A Study on the Effect of Metaphor Awareness Raising on Chinese EFL Learners' Vocabulary Acquisition and Retention[1]

UNE ETUDE DE L'EFFET DE LA SENSIBILISATION A LA METAPHORE SUR L'ACQUISITION ET LA MEMORISATION DE VOCABULAIRE CHEZ LES ETUDIANTS CHINOIS EFL(ENGLISH FOREIGN LANGUAGE: L'ANGLAIS COMME LA LANGUE ETRANGERE)

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Abstract: The research investigates the vocabulary acquisition and retention effect of raising learners' metaphor awareness on EFL learners (non-English majors) of intermediate-low English proficiency level. The subjects are first-year non-English college students in a vocational college. The pre-test, immediate posttest and delayed posttest experiment lasted for a whole semester and the data collected at the tests were processed with SPSS Windows 13.0. The result shows that in EFL class, organizing metaphorical expressions along their metaphorical theme is more effective in enhancing EFL learners' vocabulary retention. Accordingly, efforts to raise learners' metaphor awareness should be made in classroom-based EFL teaching and the considerations should be given in teaching treatment to achieve a better effect in EFL vocabulary teaching and learning.
Keywords: metaphorical theme/source; domain metaphor awareness; Vocabulary acquisition; vocabulary retention

Résumé: La recherche étudie l'effet de la sensibilisation à la métaphore sur l'acquisition et la mémorisation de vocabulaire chez les étudiants chinois EFL (spécialité non-anglais) qui ont un niveau d'anglais intermédiaire-faible. Les sujets

d'études sont des étudiants en première année dans une école professionnelle non-anglaise. Le pré-test, le post-test immédiat et le post-test différé ont duré un semestre entier et les données recueillies lors des tests ont été traitées avec SPSS Windows 13.0. Le résultat montre que dans la classe EFL, l'organisation des expressions métaphoriques le long de leur thème métaphorique est plus efficace dans l'amélioration de la mémorisation de vocabulaire chez les apprenants EFL. En conséquence, les efforts visant à sensibiliser la conscience des apprenants sur la métaphore doivent être réalisés dans l'enseignement EFL basé sur des cours en salle de classe et les considérations devraient être y accordées pour atteindre un meilleur effet dans l'enseignement et dans l'apprentissage de vocabulaire anglais .

Mots-Clés: Thème métaphorique ; sensibilisation à la métaphore ; domaine source; acquisition de vocabulaire; mémorisation de vocabulaire

1. INTRODUCTION

Vocabulary acquisition has always been the focus of linguists in the mainland, such as Gui (1983), Wen (1996), Wang (1998), Dai (2000) and Zhang (2001). Subjects of these studies are mostly English majors or non-English majors in universities. By contrast, Little attention has been paid to English learners in vocational colleges being as non-mainstream group. However, in view that the very low English proficiency level of such college students and the limited amount of vocabulary and the improper vocabulary learning strategy, it is meaningful to take English learners in vocational colleges to provide applicable and effective teaching and learning strategies.

To apply cognitive theories to EFL teaching has been prove to be effective in helping EFL learners master numerous English words, including research on learners' extraction of target words by repeating these words in reading (Barcroft 2007; Pulido 2007; Rydland & Aukrust 2005); on acquisition of relatively difficult words, such as metaphorical expressions, polysemies, verbal phrases and idioms (Barcelona 2001; Csabi 2003;Dirven 2001;Kurtyka, 2001;Këcskes, 2000; Kövecses, 2001; Li, 2003;Liao & Fukuya 2004;Queller 2001); as well as on the cognitive processing of acquiring target words (Frajzyngier & Jirsa 2006; Goddard 2004; Këcskes 2001; Kövecses 2005;Littlemore & Low 2006). Among these studies, the application of metaphor theories to EFL teaching and learning has been drawing more attention as claims such as metaphor extensively exists in language and thoughts are metaphorical have been proved to be true by many linguists with Lackoff and Johnson being the representatives.

Against the backdrop of the wide application of cognitive theories in language teaching, Boers (2000, 2003) and Boers et. al. (2007) came up with flexible teaching techniques with the focus on the enhancing of learners' metaphorical awareness. In these studies, the English proficiency level of the subjects are intermediate and high with native language also belonging to Indo-European language as English meanwhile with a focus being on the short-term effect of EFL learners' vocabulary acquisition and retention. Different from these studies, the present study takes subjects in a vocational college with low English proficiency level with their native language Chinese being Sino-Tibetan language which is far different from Indo-European language. Additionally, the present study focuses on the long-term effect of learners' vocabulary acquisition and retention (one month or longer).

The present study first carried out a survey on the vocabulary learning strategies of non-English majors in a vocational college. Based on the result, an experiment was made to investigate the effect of applying "metaphor awareness" to EFL teaching on EFL learners' vocabulary acquisition and retention, specifically, to study the effect of the enhancement of EFL learners' metaphor awareness which is realized by organizing metaphorical expressions along with their metaphorical themes. The function of such enhancement was also compared among learners of three English proficiency levels: High, corresponding to Class A; Intermediate, corresponding to Class B and Low, corresponding to Class C.

2. LITERATURE REVIEW

2.1 Vocabulary Acquisition

Wallace (1982) believes that the acquisition of a word includes a mastery of its pronunciation, spelling, grammatical usages, collocation and its connotation and denotation, i.e., to master the word in terms of its form, meaning, syntax and grammar (Wu & Wang 1998). In the present research, "vocabulary acquisition" is defined as learners' correctly extract a learnt word's meaning meanwhile properly use the word in a specific context. Pronunciation and spelling are not factors considered in the study.

2.2 Domestic Studies on Vocabulary Learning Strategies of Non-English Majors in Vocational Colleges

Most of the domestic studies on vocabulary learning strategies have been focused on English majors in universities as subjects. With vocational colleges taking a rather small proportion in higher educational schools, little attention has been paid to the non-English majors in such colleges. As vocational colleges are increasing with the consideration that students in such colleges are generally featured with low English proficiency level and less effective vocabulary learning strategies, relative surveys and studies have been carried out in vocational colleges in recent years, including Gao (2004), Yu (2006), Huang (2006), Li (2008), Mo &. Cheng (2009), which are briefly reviewed in the following.

Based on the survey of senior non-English majors in two universities with on in Beijing and another in Xi'an, Gao (2004) analyzed the concepts and strategies of vocabulary learning of non-English majors with gender and major differences considered. In the study, concepts and characteristics of vocabulary learning strategies demonstrated in this group, differences in vocabulary learning strategies between learners majoring in science and those in art as well as the application of learning strategies were discussed.

Yu (2006) carried out an investigation in vocabulary learning strategies in three universities in Shandong province with 248 students surveyed, focusing on the styles vocabulary learning styles and the relationship between learning strategies and effect. The resulted showed that various learning strategies are adopted; no apparent strategic difference between male and female learners is showed; strategies related to scores in English tests amounted to 21 and the application of 15 kinds of vocabulary learning strategies of learners with high mark and those with low are quite different.

Huang (2006) took two intact classes in a vocational college in Jiangxi province as subjects, surveyed the most and the least used vocabulary learning strategies among non-English majors. The attempt is to develop a vocabulary teaching model which integrates strategy training and normal instruction and to prove the feasibility and effectiveness of strategy consciousness developing in vocabulary teaching.

Li (2008) studied the characteristics of vocabulary learning strategies adopted by non-English majors in the South China Normal University. The result showed that 3 of the 11 strategies given are the most popular with learners, including classroom instruction, reciting vocabulary list and referring to electronic dictionary. Meanwhile, no apparent differences existed between learners of art and learners of science but the latter rely more on classroom instruction. Li held that the three strategies are not effective in vocabulary learning and suggested that teachers in charge of students at this level provide training of vocabulary learning strategy for students.

Mo and Cheng (2009) analyzed the vocabulary learning patterns of non-English majors in vocational colleges taking sophomores in a vocational college in Guangxi. In the study, they provided suggestions for vocabulary teaching based on the factors leading to certain learning patterns as investigated. The characteristics of vocabulary acquisition found in the study include: (1) dependence on mother tongue as inter-language; (2) few adoption of meta-cognitive strategies; (3) few application of social-emotional strategies and (4) more adopted passive learning than active learning. Learners are suggested to use English-English dictionary and recognize the importance of the internal knowledge of a word as given to

the external knowledge.

The above studies all investigated and analyzed the factors of vocabulary learning strategies of non-English major in vocational colleges with consideration of individual differences. The main purpose is to summarize the status quo of vocabulary learning strategies applied by the group. Regarding what are the effective vocabulary teaching methods and how they can be applied in classroom teaching, few empirical studies have been done.

2.3 The Application of Metaphorical Awareness in EFL Teaching

2.3.1 Definition of metaphor

The development of metaphor theories have gone through the following phases: Aristotle's comparison theory, Quintilian's substitution theory, Richards and Black's interaction theory and up to Lakoff and Johnson's conceptual metaphor theory. In *Metaphors We Live By*, Lakoff and Johnson put forward conceptual metaphor theory, asserting that metaphor is a way of human thinking or a cognitive process while all the former theories considered metaphor as a kind of linguistic "deviation.

Aristotle is the forerunner in the study of metaphor. His comparison theory claims that metaphor is a linguistic ornament in using one name for another thing to achieve vividness (Aristotle 1987). In the 1st century A.D., the Roman rhetorician Quintilian advanced substitution theory, which claims that metaphor is a replacement of one expression for another. Up to 1930s, Richards put forward interaction theory, believing that language is "vitally metaphorical" (1936, p. 90), pointing out that metaphor is not simply a linguistic ornament but a way of thinking. From then on, studies of metaphor took cognitive orientation. The hot discussion ushered metaphor studies into "metaphormania" in the 1970s with the most influential representatives Lakoff and Johnson with their conceptual metaphor theory in the field as mentioned above (Li, 2007).

The present study adopts the definition of metaphor made by Lakoff and Johnson: "Metaphor is pervasive in everyday life, not just in language but in thought and action (1980, p. 3). To take ARGUMENT IS WAR for example, despite the difference in domain, with the former being linguistic behavior while the latter being armed conflict, in everyday discourse, ARGUMENT is usually constructed and understood through the concept of WAR, which is the mapping of the two domains in which the two belong to respectively. Other examples of conceptual metaphor are as follows:

Love is <u>a journey</u>	(nominal metaphor)
<u>ups and downs</u> in life	(adverbial metaphor)
<u>kill</u> this boring hours	(verbal metaphor)
be in <u>low</u> spirits	(adjectival metaphor)

2.3.2 Metaphor awareness

In linguistic studies, "metaphor awareness" and "linguistic awareness" are interrelated. According to Carter (2003), "linguistic awareness" refers to language learners' deepened understanding of the linguistic form and function of the target language while "metaphor awareness" refers to language learners' enhanced awareness of metaphor and its function in language. A language learner with metaphor awareness is the one who can identify metaphor in various forms, such as nominal metaphor, verbal metaphor and adverbial metaphor, after realizing the fact that metaphor exists in all languages and gaining a knowledge of the formation of metaphor.

The present study adopts the following definition of metaphor by Boers (2003：211) :

(1) Awareness of metaphor's pervasiveness in daily language;

(2) Awareness of the metaphorical theme of rhetorical expressions and conceptual metaphor/source domain;

(3) Awareness of cultural difference embodied in metaphorical theme;

(4) Awareness of cross-linguistic differences embodied in languages with linguistic theme.

The present study adopts the above definition

2.3.3 Domestic and foreign studies on the relationship between metaphor awareness and vocabulary learning strategy

Based on the previous studies on the effect of metaphor awareness enhancing on vocabulary learning, such as Boers (2000), Boers (2003), Boers, et al. (2007) ;Li (2003)**,** Min (2008) and Wang (2006), the present study, taking special subjects—non-English majors in vocational colleges, as opposed to those in the mentioned studies, further investigates the relationship between metaphor awareness and vocabulary acquisition and retention.

Boers (2000) pointed out that in EFL classroom, it is effective for learners' vocabulary retention to present relatively new metaphorical expressions along with their metaphorical theme or source domain. Classroom activities to carry this expression organization were put forth. He held that application of cognitive factors in EFL teaching, such as metaphor awareness, should be advocated to substitute traditional vocabulary memorizing.

Boers (2003) further studied long/short-term vocabulary enlargement, receptive/productive vocabulary, EFL learners' English proficiency level and cognitive style as well as the vagueness of vocabulary based on the result of his previous research.

Taking EFL learners in universities as subjects, Boers, et al. (2007) made research on how to present metaphorical idioms in EFL classroom. The result showed that in addition to memorizing method, a mastery of the origin and formation of idioms is conducive to the acquisition and retention of the target expressions.

Since the English proficiency level of all the subjects in Boers' studies is high or intermediate, together with the native language of these subjects and English belong to the same language system, the present study researches on the relationship between metaphor awareness and vocabulary acquisition and retention of subjects whose native language Chinese is far from the target language English meanwhile with a rather low English proficiency level to see whether the same effect can be achieved.

Wang (2006) carried out an experiment on 60 non-English majors in a university to quest the effect of teaching of metaphorical expressions to enhance learners' metaphorical thinking on learners' vocabulary learning strategy and thinking patters via questionnaire and think-aloud. The result showed that the teaching of metaphorical expressions helps learners rely less on rote while being effective in improving learners' metaphorical and multi-directional thinking. What the study made no mention is the practical classroom activities in enhancing learners' metaphor awareness, which is a task to be fulfilled in the present study.

3. RESEARCH QUESTIONS AND RESEARCH METHODOLOGY

3.1 Research Questions

(1) Is the vocabulary teaching model focusing on the enhancement of metaphor awareness more effective in learners' acquisition and retention of target words than the traditional model of vocabulary teaching?

(2) Does the vocabulary teaching model featured with metaphor awareness enhancing have the same effect on learners at different English proficiency levels in their acquisition and retention of target words?

3.2 Research Methodology

3.2.1 Participants

3.2.1 .1 Subjects

The subjects in the present study are non-English freshmen at English proficiency level A, B and C in a vocational college in Beijing. The three English proficiency levels are determined according to the English-class division test that the subjects took at the beginning of the first semester together with reference to their scores in the English test which they took at the entrance examination. Among the three levels, 6 intact classes are randomly chosen, with two at each level to form the control group and the experimental group, altogether 66 subjects (total of 66 subjects =33 (subject) *2 (class).

The control group is taught with the traditional vocabulary teaching model as illustrated in Table 3-1, which was generalized according to the survey carried out in the study; while the experimental group is taught with the vocabulary teaching model focusing on the enhancement of metaphor awareness, which is illustrated in Table 3-2.

3.2.1 .2 Instructors

The instructor for the control group and the experimental group at each level is the same one, altogether 3 instructors (total of 3 instructors=1(instructor*3 (level), i.e. Instructor A for the groups at A level, Instructor B for the groups at B level and Instructor C for the groups at C level.

3.2.2 Treatments

The instruction for the control group is to present the target words to the subjects according to their pragmatic or functional usages, as termed "The Traditional Teaching Model of Metaphorical Expressions" in the present study (see Table 3-1). The instruction for the experimental group is to categorize and organize the target metaphorical expressions in terms of metaphorical theme and then present the expressions along with the theme, aiming to enhance the learners' metaphor awareness, which is named "The Teaching Model Focusing on the Enhancement of Metaphor Awareness" (see Table 3-2).

Table 3-1: The Traditional Teaching Model of Metaphorical Expressions

Present expressions according to pragmatic of functional usage	Metaphorical Expressions
to describe acute and sudden anger	She <u>exploded</u> he unleashed his anger. She <u>erupted</u>.
to describe anger as a process	I was <u>boiling with</u> anger. He was <u>fuming.</u>
to describe the way angry people speak	She <u>blew up</u> at me. Don't <u>bite my head off</u>!

Table 3-2: The Teaching Model Focusing on the Enhancement of Metaphor Awareness

Present expressions along with metaphorical theme	Metaphorical Expressions
ANGER AS A HOT FLUID IN A CONTAINER	Anger <u>welled up</u> inside me. I was <u>boiling with anger</u>.
ANGER AS FIRE	He made an <u>inflammatory</u> remark to the boss. Don't <u>add fuel to the fire</u>!
ANGERY PEOPLE AS DANGEROUS ANIMALS	Don't <u>snap at</u> me! Don't <u>bite my head off</u>!

3.2.3 Tools

(1) Reading materials and targeted vocabulary

Both the reading materials and the targeted vocabulary were selected from Boers (2000) with the reading material modified in terms of length and level of difficulty to adapt to the subjects' English proficiency level. The targeted words, amounting to 15 (see appendix 1), were all with metaphorical themes.

(2) Vocabulary test

The vocabulary test was designed based on the one in Boers (2000) in accordance with the principles of test design. The test consisted of three sections: cloze test, English to Chinese translation and metaphorical expression listing, which aim to test the subjects' receptive and productive knowledge of the targeted words (see appendix 2).

(3) Questionnaire

The questionnaire in Wang (2006) was adopted in the present study. With Wang's permission, the original questionnaire was modified into two parts, including questionnaire 1 for learners and questionnaire 2 for English teachers (see appendix 3).

 (4) Software for data processing：SPSS Windows 13.0

3.2.4　Appraiser and appraising criteria

3.2.4.1　Appraiser of the vocabulary test

The three instructors in charge of the instruction for Group A, B and C were also the appraiser of the test of each group. The test papers were appraised conforming to the same criteria.

3.2.4.2　Criteria for the vocabulary test

The total score of the vocabulary test is 30 grades: 10 grades for Section I Cloze test which include d10 choices; 10 grades for Section II English to Chinese translation which constituted 5 sentences; and the other 10 grades for Section III Metaphorical expressing listing in which subjects should list metaphorical expressions that they have learnt, 1 grade for each list and the maximum was 10.

3.2.5　Experiment procedure

The instruction for the control group and experimental group in Group A, B and C lasted for 8 weeks. The control group was taught with the traditional teaching model whereas the experimental group was taught with the metaphor-awareness enhancing teaching model. In each week, the subjects received two 15-minute periods of metaphorical expression teaching.

   To ensure the feasibility of the experiment, two phases were designed for the study: Phase 1the preparatory period, i.e. a pilot study; and Phase 2 the major experiment. The procedure of the whole experiment is as follows:

   Phase 1: Survey of vocabulary learning strategy

   The survey was conducted with the tool of questionnaire. Based on the result of

   the survey, the traditional vocabulary teaching model is defined.

   Phase 2: 4-week pilot study

   Phase 3: 6-week major experiment:

   1）Pre-test

The pre-test was conducted one week before the targeted word instruction. The 20-minute test included targeted words and intervening words.

2) Vocabulary instruction

The vocabulary instruction was conducted one week after the pre-test. The teaching process in both control group and experimental group included targeted word presentation, instruction and discussion.

3) Immediate post-test

Immediate post-test was made right after the vocabulary instruction, employing the same test paper as used in the pre-test. The 20-minute test aimed to test the effect of the subjects' acquisition of the targeted words.

4) Delayed post-test

The 20-minute delayed post-test was carried out one-month after the immediate post-test, with the test paper the same as the previous tests. The aim is to test the subjects' long-term retention of the targeted words.

4. THE RESULT ANALYSIS

4.1 The Result of the Survey on English Vocabulary Learning Strategy Applied in Vocational College

Before the experiment, a survey on 60 non-English majors and 10 English teachers in a vocational college was made aiming to overview the application of vocabulary strategy in EFL learning and teaching meanwhile to generalize the widely adopted vocabulary teaching model in schools at this level.

The questionnaire in Wang (2006) was adopted in the present study. With Wang's permission, the original questionnaire was modified into two parts, including questionnaire 1 for learners and questionnaire 2 for English teachers (see appendix 3).

The result showed that the most widely employed vocabulary learning strategy is the application of sound and image. Moreover, 20 percent of the subjects are unaware of the role of rote in their vocabulary learning and most teachers surveyed were unaware of the function of vocabulary learning strategies and hence made little effort in applying effective vocabulary strategy in English teaching. Additionally, most of the teachers took a positive view towards the strategy rote, which reflects that the connection of cognitive factors and vocabulary acquisition has yet become a teaching notion for EFL teachers and learners. Based on the result, the traditional vocabulary teaching model was generalized as stated previously.

4.2 The Result of the Experiment

The 4-week pilot study and the major experiment were carried out as designed from February to July, 2009, lasting a whole semester.

Modifications in terms of targeted words and test time were modified to suit the subjects in the present study. The result of the pilot study showed that the experiment design is feasible.

Statistical analysis were made about the scores that the participates in Groups A , B and C (Which corresponded to Level A, B and C as designated by the college according to the subjects' scores gained in the entrance exam, the English proficiency level classifying exam) gained in pre-test, immediate post-test and delayed post- test.

Three analysis were made: 1) descriptive statistical analysis of the scores that the three control groups and the experimental groups at Groups A, B and C; the One-way ANOVA with the group type as variable and the scores gained in the pre-test the dependent variable and the One-way ANOVA with test time as variable and the scores that the subjects gained in the three tests. The scores that the subjects gained in

the immediate post-test were regarded as the factor reflecting subjects' vocabulary acquisition achievement while the scores in the delayed post-test were regarded as the factor reflecting their vocabulary retention effect. The One-way ANOVA of the pre-test indicated that there was a significant difference in the scores achieved by the six groups (F(5,176)=120.159, p=.000<.05). The Scheffe Post Hoc Test showed that the six groups can be classified into three groups in terms of English proficiency level, namely, high (Group A1 and Group A2: p=1.000>.05), intermediate (B1and B2: p=.852>.05) and Low (C1 and C2: p=.998>.05). Moreover, there was no great difference in terms of the cognition of the targeted words of the two groups at the same proficiency level (See Tables 4-5 and 4-6). Accordingly, differences in the scores achieved by the control groups and experimental groups in the immediate post-test and the delayed post-test can be viewed as the result of the adoption of different vocabulary teaching models.

Table 4-5: The Descriptive Statistical Analysis and One-way ANOVA of the Scores in Pre-test

Descriptive Statistical Analysis				One-way ANOVA					
Gr	N	Mean	Std. Deviation		Sum of Squares	df	Mean Square	F	Sig.
A1	33	16.5625	1.93337	Between Groups	5931.977	5	1186.395	120.159	.000
A2	33	17.0000	5.85235	Within Groups	1737.743	176	9.874		
B1	33	9.0000	3.11886						
B2	33	7.8571	2.67657						
C1	33	3.4688	1.19094						
C2	33	3.4706	1.50223						

Table 4-6: Scheffe Post Hoc Test Analysis of the Scores in Pre-test

Groups	Number of people	Subset for alpha = .05		
		1	2	3
A1	33	16.5625		
A2	33	17.0000		
B1	33		7.8571	
B2	33		9.0000	
C1	33			3.4688
C2	33			3.4706
Sig.		.998	.852	1.000

4.2.1 The validity of the teaching intervention

The One-way ANOVA with the scores as dependent variable and the test time as variable verified the validity of the teaching intervention adopted in the experiment: A1 (F(2,91)=88.559, p=.000<.05),A2 F(2,91)=88.336, p=.001<.05), B1 F(2,91)=37.873, p=.000<.05), B2 F(2,91)=34.990, p=.000<.05), C1 F(2,91)=62.348, p=.000<.05),C2 F(2,91)=60.348, p=.000<.05 (See Table 4-7).

Table 4-7: One-way ANOVA of the Scores in the Three Tests

GROUP		Sum of Squares	df	Mean Square	F	Sig.
A1	Between Groups	589.561	2	294.780	88.559	.000
	Within Groups	302.907	91	3.329		
	Total	892.468	93			
A2	Between Groups	277.090	2	238.545	88.336	.001
	Within Groups	1312.958	91	6.620		
	Total	1590.049	93			
B1	Between Groups	806.464	2	403.232	37.873	.000
	Within Groups	702.696	91	10.647		
	Total	1509.159	93			
B2	Between Groups	2172.215	2	386.108	34.990	.000
	Within Groups	1175.690	91	12.779		
	Total	3347.905	93			
C1	Between Groups	1252.771	2	626.385	62.636	.000
	Within Groups	960.719	91	10.330		
	Total	2213.490	93			
C2	Between Groups	1207.588	2	603.794	60.348	.000
	Within Groups	958.735	91	9.684		
	Total	2166.324	93			

Table 4-8: The Scheffe Post Hoc Test Analysis of the Scores in the Three Tests

			1					2		
			Subset for alpha = .05					Subset for alpha = .05		
	TIME	N	1	2	3	TIME	N	1	2	3
A	PRE	33	16.5625			PRE	33	17.0000		
	IMM	33		22.5484		IMM	33		21.0417	
	DEL	33			20.6129	DEL	33		20.4000	
	Sig.		1.000	1.000	1.000	Sig.		1.000	.847	
B	PRE	33	9.0000			PRE	33	7.8571		
	IMM	33		17.3043		IMM	33		18.7500	
	DEL	33			14.0870	DEL	33		17.8636	
	Sig.		1.000	1.000	1.000	Sig.		1.000	.618	
C	PRE	33	3.4688			PRE	33	3.4706		
	IMM	33		11.3125		IMM	33		11.0588	
	DEL	33		10.9375		DEL	33		10.4412	
	Sig.		1.000	.897		Sig.		1.000	.716	

4.2.2 Analysis of Vocabulary Acquisition and Retention

4.2.2. 1 Effect on Vocabulary Acquisition

The Descriptive Statistical Analysis of scores that all the groups gained in the three tests showed that the acquisition of different groups was different (See Table 4-9). The Homogeneity Analysis of the

Acquisition Achievement Scores showed that the three groups at the three levels all met the condition for One-way ANOVA (See Table 4-10), with A1 p=.173>.05, A2 p=.101>.05, B1 p=.797>.05, B2 p=.246>.05, C1 p=.100>.05,and C2 p=.900>.05. The result of the One-way ANOVA of the Acquisition Achievement Scores showed a significant difference in the vocabulary acquisition of the six groups at the three levels(F(5,173)= 64.386,p=.000<.05) (See Table4-11) . The conclusion is that A1 and A2 were at the same English proficiency level (p=.304>.05), B1 and B2 are at the same level (p=.78>.05) and C1 and C2 are at the same level (p=1.000>.05), indicating that there is no great different in the vocabulary acquisition between the control group and the experimental group (See Table 4-12).

Table 4-9: The Descriptive Statistical Analysis of the Acquisition and Retention Achievement Scores

	TIME	N	Mean	Std. Deviation	N	Mean	Std. Deviation
GR.		A1			A2		
A	PRE	33	16.5625	1.93337	33	17.0000	5.85235
	IMM	33	22.5484	2.27799	33	20.4000	2.61406
	DEL	33	20.6129	1.02233	33	21.0417	1.51741
B		B1			B2		
	PRE	33	9.0000	3.11886	33	7.8571	2.67657
	IMM	33	17.3043	3.21127	33	18.7500	4.20723
	DEL	33	14.0870	3.44981	33	17.8636	3.52729
C		C1			C2		
	PRE	33	3.4688	1.19094	33	3.4706	1.50223
	IMM	33	11.3125	3.56902	33	11.0588	3.43724
	DEL	33	10.9375	4.10301	33	10.4412	3.87057

Table 4-10: The Homogeneity Analysis of the Acquisition Achievement Scores

	Levene Statistic	**df1**	df2	Sig.
A1	**1.791**	**2**	79	.173
A2	**8.043**	**2**	79	.101
B1	.228	2	78	.797
B2	1.425	2	78	.246
C1	19.086	2	79	.100
C2	14.032	2	79	.900

Table 4-11: The One-way ANOVA of the Acquisition Achievement Scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3564.372	5	712.874	64.386	.000
Within Groups	1915.429	173	11.072		
Total	5479.802	178			

Table 4-1: The Scheffe Post Hoc Test Analysis of the Acquisition Achievement Scores

GROUP	N	Subset for alpha = .05		
		1	2	3
A1	33	22.5484		
A2	33	20.4000		
B1	33		18.7500	
B2	33		17.3043	
C1	33			11.3125
C2	33			11.0588
Sig.		.304	.738	1.000

4.2.2.2 Effect on Vocabulary Retention

The One-way ANOVA of the scores that subjects gained in the delayed post-test showed a significant difference in vocabulary retention of the control groups and the experimental groups ($F_{(5,171)}$=64.337,p=.000<.05) (See *Table 4-13*). To test the difference among the three groups at A, B and C level, Scheffe Post Hoc Test was made, which showed a difference among the three groups in terms of the effect of vocabulary retention, namely, A1 is better than *A2*：21.0417>20.6129, B1 is better than B2 (17.836>14.0870). However, concerning C1 and C2, there was no significant difference: C1=10.9375 and C2=10.4412 (See Table 4-14).

Table 4-13: The One-way ANOVA of the Retention Scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3311.927	5	662.385	64.337	.000
Within Groups	1760.533	171	10.296		
Total	5072.460	176			

Table 4-14   The Scheffe Post Hoc Test of the Retention Scores

GROUP	N	Subset for alpha = .05				
		1	2	3	4	5
A1	33	21.0417				
A2	33		20.6129			
B1	33			17.8636		
B2	33				14.0870	
C1	33				10.9375	10.9375
C2	33					10.4412
Sig.		.998	.766	1.000	.066	.997

5. CONCLUSION

The present study carried out an experiment on the metaphor-awareness enhanced teaching to investigate the effectiveness of the new teaching model for non-English majors in vocational colleges. The result showed that in terms of the effect of vocabulary acquisition, the metaphor-awareness enhanced teaching model showed no edge against the traditional vocabulary teaching mode; while regarding vocabulary retention, the former achieved greater effect. However, for learners at very low English proficiency level, there is no apparent difference in the effect achieved by the two models.

Based on the findings, suggestions for English vocabulary teaching in vocational colleges are made as follows: English teachers should develop metaphor awareness to develop the ability to choose the best way to organize metaphorical expression while teaching vocabulary; contrasts and discussions about the differences in metaphorical themes in different languages should be carried out in EFL classroom; and in teaching those very new and difficult expressions, a more explicit organization along with the metaphorical theme should be adopted so as to reduce the cognitive difficulty that learners meet.

Limitations of the study lie in three aspects: the categorization of subjects in terms of their English proficiency level, the variables included and the time for the experiment. Improvements in these aspects can be made in the future research.

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