

Effectiveness of the Vocabulary Learning Strategies on English Vocabulary Learning for Non-English Major College Students

Yue Wu

College English Department
Zaozhuang University
Zaozhuang, China

Abstract—Vocabulary learning strategies as a part of language learning strategies has been gaining increased attention after 1990s. There have been a number of researches on this field. In China, the present circumstances in vocabulary teaching and learning are not so optimistic, and most learners experience considerable difficulties with vocabulary, which lead to hinder the learners' enhancement of vocabulary competence. Therefore, on the basis of related theoretical studies in vocabulary learning strategies, the author attempts to explore the impact of vocabulary learning strategies on vocabulary learning through explicit strategy instruction with the intent to help learners become more effective and autonomous.

Keywords—vocabulary learning strategies; strategies instruction; non-English majors

I. INTRODUCTION

Since late 1970s and early 1980s, in the field of Second Language Acquisition, there has been a steadily growing interest in considering the task from the learner's point of view and in changing the focus of classrooms from a teacher-centered one to a learner-centered one with the explosion of methodologies. Accordingly, there has also been a marked shift in the focus of language instruction and research, from research on teachers and teaching methodologies to research on learners and learning methods.

The concept of 'strategy' is a somewhat fuzzy one and it is not easy to arrive at a definition of what a strategy is (Ellis, 1994; Nation, 2001). A number of researchers, such as Stern (1983), Weinstein and Mayer (1986), Chamot (1987), Rubin (1987) and Oxford (1989) have been tried to give definitions of language learning strategies. Ellis (1994) concluded that one of the best approaches to define learning strategies was to try to list their main characteristics. It has been claimed that successful language learners have their own "special ways of doing it". The first researchers who observed the successful language learners were with the idea to facilitate the language learning process for the other learners. Most of the study of learning strategies originally focuses on the identification, description and classification of useful learning strategies of the good learners (Rubin, 1975; Stern, 1983), and later on, it explores the correlations between

learning strategies and language learning outcomes (Bialystok, 1981) as well as learner training in the use of learning strategies (Oxford, 1990).

Vocabulary learning strategy, as a part of language learning strategy, is one approach of facilitating vocabulary learning, which has attracted increasing attention because vocabulary is a vital element of any language in the process of learning. Many learners and researchers have well acknowledged the importance of vocabulary in a language. As the famous linguists Wilkins (1972) once emphasized: "without grammar very little can be conveyed; without vocabulary, nothing can be conveyed". All the five language skills, i.e., listening, speaking, reading, writing and translation will be affected if the learner lacks of vocabulary. In sum, vocabulary is a crucial component of learning a foreign language.

Vocabulary forms the biggest part for the understanding of any language, and it is also the biggest problem for most learners. As Meara (qtd. in Lawson and Hogben: 102) points out, "learners themselves readily admit that they experience considerable difficulty with vocabulary, and most learners identify the acquisition of vocabulary as their greatest single source of problems." This is not an exception for most Chinese college students. The study of vocabulary learning strategies is regarded as a promising area of enquiry (Ellis, 1994: 554). And vocabulary learning strategies lend themselves to experimental investigation, which O'Malley and Chamot (1990) suggest is now needed to develop the field of learning strategy research. Therefore, in order to help learners to study English vocabulary more effectively, it is necessary to learn about what learning strategies they actually use and consciously lead them to adopt more efficient vocabulary learning strategies in their English vocabulary learning.

The present thesis, based on the previous theoretical framework of vocabulary learning strategy and foreign language pedagogy and the former experimental achievements, explores the positive effects of vocabulary learning strategies on English vocabulary learning for non-English major college students, trying to find out in which aspects vocabulary learning strategies will exert positive

effects on English learning. It also investigates ways for college students to learn English more efficient with the help of vocabulary learning strategies and provides referential data for college English pedagogy to help the teachers make vocabulary learning in class more effective. 1. Do vocabulary-learning strategies positively correlate with English vocabulary size? 2. Can the training of vocabulary learning strategies promote students' vocabulary proficiency? 3. Do the vocabulary learning strategies training work for both the high-score group and the low-score group?

II. RESEARCH METHODOLOGY

A. Subjects

The present study is conducted in Zao Zhuang University where College English is the compulsory subject for the majority of non-English major students in the first two years. Students enrolled in this university for a four-year undergraduate study are divided into different English classes. Each class has 35 to 50 students. Their ages range from 17 to 19. Independent samples T-test is adopted here to investigate whether there is significant difference between the experimental class and control class on the subjects' scores of College Entrance Examination. And the English proficiency of the two classes is at the same level.

B. Instrument

Both qualitative and quantitative research methods are used in the present study. The research instruments include an experiment, a questionnaire, interviews and classroom observations, among which the experiment and the questionnaire are the major parts and interviews and classroom observations are subsidiary instruments for gathering more detailed information about the vocabulary learning strategies adopted or known by the teachers and students.

1) *Questionnaire*: The questionnaire is designed to investigate the beliefs and methods of the students on vocabulary learning strategies. The questionnaire is written in Chinese and required to be finished in Chinese under the instruction. The questionnaire consists of two parts. The first part is about some personal information of the subject, such as their major, their gender, self-assessment of their own English proficiency, the score of their college entrance examination, etc. The other part is 25 items of multiple-choice of students' beliefs and methods on vocabulary learning strategies. The subjects are required to select a number on the 5-point Likert scale.

2) *Research procedures*: The research is conducted in two freshmen's college English classes. The training of vocabulary learning strategies for the experimental class is given once every week in their English class and lasts for one month. The teaching material used for the English class is the students' textbook, namely New Horizon College English (third edition). Data collection and data analysis procedures are included. During the procedure of data

collection, all the participants accomplish the questionnaire, the test of the vocabulary level and two tests before and after the experiment. The computer software SPSS (Statistic Package of Social Science, Version 12.0) is introduced to analyze the data collected in the present study frequently.

III. RESEARCH FINDINGS AND DISCUSSION

In this part, major findings and conclusions from the questionnaire and experiments will be discussed separately.

A. Analysis and Discussion of the Results from the Questionnaire

All the data collected from the questionnaire are input into the SPSS and a variety of results can be provided. The following "Table I" shows the mean and the standard deviation of vocabulary learning strategies used by the subjects.

By using the 5-point Likert scale, we consider that if the mean of one strategy exceeds three, the students use this vocabulary learning strategy more frequently. Otherwise, it is used less frequently. Such questionnaire can provide a variety of results that could be compared with each other. According to the above table, we can draw the conclusion that all the subjects use a wide range of strategies, as no mean score is found to be 1 which-represents "totally inconsistent with me", or 2, "not very consistent with me". With all the scores above 2, it can be assumed that these students employ a wide range of learning strategies listed in the questionnaire.

There are altogether twenty-two vocabulary learning strategies in the questionnaire. From the figures of the descriptive statistics in "Table I", we find that only eight strategies' means are more than three, which indicates the subjects use the eight strategies more frequently. The rank of these eight strategies are: Written Repetition (3. 7246) > Note-taking (3. 4493) > Dictionary Using (3. 3188) > Verbal Repetition (3. 3043) > Word List (3. 2464) > Guessing from Textual Context (3. 2319) > L1 translation (3. 1594) > Affixes and Stems (3. 1159). The overall frequency of the three broad categories of vocabulary learning strategies used by non-English majors in the present study is: cognitive strategy > metacognitive strategy > social/affective strategy.

TABLE I. MEAN AND STANDARD DEVIATION OF THE VOCABULARY LEARNING STRATEGIES

Classification	Vocabulary Learning Strategies		Mean	Std. Deviation	
General Viewpoint	I believe vocabulary learning strategy is quite necessary for vocabulary learning.		4.2754	.68350	
	I think vocabulary learning is just mechanical memory.		2.0275	1.03354	
	I can make choice among different vocabulary learning strategies to facilitate my vocabulary learning.		2.4928	.75971	
Application	Cognitive Strategies	Dictionary Using		3.3188	.71728
		Note-taking		3.4493	.84950
		Word List		3.2464	.60405
		Textual Context	Reading Material	2.5652	.75689
			Phases and idioms	2.9130	.79962
			With sentence	2.9420	.72526
			Guessing	3.2319	.64500
		Repetition	Verbal Repetition	3.3043	.94409
			Written Repetition	3.7246	.68350
		Association		2.9565	.86492
		Affixes and Stems		3.1159	.75802
		Grouping		3.1594	.75971
		Activation		2.8696	.70530
		English-language Media		2.7101	.57141
		Image		2.8406	.71995
		Flash Card		2.2029	.83278
		L1 translation		3.1594	.75971
	Metacognitive Strategies	Planning		2.7826	.74497
		Self-monitoring		2.8696	.66228
		Self-evaluation		2.2899	.66645
	Social Strategies	Native-speaker		2.1884	.75294
		Classmates		2.9855	.93136

After the general observation about “Table I”, some findings need to be addressed.

Among the three beliefs for the vocabulary learning strategies in this questionnaire, most subjects believe vocabulary learning is a very important part and vocabulary-learning strategies should be employed in their English learning ($M=4.2754$, $SD=0.68350$). On the contrary, very few subjects agree to remember the vocabulary by rote ($M=2.0275$, $SD=1.03354$). From the statistic results ($M=2.4928$, $SD=0.75971$) of the third item, it is evident that the subjects don’t know when and how to use the vocabulary learning strategies properly.

In the cognitive strategies, written repetition ($M=3.7246$, $SD=0.68350$) is on the top of the most-used strategies, though their belief reveals that they don’t think remembering the vocabulary by rote is a good way to learn vocabulary. From the class observation and the interview with the students, the author finds out the following factors may account for that result. Firstly, repetition is a simple, fast and direct method to remember the immense vocabulary for the college students. They are preparing for CET4 (College English Test Band 4) while their vocabulary size is quite limited and enlarging their vocabulary is very important for them. Secondly, repetition, especially written repetition is a very traditional means for the students to remember vocabulary since the beginning of their English learning. This traditional repetition method is still most of the students’ favorite.

The least-used strategy from the research of the questionnaire is studying the vocabulary by interacting with native-speakers ($M=2.1884$, $SD=.93136$), which belongs to

the social strategies. In the interview, most students said their spoken English was bad and they couldn’t communicate with foreigners fluently. They were very nervous to speak English with foreigners, though they had been learning English for seven or nine years and they always have high scores in their English tests. And they don’t have so many opportunities to speak with foreigners. Therefore, it is easy for us to understand why the strategy studying the vocabulary by interacting with native-speakers is the least-used strategies for the subjects in this questionnaire research. The other social strategy in the questionnaire is studying words with a group of students, the mean of which is 2.9855. It is also less than 3, which means studying words with a group of students is used less frequently.

B. Analysis and Discussion of the Results from the Vocabulary Level Test

The vocabulary level test adopted by the present thesis is a word level test, made by Norbert Schmitt, Diane Schmitt and C. Clapham, which is a matching format. This kind of matching format not only reduces the number of distractors that have to be made, but also allows many more items to be tested within the same time (Nation, 2001: 350).

Before the research, all the participants are informed that the scores will not be recorded as their academic performance and there is no effect on their course grades. They are also told that their personal information, i.e. their names, school number, will be kept confidential, and the data this thesis collected will be only used for the research.

Pearson correlation coefficient, also known as “Pearson product-moment correlation coefficient”, describes the

intensity degree between the two distance variables (e.g. age and height). After we've got the mean and the standard deviation of vocabulary learning strategies used by the subjects and the scores of subjects' vocabulary level test in the last two sections of this chapter, correlation between

vocabulary learning strategies and vocabulary size is tested here. Pearson correlations between them are computed, from which the first research question is investigated. The following table is the Pearson correlations between vocabulary learning strategies and vocabulary size.

TABLE II. PEARSON CORRELATIONS BETWEEN VOCABULARY LEARNING STRATEGIES AND VOCABULARY LEVEL TEST

Classification	Vocabulary Learning Strategies			Vocabulary Level Test	
General Viewpoint	I believe vocabulary learning strategy is quite necessary for vocabulary learning.			.132	
	I think vocabulary learning is just mechanical memory.			.058	
	I can make choice among different vocabulary learning strategies to facilitate my vocabulary learning.			.368**	
Application	Cognitive Strategies	Dictionary Using		.589**	
		Note-taking		.372	
		Word List		.199	
		Textual Context	Reading Material		.257
			Phases and idioms		.325
			With sentence		.717**
			Guessing		.138
		Repetition	Verbal Repetition		.062
			Written Repetition		.078
		Association		.574**	
		Affixes and Stems		.712**	
		Grouping		.347**	
		Activation		.366*	
		English-language Media		.091	
		Image		.089	
	Flash Card		.035		
	L1 translation		.437*		
	Metacognitive Strategies	Planning		.248	
		Self-monitoring		.549**	
		Self-evaluation		.631**	
	Social Strategies	Native-speaker		.175	
		Classmates		.198	

a. ** refers to the correlation is significant at the 0.01 level (2-tailed).

b. * refers to the correlation is significant at the 0.05 level (2-tailed).

c. No * shows the two items are not significantly correlated.

The correlation coefficient ranges from positive one to negative one. The negative or positive sign in front of the correlation coefficient only refers to the correlation direction and does not mean the degree of correlation. The absolute value of correlation coefficient indicates the degree of correlation (Qin, 2003: 238). In the light of statistics, the absolute value of correlation coefficient between 0.20 and 0.40 is the correlation; from 0.40 to 0.70 is practical relevance and the data between 0.70 and 0.90 is high correlation. From table 3.5, we can see all the correlation coefficients between the vocabulary learning strategies and the results of the vocabulary level test are positive, which reveals that there exists a positive correlation, though the correlation coefficient between some strategies and the results is not so significant.

Among the three beliefs, only the item three, evaluation for vocabulary learning strategy in vocabulary learning ($r = 0.368^{**}$) shows the significant correlation. In the cognitive strategies, using the sentence to remember the word ($r = 0.717^{**}$) and analysis affixes and stems ($r = 0.712^{**}$) have the high correlation. Guessing the words' meaning from the context ($M=3.2319$, $SD=0.645$) is frequently applied by the subjects, but the correlation coefficient with the vocabulary learning is only 0.138. When the subjects guess the words' meaning from the context, the main task for them is to

understand the context. After they get the meaning of the words, they will forget the new words. Besides, it involves learners' own knowledge and skills from many other aspects. Consequently, it is not surprising to get the low correlation for this strategy. We can also find out that though the mean of written repetition ($M=3.7246$) is the highest, it has low correlation with vocabulary learning strategies ($r=0.078$). There is the same situation to verbal repetition.

In the metacognitive strategies, both the self-monitoring ($r=.549$) and self-evaluation ($r=.631$) display practical relevant to the vocabulary learning strategies. Though the subjects don't use them often, their effectiveness is positive. There reveals low correlation in the social strategies. The correlation coefficient for learning vocabulary by interacting with native-speaker is 0.175, and for studying words with a group of students is 0.198, which reveals that most of the subjects in this research are not so capable of communicating in English with foreigners.

In conclusion, this part analyzes the results from the questionnaire and the vocabulary level test. The subjects' attitude and application of the vocabulary are found out through the analysis of the questionnaire. And the research question is also resolved by investigating the correlation between vocabulary learning strategies and vocabulary level

test, from which we sum up that there exists a positive correlation between vocabulary learning strategies and the vocabulary size. This result is consistent with a lot of researches in learning strategies, that is, there is consistently positive relationship between strategy use and L2 proficiency. Take the research of Dreyer and Oxford as an example. They (2004) reported a correlation of .73 between English proficiency scores and strategy use for university ESL learners in South Africa. And as the author mentioned in Chapter one, most of the empirical studies (Rubin, 1987, Oxford, 1990 and Chamot, 1987) on vocabulary learning strategies have revealed that vocabulary learning strategies vary among different learners and enhance vocabulary learning and English proficiency.

C. Evaluation for the Training of Vocabulary Learning Strategies

The test is used as the assessment tool in the pretest and the posttest phase of study. There is a pretest and a posttest before and after the experiment. The vocabulary tests contain recognition (multiple choices) and recall (fill in) items. Two points will be given if the answer is right for each item. There are altogether 50 items and the total score is 100. The vocabulary items in the test are mainly selected from the new lexical items taught and exposed to the subjects in their English course. All together there are 69 valid test paper collected.

The central component of the experiment for the present thesis is the training of vocabulary learning strategies. The study in this part examines the effectiveness of vocabulary learning strategies on English vocabulary learning for non-English major college students. The vocabulary learning strategies training is specifically designed for the experimental class during the students' learning of vocabulary in their college English class. The control class receives instruction to work on the vocabulary learning using whatever procedure they ordinarily employ. That is to say, the control class receives no strategy instruction but instead the subjects in this class are told to learn the words in whatever way they normally do.

The training model used is based on the framework for direct language learning strategies instruction proposed by Chamot and O'Malley (1994). The vocabulary learning strategies for training are selected in view of the results of the subjects' questionnaires. During the training of the vocabulary learning strategies, both teacher-directed and learner-centered activities are included. The training is based on CALLA (the Cognitive Academic Language Learning Approach) model of teaching learning strategies that includes five steps: preparation, presentation, practice, evaluation and expansion. These phases are often recursive in that the teacher may wish to go back to earlier phases in order to clarify or provide additional instruction.

In the pretest, both the experimental group and the control group are at the same level in vocabulary proficiency and there is no significant difference between them. But after receiving the training program of vocabulary learning strategies, the vocabulary proficiency of subjects in the

experimental class has improved significantly. While the vocabulary proficiency of the subjects who do not receive the training program in the control class are still at the same level as before. That means there is significant difference between the control class and the experimental class after the vocabulary learning strategies training. And the vocabulary learning strategies training works for both the high-score group and the low-score group in the experimental class. Therefore, the last two hypotheses put forward in chapter 2 can be testified according to the results in this chapter. The explicit vocabulary learning strategies instruction has a positive effect on the students' vocabulary learning. This result is consistent with researches done by Rubin (1987), Oxford (1990) and Chamot (1987), which have shown that the use of language learning strategies can indeed, facilitate the acquisition of vocabulary, and can enhance language performance as well.

Some factors are contributed to the results of the vocabulary learning strategies training in the present study. This may be explained in the following ways. Firstly, Just as Oxford (1990) points out that the use of appropriate language-learning strategies often result in improving proficiency or achievement overall or in some specific skill areas. It might be due to the relatively discrete nature of vocabulary learning, which makes it easier to apply strategies effectively for the vocabulary learners. Secondly, Both the interviews and the questionnaire show that the subjects in the present research attach great importance to their vocabulary learning and they particularly value vocabulary learning. From the cognitive psychological point of view, the subjects in the experimental class tend to learn and practice the strategies during the training. Finally, The process of the vocabulary learning strategies training itself make the subjects pay more attention to their vocabulary learning in and out of the classroom. Their awareness of using different vocabulary-learning strategies has improved compared with the students in the control class.

IV. CONCLUSION

A. Findings

Three research questions are put forward to investigate the topic of this thesis. The previous parts provide us with both quantitative and qualitative data. The major findings of the empirical study are summarized from the following aspects.

As it was shown in previous part, vocabulary-learning strategies correlate positively with vocabulary size. Cognitive strategies, meta-cognitive strategies and social strategies have positive effects on learners' vocabulary performances. Especially the meta-cognitive strategy, which works as an internal and executive factor in vocabulary performance, is highly correlated with learners' vocabulary size. Cognitive strategy, as a whole, is comparatively frequently used by learners in present study, while neither meta-cognitive nor social/affective strategy is frequently used.

Within four-week training, students in the experimental class are mainly introduced to several cognitive strategies, meta-cognitive strategies as well as social strategies. Students become more aware of the trained strategies, and have a strong tendency to use them. The experimental class outperforms the control class in the posttest of vocabulary, which displays that the training of vocabulary learning strategies has contributed to the improvement of students' vocabulary learning. Results positively support the effectiveness of the training. It shows that the vocabulary learning strategies can promote students' vocabulary proficiency and the cognitive strategies, meta-cognitive strategies and social strategies contribute to vocabulary improvement. The experiment also reveals that vocabulary learning strategies training works for both the high-score group and the low-score group. To sum up, the findings of this study indicate that the explicit vocabulary learning strategies instruction has positive effects on lexical knowledge development of EFL students.

B. Implications

Based on the above findings on strategy training, some general implications can be identified and illustrated. The findings of the present research have implications for learners and teachers in the field of TEFL (teaching English as a foreign language). Both learners and teachers need to become aware of the positive effects of learning strategies through strategies instruction.

According to the results of present study, vocabulary-learning strategies correlate positively with vocabulary size. Therefore, learners should employ more strategies vocabulary learning strategies to facilitate their vocabulary learning. They need to be confident that there exist a number of strategies that can be embedded into their present learning with only modest extra effort and can improve their overall ability of vocabulary learning.

Among the three major types of strategies, meta-cognitive strategies, in particular, are crucial to the success of vocabulary learning. And results of the experiment in this study positively support the effectiveness of the vocabulary learning strategies training which has contributed to the improvement of students' vocabulary learning. Considering these two points, the awareness of meta-cognitive strategies and self-training of the vocabulary learning strategies should be attached great importance by learners. Learners should especially improve the perception of meta-cognitive strategies when they employ a wide variety of strategies in their vocabulary learning. And appropriate self-training can be made consciously in learners' future vocabulary learning strategies use.

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