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An Analysis of Junior High School Students' English Vocabulary Learning Strategies

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ABSTRACT
This paper investigated 115 junior high school freshmen and their English vocabulary test papers and English vocabulary learning strategies to understand the overall situation of junior high school freshmen's use of English vocabulary learning strategies, and explored the differences in English vocabulary learning strategies between high proficiency groups and low proficiency groups. The results found that there is a significant and positive correlation between English vocabulary learning strategies and English performance, and there is a large difference between the high proficiency group and the low proficiency group in the use of strategies.

Keywords: *English vocabulary strategies; junior high school students; English vocabulary achievement*

1.INTRODUCTION

Vocabulary, as the cornerstone of language learning, is regarded as an indispensable factor in learning a foreign language. To effectively memorize English vocabulary, mastering certain English vocabulary learning strategies is a must. Previous studies at home and abroad mainly focus on high school students and college students, while the research on junior high school students is relatively few. This study aims to investigate the following questions: (1) What is the junior high freshmen's learning beliefs in English vocabulary ; (2) What vocabulary learning strategies are employed by junior high school freshmen?(3) What is the correlation between the English vocabulary learning strategies of junior high school freshmen and their English vocabulary achievement? (4) What are the differences between the high and low proficiency groups of junior high school freshmen while choosing vocabulary learning strategies? The understanding of junior high school freshmen's current English vocabulary learning beliefs and the ability to use English vocabulary learning strategies will hopefully be helpful and instructive to junior high school English vocabulary teaching in the future.

2.RESEARCH METHOD

2.1Research objects

In this study, 115 junior high school freshmen were selected from the First Experimental School in Sanming City, Fujian Province. The students in this school were admitted to neighborhood school and were randomly divided into classes after entering the school. To meet the need of research, the author conducted an English vocabulary test for the students. Among all the 115 valid subjects, the top 25% and the bottom 25% (28 students each) were regarded as the high proficiency group and the low proficiency group respectively.

2.2Research tools

Three forms of research tools including English vocabulary strategy questionnaire, English vocabulary test paper and interview were adopted in this study.

2.2.1English vocabulary learning strategy questionnaire

The questionnaire is categorized into three parts: personal information, English vocabulary learning beliefs and the use of English vocabulary learning strategies. Among them, personal information consists of name, gender and class. The part of English vocabulary learning beliefs refers to the classification

adopted by Wu Xia, Wang Qiang. (1998) [1], including three dimensions: (1) vocabulary learned by rote; (2) vocabulary learned in context; (3) vocabulary learned in use. The classification of English vocabulary learning strategy questionnaire refers to the classification method of Chamot & O 'Malley, which divides English vocabulary learning strategies into cognitive strategy, metacognitive strategy and social-affective strategy. The specific questions of this questionnaire refer to the *Questionnaire of Chinese Students' Vocabulary Learning Strategies* by Gu Yongqi (1996) [2], and combine with the suggestions of teachers. After a small-scale test, it is revised and compiled. The questionnaire adopted Likert scale, ranging from "strongly disagree" to "strongly agree".

2.2.2English vocabulary test paper

The English vocabulary test paper adopted in this study was created by Wang Qiufeng (2011) [3]. From the glossary in the appendix of the first and second grade English textbooks of PEP, 50 words were randomly selected at equal distance and divided into three grades, represented by ABC. Option A refers to "I have never seen this word before", with a score of 0; Option B means "I have seen this word before but don't know its meaning", with a score of 1; Option C means "I learned this word, and its meaning is __". Students can obtain 2 scores if they fill in the blank with the right meaning of the words while 0 with an incorrect answer. The test paper scores were graded by the English teacher who teaches the class.

2.2.3Interviews

After sorting out all the data from questionnaires and English vocabulary test papers, the author designed interview questions for certain phenomena, and interviewed ten students as well as three English teachers. After the interview, all the interview materials were unscrambled and analyzed by combining with the data collected by the questionnaire.

2.2.4Data collection and analysis

125 questionnaires were sent out, 10 invalid questionnaires were eliminated, and 115 valid questionnaires were valid, with an effective rate of 92%. The data were quantitatively analyzed by SPSS 19.0. The reliability of the English vocabulary learning strategy questionnaire is 0.951 and the validity KMO of the questionnaire is 0.898.

3.RESULTS AND DISCUSSION

3.1Junior high school freshmen English vocabulary learning beliefs

3.1.1Analysis of the overall use of English vocabulary concepts

Table 1 Junior high school freshmen English vocabulary learning beliefs

Dimension	Concept	Question number	Average	Standard deviation
Vocabulary learning beliefs	Vocabulary learned by rote	(1)	2.82	1.192
		(2)		1.034
		(3)		1.283
	Vocabulary learned in context	(4)	4.08	. 937
		(5)		1.047
		(6)		. 967
	Vocabulary learned in use	(7)	4.06	. 964
		(8)		. 925
		(9)		1.125

It can be seen from Table 1 that the average values of "vocabulary learned in context" and "vocabulary learned in use" are much higher than the average value of "vocabulary learned by rote", indicating that junior high school freshmen prefer to acquire vocabulary through context and in the process of application. The reason is that in the traditional English teaching, due to the lack of necessary learning environment and few opportunities to use English, teachers generally adopt mechanical methods such as repetition and copying to teach students to memorize words. Nowadays, the current English learning environment has been optimized, teachers' teaching ideas are more mature, and schools have provided more diversified learning environments, such as digital multimedia, enabling students to have more channels and opportunities to

contact and apply English vocabulary, implying the change of students' English vocabulary learning beliefs.

3.2The use of English vocabulary learning strategies

Table 2 The use of English vocabulary learning strategies

Dimension	Strategy	Classification	Average	Standard deviation
Metacognitive strategy	Preplanning	Making a plan	3.17	1.139
		Implementing the plan	3.77	1.001
	Selective attention	Paying attention to key words	4.15	1.011
		Selecting the key points	3.86	1.025
	Self-monitoring	Periodic testing	3.30	1.164
		Adjusting strategy	3.75	1.025
	Self-assessment	Summarizing experience	3.67	1.106
	Active learning	Active reading	3.19	1.025
		Accumulating words actively	3.62	1.136
Cognitive strategy	Dictionary	Looking up the dictionary frequently	3.13	1.295
		Writing down the content	3.49	1.217
		Understanding the usage	3.17	1.194
		Understanding the content	3.01	1.225
		Understanding the meaning of words	2.97	1.232
	Guessing	According to common sense	3.79	. 941
		According to language environment	3.82	1.005
		According to word formation	3.34	1.228
		According to the relationship between sentences	3.52	1.224
		According to context	3.52	1.095
	Taking notes	Writing down the meaning and usage	3.06	1.346
	Classified memorization	Classify according to word meaning category	3.71	1.145
	Repeated recitation	Repeated copying	2.87	1.335
		Writing while reading	3.65	1.170
		Reading aloud repeatedly	3.50	1.158
	Associative memory	Association of sound, form and meaning	3.51	1.231
		Picture association	3.53	1.180
	Contextual memory	Memorizing in sentences	3.50	1.150
	Application	Oral and written communication	3.67	1.066
		Extensive reading	3.41	1.263
		Sentence-making exercises	3.35	1.155

Social-affective strategy	Cooperation	Asking each other questions	3.10	1.277
		Exchanging experience	2.64	1.186
	Incentive	Self-motivation	3.50	1.071

3.2.1Application of the metacognitive strategy

From the perspective of metacognitive strategy, the order of average from high to low is: selective attention > self-assessment > self-monitoring > preplanning > active learning. Among them, the average value of "selective attention" is the highest, and most students in the interview indicated that they would circle or mark the key words repeatedly mentioned by teachers in class since these contents are important scoring points in the exam. It can also be seen from the ranking that the average values of preplanning and active learning are low. The students interviewed said that they rarely make vocabulary learning plans, and they will not stipulate the number of words they need to remember every week; They also said that they would not take the initiative to find extracurricular English reading materials except what the teacher asked them to learn. Meanwhile, the teachers interviewed reported that junior high school freshmen had just entered junior high school from primary school, and many study habits had not been developed, and their self-control ability was weak. It can thus be seen that preplanning and active learning are closely linked and complementary to each other.

3.2.2Application of cognitive strategy

With regard to cognitive strategy, students employ a variety of strategies to learn English vocabulary, among which classified memory, guess, associative memory and contextual memory are commonly used in turn; The less frequently used strategies are application, repeated recitation, dictionary and taking notes in turn. "Classified memory" is the most frequently used strategy. It is learned from interviews that teachers often list a series of words related to certain word when explaining, and students will pack these words for memory, showing that teachers' correct guidance is quite helpful for students to learn English vocabulary. In addition, the most frequently used strategy is "taking notes". According to the interview, most students said that they can only simply write down the Chinese meanings of new words, but seldom remember the usage of vocabulary, indicating that students have not generally developed a good habit of taking notes, and have not realized the importance of taking notes for the review stage. To sum up, the use of dictionary strategy is less frequent, because teachers fail to provide relevant guidance, resulting in students do not know that using dictionaries is an effective English vocabulary learning strategy. Therefore, teachers should emphasize the importance of dictionaries in English vocabulary learning, teach and train students to learn how to use dictionaries, and cultivate students' autonomous learning ability.

3.2.3Application of social-affective strategy

As for social-affective strategy, the average value of self-motivation is on the high side. Students said in interviews that in the process of learning English vocabulary, they sometimes give themselves psychological hints, tell themselves the importance of English vocabulary, and obtain a sense of accomplishment when they acquire certain amount of vocabulary and motivate themselves; However, the average value of cooperation strategy is low. In the interview, many students said that they seldom communicate with teachers, and some students said that they were "afraid to ask". Even though they communicated more with their classmates, they still thought that they were "not used to communicating in public". Another reason may be related to teachers' teaching requirements and orientations. Some teachers fail to perform interaction in class, get used to the "what I say counts" teaching mode, and do not provide guidance in communication and cooperation (Wei Jianheng, 2012) [4].

To sum up, teachers can exploit some teaching methods, such as applied teaching and interactive teaching, to create English communication opportunities between students or between teachers and students in class, so as to promote English vocabulary learning.

3.3Correlation between English vocabulary learning strategies and English vocabulary achievement

Table 3 Correlation between vocabulary learning strategies and vocabulary achievement

Dimension	Correlation coefficient	Significance
Total strategy score	. 518**	. 000
Metacognitive strategy	. 535**	. 000
Cognitive strategy	. 510**	. 000
Social-affective strategy	. 282**	. 002

The data in Table 3 show that there is a significant correlation between English vocabulary learning strategies and English vocabulary test scores at the level of 0.01, meaning that there is a strong positive

correlation between English vocabulary learning strategies and English vocabulary scores, and the use of English vocabulary strategies has an obvious impact on English vocabulary scores.

It can be seen from the correlation coefficient of metacognitive strategy in Table 3 that metacognitive strategy has the greatest influence on English vocabulary achievement, showing that the better students apply this strategy, the higher their English vocabulary scores will be. Effective use of metacognitive strategy can cultivate students' enthusiasm for active learning, and meanwhile promote learners to control their own learning process in an active way, formulate and supervise their own learning plans, and make timely adjustments and feedback on their own learning situation.

When using Pearson Correlation Coefficient to analyze the correlation between English vocabulary learning strategies and English vocabulary achievement, it is found that 19 specific cognitive strategies are significantly correlated with English vocabulary achievement. The most significant correlation with English vocabulary achievement is "guessing word meaning according to word formation" . As a method of English vocabulary learning, word formation can not only promote the understanding and memory of English vocabulary, but also help students discriminate and analyze English vocabulary, and promote the cultivation of English vocabulary autonomous learning ability.

Comparatively speaking, the correlation coefficient of social-affective strategy is low among the three strategies. However, social-affective strategy still has an impact on English vocabulary achievement, so the important role of cooperative communication and self-motivation in English vocabulary learning cannot be ignored.

3.4Differences in English vocabulary learning strategies between high proficiency group and low proficiency group

Table 4 Comparison of vocabulary learning strategies between high proficiency students and low proficiency students

Dimension	Strategy	Question number	High proficiency group	Low proficiency group	T value	P value
			Average	Average		
Metacognitive strategy	Preplanning	(3)	3.64	2.75	3.178**	. 002
		(12)	4.04	3.00	4.16***	. 000
	Selective attention	(6)	4.64	3.36	5.531***	. 000
		(8)	4.07	3.54	1.954	. 056
	Self-monitoring	(5)	3.79	2.71	3.790***	. 000
		(21)	4.36	3.21	4.899***	. 000
	Self-assessment	(1)	3.93	3.14	2.716**	. 009
	Active learning	(10)	4.00	2.29	6.315***	. 000
		(15)	4.25	3.04	4.712***	. 000
Cognitive strategy	Dictionary	(2)	3.89	2.39	4.815***	. 000
		(7)	4.00	3.00	3.074**	. 003
		(14)	3.71	2.46	4.147***	. 000
		(25)	3.39	2.57	2.442*	. 018
		(29)	3.29	2.68	1.761	. 084
	Guessing	(9)	4.25	3.21	4.295***	. 000
		(11)	4.25	3.07	4.825***	. 000

		(4)	4.14	2.57	5.975***	. 000
		(24)	4.18	2.75	5.098***	. 000
		(20)	3.96	2.89	3.815***	. 000
	Taking notes	(26)	3.71	2.46	3.780***	. 000
	Classified memory	(16)	4.11	3.21	3.241**	. 002
	Repeated recitation	(18)	2.68	2.82	-. 414	. 681
		(23)	4.18	3.21	3.517***	. 001
		(27)	3.43	3.14	0.899	. 372
	Associative memory	(19)	4.04	3.00	3.381***	. 001
		(22)	4.11	2.18	3.172**	. 002
	Contextual memory	(13)	4.07	2.93	3.711***	. 000
	Application	(17)	4.07	3.00	4.258***	. 000
		(28)	3.89	2.79	3.950***	. 000
		(33)	3.75	2.96	2.831**	. 006
Social-affective strategy	Cooperation	(30)	3.32	2.75	1.786	. 080
		(31)	3.18	2.32	2.853**	. 006
	Incentive	(32)	3.93	3.07	3.102**	. 003

In this study, through independent-samples t-test, it is found that there are significant differences in strategy use between high proficiency group and low proficiency group, and the results are shown in Table 4.

In terms of metacognitive strategy, the average of high proficiency group is higher than that of low proficiency group, which indicates that high proficiency students often adopt metacognitive strategy, are better at managing and regulating their own learning, and have stronger ability of autonomous learning. Moreover, among the five strategies of metacognition, the difference between high proficiency group and low proficiency group is the most obvious in the strategy of "active learning". In the interview, the students in the high proficiency group indicated that they would actively find English picture books and use online resources to learn English vocabulary in their spare time, while the students in the low proficiency group mentioned that they only learned the content related to exams, which also reflects the weak sense of autonomous learning in the low proficiency group.

With regard to cognitive strategy, significant differences appear in associative strategy, guessing strategy and note-taking strategy between high and low proficiency groups. First of all, the high proficiency group is good at using associative strategy to memorize words by various means such as word form, pronunciation and associative pictures, while the low proficiency group is more likely to memorize words by repeated recitation and other strategies that rely more on mechanical memory. Secondly, the high proficiency group is good at applying guessing strategy. In the interview, they said that they would judge the basic meanings of new words according to the relationship between sentences, such as transition, cause and effect, and using prefixes and suffixes of some words. It is learned from the interview with the teachers that the teachers have introduced the relationship between sentences and word formation in class, which means that the low proficiency group is not concentrated enough in class and failed to take notes, which leads to the inability to use it when doing exercises. Finally, the average value of the low proficiency group in note-taking strategy is less than 2.5, showing that the students in low proficiency group seldom take notes, so they have no impression of the knowledge points that the teacher has said and have not developed the habit of reviewing notes after class.

As for social-affective strategy, the average value of each strategy in high proficiency group is greater than that in low proficiency group. According to the interview, the high proficiency group considers self-motivation as a type of positive autosuggestion and it is beneficial to learn English vocabulary by instilling positive psychological hints such as "vocabulary is very important for English learning" and giving appropriate

rewards when achieving the goals. However, the students in the low proficiency group possess low self-motivation. The average value of "cooperation strategy" of high proficiency group is higher than that of low proficiency group because high proficiency students often recite words and ask each other questions with classmates. This mutual help is beneficial for both sides to strengthen their memory of words and relax their brains at the same time, indicating that high proficiency students have stronger autonomy learning ability and know which learning method can effectively help them learn English vocabulary, which is one of the motives driving them to communicate and cooperate; while low proficiency students said that they do not talk about learning with their classmates, implying that they are not aware of the role of cooperation and communication in English vocabulary learning, and their awareness of autonomous learning is weak.

4.CONCLUSIONS

Based on the investigation and analysis of the relationship between junior high school freshmen's English vocabulary learning strategies and English vocabulary achievement, this study draws the following conclusions: (1) Junior high school freshmen is more receptive to the concept of learning vocabulary in context and in application than to the concept of learning by rote; (2) Junior high school freshmen adopt metacognitive strategy and cognitive strategy more frequently than social-affective strategy; (3) Junior high school freshmen's English vocabulary learning strategies are significantly correlated with their English vocabulary achievement, showing a significant positive correlation at 0.01 level. There is a significant positive correlation between 31 of the 33 strategies and scores. (4) There are obvious differences between the high proficiency group and the low proficiency group in junior high school freshmen in terms of metacognitive strategy and cognitive strategy, and the high proficiency group shows higher autonomous learning ability and strategy application ability.

Based on the above findings, this study proposes some suggestions on vocabulary teaching in junior high schools. First, teachers should strengthen the training of students in memorizing English vocabulary. Although learning vocabulary by rote is not the best way to learn and memorize English vocabulary, considering that English is currently not a social language in China, students have no chance to contact and use English out of classroom, repeated recitation and practice of English vocabulary still play a certain role in learning foreign languages at present, thus proper repetitive memory is still necessary.

Secondly, through the analysis of metacognitive strategy, it is found that students' autonomous learning ability needs to be further improved. Autonomous learning can help students cultivate independent thinking consciousness and active learning attitude, so teachers should strongly advocate autonomous learning strategies to help students understand metacognitive strategy and use autonomous learning strategies skillfully.

Thirdly, in cognitive strategy, association, guessing and note-taking have a great influence on students' vocabulary learning. However, low proficiency students cannot master and use these strategies skillfully and flexibly. Hence, in the future teaching activities, teachers should emphasize the use of picture association and sound-form-meaning association to memorize vocabulary, stress the use of various vocabulary guessing methods to judge word class and meaning, and highlight the importance of taking notes frequently and reviewing vocabulary with notes.

Fourth, in terms of social-affective strategy, teachers should encourage low proficiency students in class, so that they can feel their own progress and a sense of accomplishment in learning; meanwhile, the dialogue and communication between teachers and students and the interaction and cooperation between students should also be consciously promoted to stimulate the motivation of learning and create opportunities to practice language in cooperation.

REFERENCES

[1] O 'Malley, J.M. & Chamot, A.U. (2001) Learning Strategies in Second Language Acquisition. Shanghai Foreign Language Education Press, Shanghai.

[2] Wu Xia, Wang Qiang. (1998) English Vocabulary Learning Strategies for Non-English Majors. Foreign Language Teaching and Research, 01: 55-59.

[3] Wang Qiufeng. A Study of Relationship between Senior High School Students' Vocabulary Learning Strategy Use, Vocabulary Size and English Proficiency. Shandong University, 2011.

[4] Li Songhao. (2006) An Empirical Investigation and Analysis of Junior High School Students' Use of English Vocabulary Learning Strategies. Foreign Language and Literature Studies, 2: 99-103.

[5] Ma Guanghui. (1997) A study on the Differences of Learning Strategies between High-grade Students and Low-grade Students. Foreign Language World, 2: 38-40.

[6] Gu Yongqi. (1996) Vocabulary Memory Strategies, Vocabulary Size and Changes in English Achievement. Shaanxi Normal University Press, Xi'an.

[7] Cheng Xiaotang & Zheng Min. (2002) English Learning Strategies. Foreign Language Teaching and Research Publishing House, Beijing.

[8] Wu Xiaohong. A Comparative Study of Vocabulary Learning Strategies between Excellent Students and Poor Students in Junior High School. Central China Normal University, 2017.

[9] Zhang Ping. (2006) Research on Second Language Vocabulary Acquisition: A Ten-year Review and Prospect. Foreign Languages and Their Teaching, 6: 21-26.

[10] Wen Qiufang. (1996) On English Learning Strategies. Shanghai Foreign Language Education Press, Shanghai.

[11] Yang Jinfeng & Gong Yuer. (2004) The Relationship between English Vocabulary Learning Strategies and Academic Achievement. Foreign Language and Literature Studies, 4: 40-44.

[12] Wei Hengjian. (2012) The Relationship between English Vocabulary Learning Strategies and English Achievement. Journal of Basic English Education, 14: 27-36.