	1	7	8	2	3	5
rush off	1	3	4	0	1	1
use up	4	2	6	4	2	6
<i>Mean</i>			7.33			5

More Arabic speakers gave correct answers to the transparent phrasal verbs than the idiomatic phrasal verbs in the immediate post-test, and this tendency was maintained in the delayed post-test. It suggests that the semantic properties will have an effect on learning and

retention of phrasal verbs. All of the participants in the immediate post-test gave a correct answer to a transparent target phrasal verb “add up” and nine out of ten participants answered right in the delayed post-test. By contrast, half of the participants gave a correct answer to an idiomatic phrasal verb “chip in” in the immediate post-test, but only one participant retained the meaning of “chip in” in the delayed post-test.

On the other hand, the advantage for transparent phrasal verbs was not prominent in Korean participants because they already knew most of them. Rather, the retention of the idiomatic phrasal verbs was better than that of the transparent phrasal verbs. This result seems to be due to the unbalanced and small number of items in each group.

Table 10. The Correct Answers of Target Phrasal Verbs (Korean Participants)

Phrasal Verbs	Post 1			Post 2		
	High	Low	Total	High	Low	Total
act up	4	2	6	5	3	8
brush aside	5	3	8	2	1	3
pass out	7	1	8	4	1	5
run into	7	3	10	5	1	6
tell off	2	3	5	0	2	2
<i>Mean</i>			7.4			4.8
die down	5	1	6	2	1	3
hand down	5	5	10	4	2	6
rush off	5	3	8	2	0	2
<i>Mean</i>			8			3.67

In addition, each phrasal verb was also investigated by learning conditions. Among the Arabic participants, the translation learning condition was beneficial in both types of phrasal verbs, and the idiomatic phrasal verbs particularly obtained more correct answers in the translation learning condition than the context learning condition. The number of correct answers of the transparent phrasal verbs was slightly higher in the translation learning condition than in

the context learning condition, though the correlation between the transparent phrasal verbs and translation learning condition was not statistically supported. On the other hand, Korean participants showed inconsistent results: they gave more correct answers to the idiomatic phrasal verbs in the translation learning condition but to the transparent phrasal verbs in the context learning condition. This inconsistency also seems to be due to the unbalanced and small sample size. Since the Korean participants already knew a great number of transparent phrasal verbs, there were only three unknown phrasal verbs in the post-tests. These results are presented in Table 11 and Table 12.

Table 11. The Phrasal Verbs by Learning Conditions (Arabic Participants)

Phrasal Verbs	Context Learning			Translation Learning		
	Post1	Post2	Total	Post1	Post2	Total
act up	3	1	4	5	2	7
brush aside	1	0	1	4	1	5
call off	3	1	4	2	0	2
chip in	3	0	3	4	1	5
pass out	2	0	2	1	2	3
run into	3	1	4	3	3	6
tell off	3	2	5	2	1	3
<i>Mean</i>			3.29			4.43
add up	7	4	11	7	5	13
die down	2	1	3	3	1	4
go against	4	3	7	3	4	7
hand down	6	2	8	2	3	5
rush off	2	0	2	2	1	3
use up	3	2	5	3	3	6
<i>Mean</i>			6.00			6.33

Table 12. The Phrasal Verbs by Learning Conditions (Korean Participants)

Phrasal Verbs	Context Learning			Translation Learning		
	Post1	Post2	Total	Post1	Post2	Total
act up	1	3	4	5	5	10
brush aside	5	2	7	3	1	4
pass out	5	4	9	3	1	4
run into	5	3	8	5	3	8
tell off	1	0	1	4	2	6
<i>Mean</i>			5.8			6.4
die down	3	2	5	3	1	4
hand down	6	3	9	4	3	7
rush off	5	1	6	3	1	4
<i>Mean</i>			6.67			5

5. DISCUSSION

The present study has several limitations in that the pre-known phrasal verbs were not excluded in the post-tests, so the number of test items was not balanced, and that it was hard to obtain statistically reliable results because of the small sample size. Despite of these limitations, there are some meaningful findings in the present study. The study found that the Arabic participants performed better in the context learning condition and the Korean participants did better in the translation condition. Also, the types of phrasal verbs have an effect on the learning and retention. These findings are in accord with the hypotheses, and two aspects will be discussed here. The first is the effect of first language in the aspects of cultural or learning differences as well as in the linguistic differences in the strand of correlation with the learning conditions. The second is the correlation between the types of phrasal verbs and the learning of phrasal verbs.

First, the effect of learning conditions is correlated with the participants' first language because the Korean knew so many words and the Korean had higher proficiency. The present study started from investigating the effective way of learning in phrasal verbs, but the obtained results show that the effect of learning conditions are correlated with the participant's first language as well as their proficiency level. For the sake of discussion, the intertwined results will start from the influence of the participants' first language.

It is notable that Arabic participants gained higher scores when they were tested in the context condition. Another notable point in the preference of learning style was observed during

the experiment of the present study. Some Arabic participants who were allotted to the translation test condition asked the researcher whether they could show the sentence that includes the target phrasal verbs instead of the L1 equivalent. On the other hand, some Arabic participants showed English synonyms or phrases instead of Arabic equivalent expressions in the translation condition. This Arabic participants' preference to the context condition can be interpreted as the influence of their first language system. In Arabic, as in other Semitic languages, the vast majority of words are comprised of only consonants in the orthography. Since the root forms of words are abstract constructions, their meanings can be clearly revealed in the sentence level (Sampson, 1985). This feature of Arabic gives us the clue of Arabic participants' higher scores in the context learning conditions. It is predictable that because of the orthographic feature of their first language, they are familiar with the context condition in adopting new words.

Fender's (2003) study is suggestive in this point. He investigated English word recognition skills in the comparison of Arabic and Japanese participants and found that the Arabic participants were less fluent in ESL word recognition skills than the Japanese participants while the Arabic participants were better in the ESL word integration skills than the Japanese participants. Fender asserts that this is due to the difference of orthographic knowledge and processing skills. This interpretation also can be adopted in the present study. Although the Arabic participants' learning experience in their first language were not explored in depth in the present study, their higher achievement in the context learning condition may be due to the learning experience and processing of their first language.

The influence of learning experience of first language also might explain the Korean participants' preference for the translation condition. Korea and other East Asian countries spend

considerable amount of time in preparation for university entrance exams (Brown & Hayes, 1985). In Korea, English is one of the important subjects for the university entrance exams, and most Korean participants are accustomed to learning English words by memorizing pairs of English and Korean words for preparing the exams. Thus, the Korean participants' higher achievement in the translation condition than in the context condition seems to be due to their educational experience.

On the other hand, the effect of learning conditions needs to be discussed in the retention of vocabulary knowledge. The present study obtained the result that when they learned the target phrasal verbs in the translation condition, the participants who gained lowest scores in the delayed post-test. Lack of retention of vocabulary knowledge was consistent in both Arabic and Korean groups. Hermann (2003) obtained similar results from the experimental study on the effect of different learning conditions on vocabulary acquisition. He found that the paired-associate learning was quite superior to the reading condition, but the scores of the paired-associate condition declined to a level near the score of the reading condition group in the delayed post-test which was performed three weeks from the initial post-test. Besides the experimental studies, the strengths and drawbacks of using translation, which are also called as paired-associate or word list method, has been mentioned in other studies (Cohen, 1990; Oxford and Scarcella, 1994; Nation, 2001). Oxford and Scarcella (1994) pointed out that the learners can learn a great number of words in a short time and be helpful in taking tests, but they can rapidly forget the most memorized words. The results of the present study support this indication in that the translation learning condition shows the lowest scores. In addition, it suggests that the use of the translation method is not beneficial in the long-term retention of vocabulary knowledge.

With regard to the effect of learning condition, the last point to be discussed is the correlation with the proficiency level. The present study obtained the results that high proficient participants showed overall superiority in both learning conditions to low proficient participants. In effect, it is hard to grasp the pure correlation between the proficiency level and the learning condition in the present study because of the influence of first language. Nevertheless, it is interesting that the high proficiency participants in each language group showed the prominent inclination to the specific learning condition. If the high proficiency learners are considered as those who are trained in using the learning strategies, the influence of first language can be comprehensible. As we discussed before, the Arabic high proficiency participants may be familiar with the context learning condition because of the orthographic feature of Arabic, and they might be trained to use the similar strategy in learning L2 words. On the contrary, the Korean high proficiency participants may be familiar with the use of translation learning condition because of their previous learning experience, and the high proficiency learners may be better or more trained to use the translation method in learning L2 words. Since the present study conducted only a delayed post-test two weeks later from the immediate post-test, the superiority of the high proficiency participants' retention is not clearly revealed. However, we can reason that the high proficiency learners in each language group may be good at not only adopting the meaning of new words but also retaining the meanings.

Secondly, there was the correlation between the semantic properties of phrasal verbs and the learning conditions in Arabic participants. This tendency was not prominent in Korean participants because they already knew most of the target phrasal verbs, and there were a small number of sample phrasal verbs. The Arabic participants gave more correct answers to the transparent phrasal verbs than the idiomatic phrasal verbs, and they did better in the translation

learning condition. This result is in the same strand of Dagut and Laufer (1985), and Liao and Fukuya (2004). The previous research on avoidance of phrasal verbs obtained that learners avoided using idiomatic phrasal verbs, so they rather used a single word with the same meaning. These results indicate that the avoidance of idiomatic phrasal verbs are due to the semantic idiomaticity which leads learners to false inferences of the meaning. Thus, we can reason that the translation learning condition could be more beneficial to learn the idiomatic phrasal verbs because it gave the explicit meaning of the target phrasal verbs.

Finally, the test condition itself can be considered as a part of the learning condition. Though neither the answers nor the list of the target phrasal verbs of the immediate post-test were released, the test itself motivated the learners to think about the meaning of the test items and to pay attention to the phrasal verbs in their regular classroom activities. The effect of motivation in the context learning condition might be larger than that in the translation learning condition because the given test sentences provided more meaningful context. Thus, learners exposed to the context learning condition can be motivated to know the meaning of the phrasal verbs. Actually, some participants showed their desire to learn the target phrasal verbs, and they asked the researcher to give them a list of the phrasal verbs after the experimental study. This can be interpreted as the backwash effect (Hughes, 1998). Though the backwash effect has not been explicitly elucidated so far, the test condition itself seems to have an effect on learners in motivating them to study phrasal verbs.

6. CONCLUSIONS

A variety of factors can intervene in the learning of phrasal verbs. Although the results of this study did not support all of the hypotheses, it might be said that the effect of context, in relation with first language, might be made clear with larger samples.

The present study has investigated the effect of context in learning phrasal verbs to Arabic and Korean learners of English, and suggested that the use of sentence context was better in achieving retention than using the translation condition. This does not mean that the use of context is always better than the translation condition, but context is more beneficial when retaining vocabulary knowledge. However, the effect of the learning conditions was closely related to the other factors such as the proficiency level, first language, and the combination of the learning and the test conditions. Therefore, the effect of context should be estimated under the consideration of the interaction with other variables.

In addition, the present study investigated the correlation between the phrasal verb types and learning condition, and suggested that the participants gained lower scores on the idiomatic phrasal verbs than the transparent phrasal verbs. Though the effect was not prominent, the translation learning condition was slightly beneficial in learning of the idiomatic phrasal verbs. This means that semantic idiomaticity of phrasal verbs makes it difficult for learners to adopt the meaning, so the use of context cannot be a good strategy to infer the idiomatic meanings. In the

future study, it will be necessary to investigate the learning strategies that facilitate learning idiomatic phrasal verbs.

In conclusion, the present study examined the effect of context on learning phrasal verbs under the consideration of other variables such as first language, proficiency, and the test items semantic properties, and suggested that the idiomatic phrasal verbs are hard to learn and retain compared to the transparent phrasal verbs.

7. SUGGESTIONS FOR FUTURE RESEARCH

One of the problems in designing a study on vocabulary acquisition is the control of the participant's pre-knowledge of the target expressions (Hulstijn, 2003). At first, this study was designed to rule out some target phrasal verbs that are already known to the participants, but the target phrasal verbs were used in the main treatment due to the administrative procedures and limited time.

A future study on phrasal verbs will need to be focused on the cognitive process. In the research design, this should be considered as Hulstijn (2003) pointed out that “with an immediate post-test, the researcher is able to measure the effect of cognitive processes during the learning session – nothing more, nothing less.” In effect, it is hard to see the effect of learning in the short-term delayed post-test design. On the other hand, vocabulary knowledge is not obtained from one-time instruction but rather by repeated exposure and practice. Therefore, repeated instruction should also be considered in the future research.

Next, the measurement of vocabulary knowledge will need to be elaborated in order to obtain precise effect of the contextualized learning. The present study used the sentential context for contextualized learning as well as for the measurement of contextualized production. However, Nation (2001) pointed out that one or two sentences may not provide sufficient context from which learners infer the target word meaning. Therefore, a future study will need to provide sufficient context such as a short reading passage for the contextualized learning condition.

Finally, the ESL learners' first language experience needs to be investigated in depth in the future study. Even though the present study is limited to the vocabulary learning condition, the influence of first language in other language skills. The influence of first language on second language acquisition has been focused on the contrastive analysis, but it needs to be considered from the perspective of learning experience and educational background.

Appendix A

PRE-TEST MATERIAL

1. Native Language: _____ 2. Age: _____ 3. Gender: Male / Female
4. How many years have you studied English? If you have experience study English in any of the following schools, check all that apply.
- Elementary or primary school ()
- Secondary school ()
- College or University ()
5. How long have you been in English speaking countries? _____

TUTORIAL

If you don't know a phrasal verb in the list, check "No", and move on to the next phrasal verb. If you know a phrasal verb in the list, check "Yes", and write the meaning of the phrasal verb in your native language.

[Example]

	Phrasal Verbs	Do you know the meaning of this phrasal verb?		
		No	Yes	
1	pull around	√		
2	put out		√	نَجَّحَ 만들어내다

	Phrasal Verbs	<i>Do you know the meaning of this phrasal verb?</i>		
		<i>No</i>	<i>Yes</i>	
1	account for			
2	act up			
3	add up			
4	apply to			
5	blow up			
6	break in on			
7	bring up			
8	brush aside			
9	call off			
10	carry on			
11	catch out			
12	chip in			
13	come along with			
14	cut across			
15	drag out			
16	die down			
17	do up			
18	fall out with			
19	fill in			
20	follow through			
21	find out			
22	get along			
23	go against			
24	give off			
25	hand down			

	Phrasal Verbs	<i>Do you know the meaning of this phrasal verb?</i>		
		<i>No</i>	<i>Yes</i>	
26	head for			
27	hold off			
28	keep in			
29	light up			
30	look into			
31	look up to			
32	make off			
33	meet up with			
34	pay back			
35	pass out			
36	point out			
37	pull for			
38	run around			
39	run into			
40	rush off			
41	sign in			
42	take after			
43	talk over			
44	tell off			
45	throw away			
46	turn down			
47	use up			
48	watch out			
49	wash off			

Appendix B

B.1 TRANSLATION VERSION POST-TEST MATERIAL

Please write down the meaning of the phrasal verb in your native language or English.

Phrasal verbs	Meaning
act up	
add up	
brush aside	
call off	
carry through	
chip in	
come along with	
die down	
fall out with	
fill in	
go against	
hand down	
look into	
pay back	
pass out	
run into	
rush off	
tell off	
turn down	
use up	

B.2 CONTEXT VERSION POST-TEST MATERIAL

♣ Please choose the proper phrasal verb in the box and complete the sentences.

act up, add up, brush aside, call off, carry through, chip in, come along with, die down, fall out with, fill in, go against, hand down, look into, pay back, pass out, run into, rush off, tell off, turn down, use up

1. If you _____ the numbers 1 and 10, it becomes 11.
2. We are _____ the possibility of buying notebook computers for the students. It will depend on the amount of money available in the school's budget.
3. My father owns a bakery shop. When he gets older, he will _____ the family business to me.
4. My teacher always _____ us _____ for talking, so our Maths lessons are really boring because no one talks.
5. We are determined to _____ with our plans until they are complete. We are unwilling to give up, even though our financial situation is getting worse.
6. Can you lend me ten dollars? I'll definitely _____ you _____ tomorrow.
7. My parents don't want me to go on the ski trip. I will _____ their wishes because I really want to take this trip with my friends.
8. I _____ Mike on Seventh Avenue last evening. I did not expect to see him there.
9. The bank _____ his request for a loan, because his credit was not good.

10. He drank too much alcohol at Mike's party, and _____ on the sofa. I could not wake him up until the next morning.

11. My dog always _____ by making a big mess when I leave home. So, I need to ask someone to take care of my dog when I'm gone.

12. The airplanes won't take off until the winds _____, because it's too dangerous to navigate through such strong wind.

13. Matt and Katie _____ their engagement. They got engaged after only two months of dating. They decided that they did not know each other enough to get married.

14. There are several blanks that need to be _____ before the story is complete. Otherwise, there will be pieces of missing information.

15. All of the students in the high school are required to _____ one dollar each. The money raised will go to the high school music program.

16. The company faced a financial crisis because the chief executive of the company _____ the warning of the bank.

17. She _____ her three weeks of vacation last month. She would like to go to Europe next month, but she doesn't have any vacation days left.

18. Bill _____ Sally over the issue of buying a new car. He wanted to buy a fancy sports car, but she was against it.

19. It's too bad you have to _____ right after the movie. We could go to dinner together.

20. May I _____ you to the party? I have never been to her house before, so it would be easier for me to just follow you.

Appendix C

DATA

ID	Language	Learning	Test	Level	Pre-test	Post1	Post2
1	Arabic	Context	Translation	H	9	.	.
2	Arabic	Translation	Context	H	8	1	1
3	Arabic	Context	Translation	L	0	.	.
4	Arabic	Context	Translation	L	4	11	4
5	Arabic	Translation	Context	L	2	6	5
6	Arabic	Context	Context	L	2	4	.
7	Arabic	Translation	Translation	L	0	.	.
8	Arabic	Context	Context	L	1	4	3
9	Arabic	Translation	Context	H	8	8	6
10	Arabic	Translation	Translation	H	8	8	5
11	Arabic	Context	Translation	L	4	8	7
12	Arabic	Translation	Translation	H	8	3	1
13	Arabic	Translation	Translation	L	3	3	1
14	Arabic	Context	Context	L	3	4	.
15	Arabic	Context	Context	L	1	2	.
16	Arabic	Context	Context	H	5	11	7
17	Arabic	Context	Translation	H	10	6	5
18	Korean	Context	Translation	L	10	5	3
19	Korean	Context	Context	H	12	3	3
20	Korean	Context	Context	L	6	3	1

21	Korean	Translation	Context	L	10	2	1
22	Korean	Translation	Context	H	11	7	5
23	Korean	Context	Translation	L	7	0	0
24	Korean	Context	Context	H	18	6	4
25	Korean	Context	Context	L	1	1	1
26	Korean	Context	Translation	H	11	7	0
27	Korean	Translation	Context	L	8	1	2
28	Korean	Translation	Translation	L	7	3	0
29	Korean	Translation	Translation	H	18	6	2
30	Korean	Context	Translation	H	28	6	6
31	Korean	Translation	Context	H	14	5	4
32	Korean	Translation	Translation	L	8	5	2
33	Korean	Translation	Translation	L	1	1	1
34	Korean	Context	Context	L	3	.	.

Note. The known phrasal verbs in the pre-test are not included in counting the post-test scores.

BIBLIOGRAPHY

- Arnaud, P., & Savignon, S. J. (1997). Rare words, complex lexical units and the advanced learner. In J. Coady & T. Huckin (Eds.) *Second language vocabulary acquisition* (pp.157-173). Cambridge: Cambridge University Press.
- Bensoussan, M. (1992). Learners' spontaneous translations in an L2 reading comprehension task: Vocabulary knowledge and use of schemata. In P. Arnaud & H. Béjoint (Eds.), *Vocabulary and applied linguistics* (pp.102-112). London: Macmillan.
- Bishop, H. (2004). The noticing of formulaic sequences by second language readers, Ph.D. dissertation at the University of Wisconsin-Madison.
- Brown, T. L., & Haynes, M. (1985). Literacy background and reading development in a second language. In T.H. Carr (Ed.), *The development of reading skills*. San Francisco, CA: Jossey-Bass.
- Butler, C. (1985). *Statistics in linguistics*. New York: Basil Blackwell.
- Chen, H.-C., & Leung, Y.-S. (1989). Patterns of lexical processing in a non-native language. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 15, 316-325.
- Cohen, A. D. (1990). *Language learning: Insights for learners, teachers, and researchers*. Boston, MA: Heinle & Heinle.
- Cooper, T.C. (1999). Processing of idioms by L2 learners of English. *TESOL Quarterly* 33 (2), 233-262.
- DeCarrico, J. S. (2001). Vocabulary learning and teaching. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (pp.285-299). Boston: Heinle and Heinle.
- Ellis, N. (1996). Sequencing in SLA: Phonological memory, chunking, and point of order. *Studies in Second Language Acquisition*, 18, 91-126.
- Ellis, N. (2002). Frequency effects in language acquisition: A review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition*, 24, 143-188.
- Ellis, N. (2005). At the interface: Dynamic interactions of explicit and implicit language knowledge. *Studies in Second Language Acquisition*, 27, 305-352.

- Fender, M. (2003). English word recognition and word integration of skills of native Arabic-and Japanese-speaking learners of English as a second language. *Applied Psycholinguistics*, 24 (2), 298-315.
- Finkbeiner, M., & Nicol, J. (2003). Semantic category effects in second language word learning. *Applied Psycholinguistics*, 24, 369-383.
- Folse, K. S. (2004). *Vocabulary myths*. Ann Arbor: The University of Michigan Press.
- Hermann, F. (2003). Differential effects of reading and memorization of paired associates on vocabulary acquisition in adult learners of English as a second language. *TESL-EJ* 7 (1). Retrieved July 26, 2006, from the Internet <http://www-writing.berkeley.edu/TESL-EJ/ej25/al.html>.
- Hulstijn, J. (1992). Retention of inferred and given word meanings: Experiments in incidental vocabulary learning. In P. Arnaud & H. Bejoint (Eds.), *Vocabulary and applied linguistics* (pp.113-125). London: MacMillan.
- Hulstijn, J. H. (2003). Incidental and intentional learning, In Doughty, C. J. & Long, M. H. (Eds.), *The handbook of second language acquisition* (pp.349-381). Malden, MA: Blackwell Publishing.
- Hughes, A. (2002). *Testing for language teachers*. Oxford: Oxford University Press.
- Irujo, R. (1986). A piece of cake: Learning and teaching idioms. *ELT Journal* 40 (3), 123-142.
- Jones, M., and Haywood, S. (2004). Facilitating the acquisition of formulaic sequences. In N. Schmitt (Ed.), *Formulaic sequences* (pp.269-300). Philadelphia: John Benjamins Publishing Company.
- Kroll, J. F. & Sunderman, G. (2003). Cognitive processes in L2 learners and bilinguals. In Doughty, C. J. & Long, M. H., *The handbook of second language acquisition* (pp.104-129). Malden, MA: Blackwell Publishing.
- Lee, S. H. (2003). ESL learner's vocabulary use in writing and the effects of explicit vocabulary instruction, *System*, 31, 537-561.
- Liao, Y., & Fukuya, Y. J. (2004). Avoidance of phrasal verbs: The case of Chinese learners of English, *Language Learning* 54 (2), 193-226.
- Liu, D. (2003). The most frequently used spoken American English idioms: A corpus analysis and its implications. *TESOL Quarterly*, 37 (4), 671-700.
- Liu, J. (1998). The effects of three methods of vocabulary instruction on second language learning at the college level, Ph.D. dissertation at the University of Missouri-Kansas City.
- Lotto, L., & de Groot, A. M. B. (1998). Effects of learning method and word type on acquiring vocabulary in an unfamiliar language, *Language Learning* 48 (1), 31-69.

- Monheimer, H. A. (2004). L2 vocabulary acquisition through text reading: Can lexical processing strategies help? Ph.D. dissertation at the University of Pennsylvania.
- Moon, R. (1997). Vocabulary connections: Multi-word items in English, In Schmitt, N. & McCarthy, M. (Eds.), *Vocabulary: Description, acquisition and pedagogy* (pp.40-63). New York: Cambridge University Press.
- Nagy, W. (1997). On the role of context in first- and second- language vocabulary learning, In Schmitt, N. & McCarthy, M (Eds.), *Vocabulary: Description, acquisition and pedagogy* (pp.64-83), New York: Cambridge University Press.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. New York: Cambridge University Press.
- Nattinger, J.R. & De Carrico, J.S. (1992). *Lexical phrases and language teaching*. Oxford: Oxford University Press.
- Nelson, D. L., & Schreiber, T. A. (1992). Word concreteness and word structure as independent determinants of recall, *Journal of Memory and Language*, 31, 237-260.
- Oxford, R. L., & Scarcella, R. C. (1994). Second language vocabulary learning among adults: State of the art in vocabulary instruction. *System* 22 (2). 231-243.
- Prince, P (1996). Second language vocabulary learning: The role of context versus translations as a function of proficiency. *The Modern Language Journal*, 80, 478-493.
- Sampson, G. (1985). *Writing systems*. Stanford, CA: Stanford University Press.
- Schmitt, N. & McCarthy, M. (Eds.). (1997). *Vocabulary: Description, acquisition and pedagogy*. Cambridge: Cambridge University Press.
- Schneider, V. I., Healy A. F., & Bourne, Jr., L. E. (2002). What is learned under difficult conditions is hard to forget: Contextual interface effects in foreign vocabulary acquisition, retention, and transfer, *Journal of Memory and Language*, 46, 419-440.
- Simpson, R. and Mendis, D. (2003). A corpus-based study of idioms in academic speech, *TESOL Quarterly*, 37 (3), 419-441.
- Singleton, D. (1999), *Exploring the Second Language Mental Lexicon*. Cambridge: Cambridge University Press.
- Sternberg, R.J. (1987). Most vocabulary is learned from context. In M. McKeown & M. Curtis (Eds.), *The Nature of Vocabulary Acquisition*, Hillsdale, NJ: Lawrence Erlbaum.
- Stubbs, M. (1995). Collocations and cultural connotations of common words. *Linguistics in Education*, 7 (4), 379-390.

- Wood, D. (2004). An empirical investigation into the facilitating role of automatized lexical phrases in second language fluency development, *Journal of Language and Learning* 2 (1).
- Wray, A. (2000). Formulaic sequences in second language teaching: Principle and practice. *Applied Linguistics*, 21 (4), 463-489.
- Wray, A. (2002). *Formulaic language and the lexicon*. Cambridge: Cambridge University Press.
- Wray, A. P., & Perkins M. (2000). The functions of formulaic language: An integrated model. *Language and Communication*, 20 (1), 1-28.
- Zimmerman, C.B. (1997). Historical trends in second language vocabulary instruction. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition, a rationale for pedagogy*. Cambridge: Cambridge University Press.
- Spears, R. (1993). *NTC's Dictionary of Phrasal Verbs*. McGraw-Hill.
- The American Heritage Dictionary of Phrasal Verbs* (2005).