

Vocabulary Study Strategies: Prevalence among L2 learners

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Abstract

The primacy of building students' vocabulary in many EFL programs has led to increasing research in the area. Studies often attempt to compare vocabulary teaching styles; however, before deciding on the best teaching strategy, it is important to observe which methods students prefer and employ. This research sought to identify the most popular vocabulary study methods among EFL students and look for patterns in those choices when compared to second language proficiency level, class groups, and gender. An online survey was conducted and 139 responses from undergraduate students were recorded. The results showed that memorizing the translation of the vocabulary item and rote copying, writing the item again and again, were the two most commonly reported forms of study. With respect to study patterns in various groups, there were no significant differences found. That is to say, proficiency level, class level/group, and gender showed no differences when the chosen study methods were compared between groups. Now that the popular methods for this population have been identified, future research should focus on whether these self-selected methods are the most efficient and effective or not.

Key terms: vocabulary, study methods, EFL, learning, survey

Literature Review

Research into the teaching methods of vocabulary for L2 learners has been growing over the last 20 years, with works like Paul Nation's 1990 book, *Teaching and Learning Vocabulary*. What teaching strategies help learners the most? Various studies look into the effect of vocabulary teaching methods: each trying to pinpoint which is the most effective. For example, Hoshino (2010) looked at the effect of different kinds of word lists on vocabulary acquisition while others looked at the effect of using keywords (Avila & Sadoski, 1996; Brown & Perry, 1991). Further examples include the effect of learning using context (Chin, 2000), encoding vocabulary with visual cues such as pictures (Shen, 2010; Lotto & De Groot, 1998; Levine & Reves, 1990), and even just listening to the teacher and picking up vocabulary incidentally (Horst, 2010). Recent enthusiasm in the area of collocations has led to research into explicit collocation instruction (Hsu, 2010). Even simple, rote repetition has been shown to have an effect on vocabulary acquisition (Hummel, 2010; Al-Qarni, 2003). With these many types of vocabulary teaching strategies along with many others not listed here, teachers have a wide arsenal of techniques to try in the classroom.

However, what strategies do students use when studying vocabulary? Do they try to mimic the techniques used in class, such as encoding the vocabulary with visual cues or studying collocations, or do they have their own method? Gu and Johnson (1996) looked at vocabulary learning strategies in a massive survey of more than 800 adult, Chinese EFL learners. Rather than comparing the actual methods students used, the 108 item questionnaire (not including biographical questions) grouped participants' general vocabulary study methods into various types. Among other findings, they reported that methods involving active memorization were not commonly used. Another study which surveyed students' vocabulary study methods compared the results of males vs. females (Jimenez-Catalan, 2003). Results from the nearly 600 Spanish-speaking students showed that males and females shared most strategies; however, they differed in proportion. Females tended to use formal rule and rehearsal strategies while males had higher use of image vocabulary learning strategies. Furthermore, females tended to use a wider variety of strategies. These studies helped illuminate the general study methods that learners use, but they tended not to consider specific vocabulary study techniques. This present research will examine a survey of 139 EFL learners at a Japanese university in an attempt to uncover the most popular, non-categorized form of vocabulary study.

Research Questions

Using survey data, the following research questions will be examined. Beginning with a general question, the focus will then shift to see if there are any patterns to the various kinds of vocabulary study. Four main questions will be examined:

- (1) What method of vocabulary study is most often used, according to self-reported survey data?
- (2) Do students with differing vocabulary study methods also differ in their (reported) English proficiency on TOEFL pbt (Paper-based version of the Test of English as a Foreign Language, a widely used and accepted test of English proficiency)?
- (3) Do differing class levels (which contain a wide variety of TOEFL scores) have differing vocabulary study methods?
- (4) Does gender affect the choice of vocabulary study methods?

Methodology

Participants

The participants for this study included 139 EFL students (ages 18 to 21) from Ritsumeikan Asia Pacific University in south western Japan. The number of males to females was 54% (n=75) and 46% (n=64) respectively. The university as a whole has nearly 50% non-Japanese students; however, the percentage of international students taking English classes is dramatically less. Indeed, in this survey Japanese students accounted for 88% of the participants while Chinese and Korean totalled about 6% each. The average reported length of English study (in years), hours of vocabulary study per week, and TOEFL scores are shown in Table 1.

	N	Minimum	Maximum	Mean	SD
Years of English study	139	1	16	7.2	2.5
Best TOEFL score	124	300	650	430.1	42.0
Hours of vocabulary study / week	139	0	30	4.9	5.9

Table 1: Self-reported English study statistics

The participants were divided into four class levels at their institution. While originally placed according to TOEFL scores, students move up levels not based heavily on TOEFL scores, but rather on various in-house assessments of speaking, listening, and writing. Therefore, within a class level there is a wide variety of TOEFL proficiency. These levels are named (shown in ascending order) elementary (n=32), pre-intermediate (n=5), intermediate (n=90), and advanced (n=11). This group of participants appears to hold the study of vocabulary in high regard. They were asked on the survey to agree or disagree with the statement, "I think vocabulary is the most important thing to study to improve my English." Figure 1 illustrates their responses which were overwhelmingly in agreement.

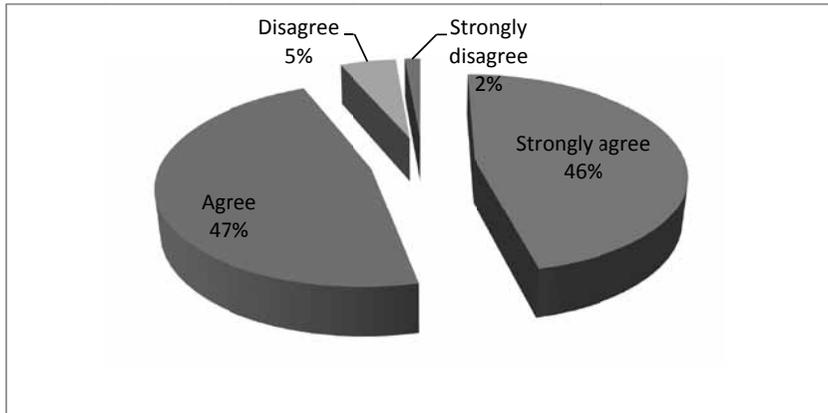


Figure 1: Responses to a statement about the importance of vocabulary

Instruments

The short survey used in this study consisted of 10 items (Appendix 1). Participants answered the survey online via SurveyMonkey. As with Gu and Johnson (1996), the questions appeared with an L1 translation, in this case Japanese. Although some students were not native Japanese speakers, the required Japanese proficiency level to enter the university would presume that they could understand the simple questions in this survey. There were multiple choice, numerical answer, and open-ended questions given.

Procedure

Students were asked by their English teachers to voluntarily answer a short questionnaire about “English study” and some completed the untimed survey in-class while others tried it from home. They weren’t specifically told that the purpose of the questionnaire was vocabulary related; however, with only 10 items, they likely surmised the topic after reading the questions. SPSS software was used for the statistical analysis. Several transformations were required as large portions of the data were imported as string variables (e.g., gender, nationality, class level). This meant that text items were given numerical designations necessary for analysis in SPSS.

The results required several different analyses in order to answer the research questions stated above. Specifically, descriptive statistics were used to compare study strategies while an ANOVA was calculated to see if the reported TOEFL scores differ significantly depending on what strategies particular participants use. Finally, chi-square was used to show whether (a) different class levels and (b) males and females use different learning strategies.

Results

In order to address the first research question as to which vocabulary study method was the most popular, the frequencies were compared and showed that memorizing the L1 translation was the most popular method for this group of participants (Figure 2). On this question in which participants could choose more than one response, more than half chose to include memorizing the L1 translation while just over a third selected rote copying as one of the methods of vocabulary study they use. About 20% of the responses fell to each of the following: make a sentence, synonym/collocation, and other. The only study method less popular than memorizing the English definition at 16% was drawing a picture which accounted for just 2.2% (n=3) of the responses.

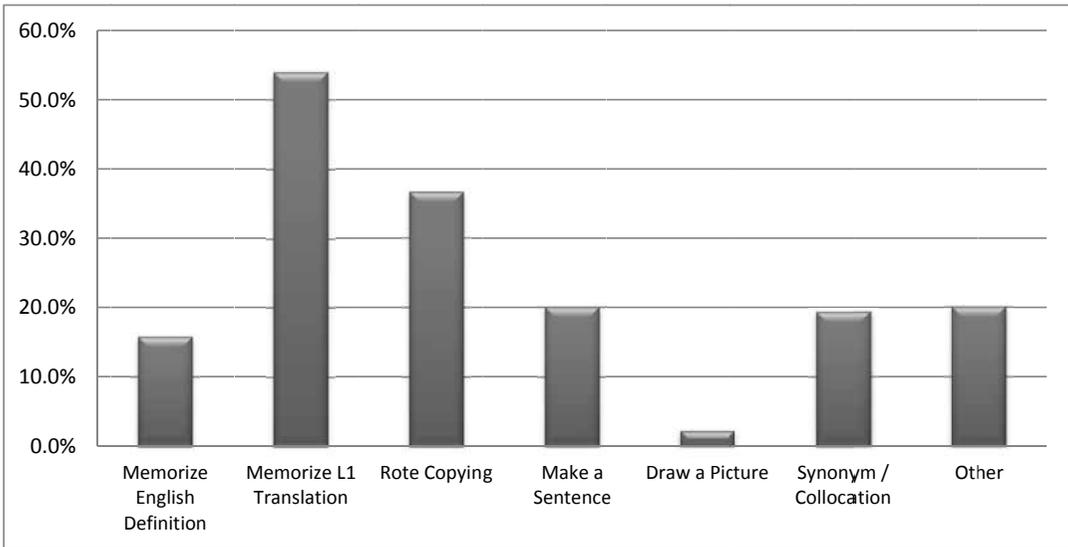


Figure 2: The percentages of reported vocabulary study method

When comparing vocabulary study strategies which use memorization and those that don't rely heavily on explicit, uncontextualized memorization, the results showed that participants often included memorization of the target word alone in their study method. 83% (n=114) of participants used this kind of memorization as part of their vocabulary study habit while just 17% (n=23) did not.

The second research question necessitated comparing the means of the reported TOEFL scores for the various vocabulary study methods. A one-way ANOVA revealed a lack of any significant differences between the methods (Table 2). This F statistic is profoundly low which shows that the variance of TOEFL scores within the each method did not differ between methods. Despite observing means that differed noticeably between some groups, the disproportionate n-sizes and large standard deviations (which mean there is a large spread in scores) completely nullified any significant differences when tested with an analysis of variance. After attempting to group and collapse various data and still finding no significance, it can be concluded that the differing study methods do not result in significantly different reported TOEFL scores for this group of participants.

Source	DF	Sum squares	Mean square	F-test	p
Between groups	6	4226.5	704.4	.388	.886
Within groups	117	212682.4	1817.8		
Total	123	216908.9			

Table 2: ANOVA table for differing vocabulary study methods

For the third and fourth research questions, chi-square analyses were required. Chi-square checks to see if the frequencies observed are the same as expected by chance distribution, or whether there is a pattern not determined by chance. When cross-tabulating class level and study method, the result showed significance ($X^2=30.4$; $df=18$; $p=0.033$). That is to say, class level appeared to have an effect on the choice of study method. However, on closer inspection, the calculation had broken the assumptions needed for valid results. The assumption is that at least 80% of the cells should have an expected count over 5. However, in this analysis, less than 30% of the cells had an expected count over 5. By collapsing the class divisions from four to two (the highest two and lowest two) and using only the most common study

strategies of L1 translation, rote copying, or multiple methods, a chi-square that didn't violate any assumptions was achieved (Table 3). However, it is clear that when the proper assumptions are met, the groups do not differ significantly. In fact, the count and expected count are strikingly similar, nearly exact. This means that the frequency of responses is nearly the same as they would be if it were distributed by chance. There are no differences in preference of study method between class levels.

Table 3: Cross-tabulation of combined class levels and popular study methods ($X^2=0.212$; $df=2$; $p=0.900$)

		L1 translation	Rote Copying	Multiple method	Total
Elementary / Pre-Inter.	count	5	9	10	24
	expected	5.8	9.0	9.3	
Intermediate / Advanced	count	18	27	27	72
	expected	17.3	27.0	27.8	
Total		23	36	37	96

Similar results were discovered when looking for associations between gender and study strategy. For example, gender versus L1 translation, rote copying, and multiple methods showed a non-significant, chi-square result ($X^2=1.88$; $df=2$; $p=0.390$). One further analysis with respect to gender was performed to compare the reported use of single or multiple strategies: once again, there was no significance ($X^2=0.007$; $df=1$; $p=0.935$).

Discussion

L1 translation being the most common method of vocabulary study chosen by the participants, who believe vocabulary study is crucial to English learning, was somewhat surprising since it seems quite a boring method of study. However, word lists and vocabulary text books that are filled with thousands of English words and their L1 translations are very popular in Japan. EFL learners in Japan seem to have conceded that this is the best or fastest way to study. Furthermore, memorization played a central role in most participants' vocabulary study methods, which contradicts the findings of Gu and Johnson (1996). This may be due to the different participant population, the effects of change over time, or an artifact of the research instruments themselves. They also reported that some vocabulary study styles led to small positive correlations with proficiency and vocabulary size. However, in the present study, the various learning strategies did not show differences in participants' reported proficiency on TOEFL.

Class level didn't affect students' choice of vocabulary study method. After all, most students came from a similar English study background. However, the question of whether advanced students picked up new techniques or gravitated to more successful strategies as they moved through the program made this a compelling inquiry. Gender also showed no significant differences, unlike the 2003 study by Jimenez-Catalan. In this case, however, it is important to point to n-size: she had nearly 5 times more participants in her study. With such a large n-size, subtle effects are much more likely to be detected.

The first, most obvious limitation in this study is the self-reported nature of the data. Not only are the study methods self-reported, but because access to their TOEFL records was impossible, their TOEFL scores are also given voluntarily from the participants' memories. The accuracy of their scores is somewhat questionable; not because they would intentionally answer incorrectly, but because memory can be fuzzy or misunderstandings or typos can occur. Indeed, two TOEFL scores had to be thrown out due to being out of range of the actual test. Also, as mentioned by Nation (2001), reported data regarding students' study strategies is not reliable. The researcher cannot know whether the reported strategies actually reflect how the participants truly study. Observing students' study habits directly would be much more reliable, but would be limited by the number of participants able to be in the study and is very time consuming.

In this study, the most popular form of vocabulary study was memorizing the L1 translation of a new vocabulary word, with rote writing practice as second. Knowing how students choose to study is important in tailoring material for

language classes. However, despite their popularity among these participants, are they really the most effective methods? Future research should continue to experimentally test the effectiveness of these methods compared to others supported by the literature. For example, how would L1 translation and rote copying compare to practice in the less popular word association tasks?

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Appendix 1

Survey Questions

*What is your gender? あなたの性別は？

*What is your nationality? (e.g., Japanese, Chinese, Korean, etc) あなたの国籍は？

*Which class are you taking? 現在どのクラスを受講中ですか？

*How many years have you studied English? あなたは何年間英語を勉強しましたか？

*What is your best TOEFL score so far? (Approximate score is OK) これまであなたの TOEFL の最高得点はだいたい何点くらいですか？

*What would you say is your strongest ability? (Reading, Writing, Listening, Speaking) 英語に関する 4 技能のうち自分が最も得意とする分野は？

*How many hours do you spend studying vocabulary each week? 一週間につき語彙の学習にどのくらいの時間を費やしていますか？

*How do you study vocabulary? (Choose as many answers as you like) あなたはどのように語彙を勉強していますか？

- Memorize the English definition (英英辞書に載ってる定義を覚える)
- Memorize my language's translation (自分の母国語に訳し覚える)
- Write the word many times (その単語を何度も書く)
- Write the word in a sentence (文章の中でその単語を書く)
- Draw a picture (絵を描く)
- Match with similar words (既知の単語の同意語として覚える)
- Other

*If you answered "other" above or wish to explain your vocabulary study method, please write here. (上記の質問で「その他」と回答した人は、ここに自分の語彙勉強方を書いてください。また他の選択肢を選んだ人で詳しい勉強方法を書ける人は書いてください。) 日本語で回答してもかまいません。

*Agree or disagree? "I think vocabulary is the most important thing to study to improve my English." (賛成ですか、反対ですか？「語彙の学習は自分の英語力を高めるのに最も重要なことであると考えて。」)