A Study on English Vocabulary Learning Strategies Used by Chinese College Students

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Abstract

This article is a study on the learning strategies of English vocabulary used by Chinese College English learners. The study is to draw on related theories as well as a case study to ascertain the strategies that are useful for Chinese college students in particular. Due to their large percentage as ESL learners, the study will illuminate the strategies that may be conductive to learning English vocabulary in general. The participants in the study are 119 fourth-year students from Inner Mongolian University for nationalities, China. For data collection, the study applies a vocabulary test and a vocabulary learning strategy questionnaire. And ANOVA is employed for data analysis. The result of the study shows the effecive vocabulary learning strategies of the Chinese college students.

Key words: L2 vocabulary; Chinese college students; Strategies; Frequency of use; Usefulness

INTRODUCTION

Vocabulary learning is a very important aspect for all English learners, especially for learners of ESL. As for the strategies for vocabulary learning, it involves keeping a notebook, or using a dictionary properly, and above all, the learners should be active and independent. And all these strategies are closely related to the learner-centered approach to language teaching, which is based on the assumption that language learners who take intiative in their learning will become more successful. So the strategies employed by good language learners are worthy of further investigation for English teachers and researchers.

The importance of vocabulary learning strategies in second language (L2) study can be illustrated through the application of the schema-based approach to language learning. The learning theory based on information processing and the role of cognitive processes suggests that "the information from long-term memory can be used to enrich the learners' understanding or retention of the new ideas by providing related information or schemata into which the new ideas can be organized" (O'Malley & Chamot,1990, P.18). For L2 learning, only when the appropriate schema for a given language situation or text is activated, will learners have better comprehension of the related text. So Background knowledge is very important to the understanding of L2 texts. Therefore, it's very essential to expore the related English vocabulary learning strategies based on the schema-based theory.

1. THE CLASSIFICATION OF LEARNING STRATEGIES

As we know, the strategies for learning cannot be separated from what is being learned or the process of learning. For the learning of L2 vocabulary, Brown and Payne (1994, as cited in Hatch & Brown,1995, p.373) have identified five steps: (a) having sources for encountering new words, (b) getting a clear image, either visual or auditory or both, of the forms of the new words, (c) learning the meaning of the words, (d) making a strong memory connection between the forms and the meanings of the words, and (e) using the words. Accordingly, all

strategies for learning L2 vocabulary are, to a certain extent, related to these five steps.

But in effect, no classification of the learning strategies of English vocabulary is perfect, and any individual strategy may fall into one category or another, depending on the aspect of focus. All the strategies may generally be classified as those that are "more directly related to individual learning tasks and entail direct manipulation or transformation of the learning materials," that is, the cognitive strategies, and those that are connected with the learning process, planning for learning, monitoring of comprehension or production. Therefore it is necessary to conduct a study that is intended to investigate the relationship between vocabulary learning beliefs and vocabulary learning strategies to see how learners' beliefs about learning affect the choice of strategies.

2. THE PROPER CHOICE OF PROCESSING STRATEGIES

As learning may take place intentionally or unintentionally, we must make a distinction between strategies that involve the learners deep processing and those that do not involve the learners deeply. And according to the theory of cognitive psychology, activities that require a deeper, more involved manipulation of information can promote more effective learning. Even rote repetition can be effective if students use some cognitive approaches. If a generalization can be made, shallower activities may be more suitable for beginners, because they contain less material which may only distract a novice, while intermediate or advanced learners can benefit from the context usually included in deeper activities.

Although evidence from cognitive psychology shows that strategies that require a deeper, more involved manipulation of information are more effective to learning than those that do not (Craik & Tulving, 1975), research findings regarding the effectiveness of L2 vocabulary learning strategies seem to be rather conflicting.

Rote memorization，for example, has been considered an "undesirable" way of learning and is "out of fashion" in communicative language teaching (Read, 2000, p.39). However, the findings of studies show that a large number of words may be learned within a short period of time in this way. In contrast, Mnemonic devices have been regarded as more "desirable" strategies than rote memorization as they involve learners more deeply in the process of learning and can therefore help them to retain more words than rote memorization or repetition. Cohen and Aphek (1981) noted that native English-speaking students reported using meaning, sound, and image association strategies in order to enhance memory of Hebrew words. One kind of association strategy that has been intensively researched is the keyword technique (Atkinson, 1975). This strategy, which associates the meaning, sound, and image of the L1 and L2, has been found to improve retention However, this technique has been criticized for focusing only on receptive vocabulary (Meara, 1980) and for requiring too much effort on the part of the learners (Sternberg, 1987).

The fact is that many learners do use strategies for learning vocabulary, especially when compared with more integrated tasks. Chamot (1987) found that high school ESL learners were reported more strategy use for vocabulary learning than for any other language learning activity, including listening comprehension, oral presentation, and social communication. This might be due to relatively discrete nature of vocabulary learning compared with more integrated language activities, like giving oral presentations, thus making it easier to apply strategies effectively. Besides, many researchers found that strategy use is related to one's learning style and may change according to a person's cognitive approach to learning and his or her attitude toward the task. For example, O'Malley, Russo, and Kuper (1985) found resistance among Asian students to use strategies for imaginery and grouping when learning vocabulary. In their study, the Asian students usually apply rote memorization strategies so successfully that they outperformed the experimental groups, who had been trained in more sophisticated strategies. It shows that these students' characteristics like motivation, aptitude, age, as well as cultural background and learning style are of great importance in the use of learning strategies. So it will be very conductive to explore the learning strategies of Chinese college students who take a large percentage among ESL learners so as to find out a relatively effective English vocabulary learning strategies for ESL learners in general.

3. A CASE STUDY ON ENGLISH VOCABULARY LEARNING STRATEGIES USED BY CHINESE COLLEGE STUDENTS

3.1 Participants and Procedure

The participants in the study were 119 fourth-year students from Inner Mongolian University for Nationalities, among which about 20% are male and 80% female. They have been English-majors for more than three years, and have formed their own views about English vocabulary learning. The age range, the language proficiency, and the strategies of learning for this group of students are representative of those of the students in the same academic year.

First, a vocabulary test was conducted among them. The purpose of the vocabulary test was to make clear the vocabulary size of the students in the study so as to

identify the students' levels of proficiency in English vocabulary. The test is similar to the Word Levels Test discussed by Nation (1990), which contains words at five frequency levels. The 2,000 and 3,000 word levels contain high-frequency words; the University Word List (UWL) level represents one type of specialized vocabulary; the 5,000 word level is on the boundary of high- and low-frequency words; the 10,000 word level contains low-frequency words. The word level test was chosen for the study. The participants were required to match the three definitions with three of the six words provided in each group by writing the numbers of the words before the corresponding definitions.

For example:
a) elementary
b) negative _____ of the beginning stage
c) static _____ not moving or changing
d) random _____ final, furthest
e) reluctant
f) ultimate

Besides, a vocabulary learning strategies questionnaire was assigned to each of them, the main aim of which was to have a better understanding of the strategies used by the students and to identify strategies that may be related to success in learning L2 vocabulary. The questionnaire was designed by Fan (2003), and was revised to cater for the need of the study. The questionnaire includes 60 vocabulary learning strategies grouped into nine categories. The grouping was based on the findings of previous works on vocabulary learning strategies (Gu & Johnson, 1996; Naiman et al., 1978; O'Malley & Chamot, 1990; Oxford, 1990; Rubin, 1981), and on information collected from a pilot study in which students of different language proficiency levels were interviewed, and on the objects of the study, that is, how the students managed their vocabulary learning, how they exploited the sources for new words, how they used strategies to establish the meaning of new words, how they committed words to memory, and how they consolidated the knowledge of words recently learned. Among the 60 strategies, only 56 were used for analysis in this study because of a minor revision in the categorization. The nine categories of strategies are listed in Table 1.

Table 1
The Nine Categories of Vocabulary Learning Strategies

Categories of strategies	Number of items	Section and item number
Management	5	A1- A5
Sources	8	B1-B8
Guessing	8	D1-D8
Dictionary	13	E1-E13
Repetition	5	H1-H5
Association	5	J1-J5
Grouping	5	G1-G5
Analysis	4	I1-I4
Known Words	3	F1-F3

Among the nine groups of strategies, *management* belongs to the category of metacognitive strategies and in the field of social/affective strategies, a *sources* category was established because the sources for encountering new words are very important in the process of learning. Besides, *Repetition, association, grouping* and *analysis* are all memorization strategies for committing new words to memory. Among them, repetition strategies have generally been considered mechanical techniques whereas the other three categories are regarded as strategies involving deep processing.

For each of the items in the questionnaire, students were requested to respond to both of the following: (a) How frequently do you use the strategy stated? and (b) To what extent do you think the same strategy is or may be useful to you? They responded on a 5-point Likert scale, ranging from *never, seldom, sometimes, often* to *very often* for the former and *not useful, not sure it is useful, quite useful, very useful* to *extremely useful* for the latter. This design was adopted from a study by Johnson and Fan (1996) and Fan (1998), which produced some evidence that discrepancies may exist between the frequency of use and the perceived usefulness of vocabulary learning strategies. Schmitt's 1997 study only asked learners to indicate either *yes* or *no* for their response regarding to the use and helpfulness of strategies. By comparison, the 5-point scale has made it possible to collect more detailed and revealing information. These nine categories of strategies were checked for their internal reliability in terms of both frequency of use and perceived usefulness by using Cronbach's alpha coefficient. The results are reported in Table 2.

Table 2
Internal Reliability of the Nine Categories in Frequency of Use and Perceived Usefulness

Categories of strategies	Frequency of use cronbach's a	Perceived usefulness cronbach's a
Management	.707	.673
Sources	.668	.696
Guessing	.662	.753
Dictionary	.746	.808
Repetition	.681	.740
Association	.804	.833
Grouping	.665	.622
Analysis	.712	.700
Known Words	.642	.667

The questionnaire was conducted by using a small group of students from the participants in the study. The purpose was to ensure that the questionnaire covered the strategies that are relevant to learning English vocabulary and that the students could understand the questionnaire easily. All the interviews were recorded and the time for completing the questionnaire was checked.

Both vocabulary test and the questionnaire were administered to the 119 fourth-year English majors from

Inner Mongolian University for nationalities during the participants' regular English classes within two weeks, and the test was administered without telling students that this was for research. Thus, students naturally regarded it as a usual test before the final examination. It took them 20 minutes to finish the test. Then the questionnaire was sent to them at the next regular period in the classroom to the participants, which also lasted for 20 minutes. When filling out the questionnaire, students were asked to give their opinions as honestly as they could. Then both the test and questionnaire were collected and were coded for analysis.

3.2 Data Analysis

Firstly, in order to identify the frequency and effciency of those strategies used, the average mean score for each of the 56 strategies in both frequency of use and perceived usefulness was calculated and rank ordered. Although the two scales are not directly comparable, the rank order can facilitate the comparisons among the 56 strategies within each of the two dimensions.

Secondly, to find out whether there were discrepancies between the frequency of use and effciency of those strategies, the average mean score for each of the nine categories of strategies was calculated for both variables. To check whether there were significant differences among the nine categories in frequency of use and perceived usefulness, ANOVA was applied with the nine categories as an independent variable with nine levels, and the mean scores for frequency of use and perceived usefulness as dependent variables.

Thirdly, in order to identify the strategies used significantly more often by the students who were most proficient in English vocabulary, one-way ANOVA was used with the three groups (High, Middle, and Low) as the independent variables and the mean score for each of the 56 strategies in frequency of use as the dependent variables.

Fourthly, in order to look for the category of strategies that may be especially relevant to the learning of high and low frequency words, Forward Stepwise Multiple Regression was performed with the nine categories of strategies as independent variables and test scores for words at each of the five frequency levels as dependent variables in the five separate analyses. Further, the strategies that are used more often by the students who are most proficient in English vocabulary need to be identified. For this purpose, firstly, it was necessary to find the students who outperformed the others in the vocabulary test, and secondly, the strategies used significantly more often by this proficient group. All the students were first classified into the high-, middle-, and low-scoring groups, according to their overall results on the vocabulary test, with about 33.3% of them in each category. The results of ANOVA using the three scoring groups as the independent variables and their test scores (%) as dependent variables confirmed significant differences among the three groups, $F(2, 1081) = !758.289, p< .001$.

Table 3
Mean Scores (%) of the Three Groups on the Vocabulary Test

Groups	N	M(%)	SD
High	41	93.4	4.5
Middle	40	74.0	2.2
Low	39	63.3	6.1

Note. The three groups were obtained based on the overall results on the vocabulary test with about 33.3% of the subjects under study in each category.

Table 4
Results of One-Way ANOVA on Test Scores by the Three Groups

Groups	df	SS	MS	F	p
Between groups	2	7307.242	3653.121	175.289	.001
Within groups	120	2245.489	20.779		
Total	121				

The results revealed 24 items that were used significantly more often by the high-scoring group, 18 were used significantly more often by the high-scoring groups than by both the middle- and low-scoring groups, and 6 were used more significantly by the high-scoring group than by the low-scoring group.

These findings suggest that the students who are less proficient in L2 vocabulary depend much more on repetition and association strategies in their learning than the more proficient students. Besides, the high-scoring group, like the other two groups, also uses some of the 24 strategies more often than others. For example, they use the strategy, "In reading a sentence or a passage, when I come across a word I have recently learnt, I recall the meaning of the word to help me understand the context" (K2, 4.20/0.76) much more frequently than the strategies "I think about my progress in learning vocabulary" (A4, 2.39/1.04) and "I plan my vocabulary learning" (A1, 2.60/0.92), both of which are management strategies. To some extent, these findings reflect the learning style of the students in the study and may not be applied in a general sense.

CONCLUSION

As the above analysis shows, the students in this study who were the most proficient in English vocabulary used various kinds of strategies more often than those less proficient students. In particular, the proficient students used more sources, guessing, dictionary, and known words strategies than the less proficient students. So this finding is proved to be in accordance with those of many previous

studies on L2 vocabulary (Gu & Johnson, 1996). As for the importance of sources strategies in the learning of L2 words, reading practice after class is shown as important as learning the words attentively in class. In effect, the high-scoring group shows using the strategies like reading newspapers, magazines and novels etc. outside class to enlarge their English vocabulary. Also, they apply the strategy "I pay attention to the new words and expressions used by my teachers and classmates," quite often.

As for the guessing and dictionary strategies, although the learners in the study shows using guessing strategies significantly more often than dictionary strategies, they think the latter strategy more useful. But those more proficient students shows using both categories of strategies much more often than the less proficient groups. These findings show that students need to apply both guessing and dictionary strategies to learn new words effectively. These finding confirm the previous studies of Gu and Johnson (1996) and indicate that neither category should be promoted at the expense of the other in L2 teachings

Besides, the study also shows the importance of reviewing and consolidating the knowledge of newly learned words when learning L2 vocabulary. "In reading a sentence or a passage, when I come across a word I have newly learned, I recall the meaning of the word to help me understand the context," which was the only strategy most frequently used and perceived to be most useful by all the students in the study, is actually used more frenquently by those most proficient students. This implies the effectiveness of this strategy, so all students should use it as often as possible. In contrast, the study shows that both repetition and association strategies may not be useful for learning L2 vocabulary, for the less proficient groups in the study use these strategies more often than the most proficient group. These findings contradict those of O'Malley et al. (1985), who reported that Asian students applied rote memorization strategies successfully in learning L2 vocabulary, as well as the findings in other previous research that association strategies enhance learning (e.g., Cohen & Aphek, 1981; Hulstijn, 1997). In spite of this contradiction, the findings of this study provide valuable information concerning the English vocabulary learning strategy used by Chinese college students. More importantly, the study has identified the strategies that may contribute to the successful learning L2 vocabulary. Besides, the findings of this study also show some complicated relationships between different norms such as the frequency of the strategies used and the effectiveness of the strategies, thus giving us further knowledge concerning the strategy use of L2 learners and offering direct guidance for the learning and teaching of L2 vocabulary.

Concerning the deep and surface processing learning strategies, repetition strategies, which are mechanical strategies, have been found to be related to poor learning. However, there is no sound evidence in this study to confirm the previous studies that "the more desirable strategies", such as association strategies, are connected with high vocabulary proficiency. So to sum up, the effective vocabulary learning strategies will help students see the relevance of strategy use in learning L2 vocabulary and introduce them to the strategies used often by proficient vocabulary learners and finally encourage them to develop their own effective learning strategies.

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