Metacognitive Regulation of Malaysian Adult ESL Learners in Vocabulary Acquisition

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Abstract

This study examines the relationship between metacognitive regulation and the acquisition of passive vocabulary knowledge among Malaysian adult ESL learners. Metacognitive regulation involves decisions about planning, monitoring, or/and evaluating the best ways to acquire English vocabulary. Two entities make up metacognitive regulation in this study namely selective attention such as making notes of words which seem important, and self-initiation such as reading other English reading materials besides textbooks to expand one's vocabulary knowledge. The metacognitive regulation level of the ESL learners is analyzed using the Vocabulary Learning Questionnaire. Simultaneously, their passive vocabulary knowledge is assessed using the Vocabulary Levels Test. Passive vocabulary knowledge is usually defined as what one needs to know about a word in order to use it in reading and listening. 360 university students aged between 18 to 21 years old were involved. Though metacognitive regulation is not that preferred by the respondents, it positively and significantly correlates with passive vocabulary knowledge. Further discussion focuses on the significance of metacognitive regulation in vocabulary acquisition. This paper concludes with a discussion on the pedagogical implications of these results.

Keywords: Metacognitive regulation, Selective attention, Self-initiation, Passive vocabulary knowledge

Introduction

The issue of ease and difficulty in vocabulary learning is important to language teachers who have to make various decisions about ways of enriching language learners' vocabulary. Though some teachers think vocabulary learning is easy, language learners always have a serious problem remembering the large amounts of vocabulary necessary to achieve fluency. "Vocabulary is by far the most sizeable and unmanageable component in the learning of any language, whether a foreign or one's mother tongue" because of "tens of thousands of different meanings," according to Hague (1987, p. 219). To overcome this problem, second language (L2) learners have to use certain vocabulary learning strategies. 'Vocabulary learning strategies' refers to a wide spectrum of strategies used as part of an on-going process of vocabulary learning (Schmitt & Schmitt, 1995). Gu and Johnson (1996) proposes seven (7) major categories of vocabulary learning strategies namely Metacognitive Regulation, Guessing Strategies, Dictionary Strategies, Note-taking Strategies, Rehearsal Strategies, Encoding Strategies, and Activation Strategies.

Literature Review

One of the first definitions of metacognition comes from Flavell (1976) who describes metacognition as one's knowledge concerning one's own cognitive processes and products or anything related to them. Thus, Baird (1990, p. 184) uses Flavell's idea to suggest the following formulation, "Metacognition refers to the knowledge, awareness and control of one's own learning." Metacognitive regulation involves decisions about planning, monitoring, or/and evaluating the best ways to study a new word.

They include for example, using English-language media such as songs, movies, and newscasts, using spaced word practice such as expansion of rehearsal, testing oneself with word tests, skipping or passing new word, and continuing to study a word over time. Cook (2001) suggests six language-learning metacognitive strategies that good language learners use, that should be known by vocabulary learners. These are: (1) find a learning style that suits you, (2) involve yourself in the language learning process, (3) develop an awareness of language both as system and as communication, (4) pay constant attention to expanding your language knowledge, (5) develop a second language as a separate system, and (6) take into account the demands that L2 learning imposes. Anderson (2002) believes that metacognitive regulation that allows students to plan, control, and evaluate their learning, have the most central role to play in the improvement of learning and he also believes that developing metacognitive awareness may also lead to the development of stronger cognitive skills. Eyraud et al. (2000) put forward, "most vocabulary growth takes place through incidental learning, that is, through exposure to comprehensible language in reading, listening, discussions, bulletin board displays, videos, and so forth" (p. 2).

In other word, learning from context is taken to mean the incidental learning of vocabulary from reading or listening to normal language use while the main focus of the learners' attention is on the message of the text. Learning from context thus includes learning from extensive reading, learning from taking part in conversations, and learning from listening to stories, films, television or radio. Learning from context does not include deliberately learning words and their definitions or translations even if these words are presented in isolated sentence contexts. Therefore, metacognitive regulation is a good strategy to be used to acquire new English words because ESL learners got the opportunity to encounter English words from various sources. Taking Eyraud et al. explanation on how most vocabulary growth takes place, one question may arise, "How much vocabulary is learned from context?" Studies with young native speakers of English using texts which have not been specially modified (Nagy, Herman & Anderson, 1985; Nagy, Anderson & Herman, 1987; Shu, Anderson & Zhang, 1995) have found that there is between a 1 in 10 and 1 in 20 chance of an unfamiliar item being learned to some degree. A meta-analysis of 20 studies involving native speakers (Swanborn & de Glopper, 1999) confirms these findings with students incidentally learning an average of 15% of the unknown words they met while reading.

Studies with second language learners however have generally not been as carefully conducted as the studies with native speakers (Saragi, Nation & Meister, 1978; Pitts, White & Krashen, 1989; Day Omura & Hiramatsu, 1991; Dupuy & Krashen, 1993). Nevertheless, Horst, Cobb, and Meara (1998), in a study using a longer text (a graded reader) and two kinds of vocabulary test, find that about one in five of the unknown words were learned to some degree. In terms of actual words, this averaged about five words. What does it mean to "know" a word? Establishing exactly what it means to know a word is not easy. Is "knowing" a word being able to recognize what it looks and sounds like? Is it being able to give the word's dictionary definition? Basically, "knowing" a word is a matter of degree rather than an all-or-nothing proposition (Nagy & Scott, 2000). One of the degrees of knowing a word is how well we understand and use words in different modes (e.g., passive vs. active vocabulary knowledge. Usually the terms *passive* and *active* vocabulary are defined in relation to the language skills of reading, listening, speaking, and writing. An individual's *active* vocabulary includes words which are used in speech and writing. On the other hand, one's *passive* vocabulary embodies those which are understood as they occur in reading materials or while hearing something.

Aim of the Study

The aim of the study is to examine the relationship between the respondents' metacognitive regulation and their acquisition of passive vocabulary knowledge. In particular, the study addresses the following research questions:

1) Do the respondents prefer metacognitive regulation as their vocabulary learning strategy?
2) What is the correlation between the respondents' metacognitive regulation and their passive vocabulary knowledge?

Sample

There are 5413 university students available to be taken as samples. According to Wunsch (1986), for a group of 5413 students, at least a sample of 346 is needed to make estimation with a sampling error of ± 5 percent at 95 percent confidence level. Nevertheless, 360 students are chosen. The sample size for this study is determined using the formula for estimating sample size and the table for sample size (Wunsch, 1986).

Methodology

Gu and Johnson's (1996) Vocabulary Learning Questionnaire, translated into Malay language, is used to elicit students' self-reported vocabulary learning strategies. The questionnaire is pilot-tested where 78 out of 92 vocabulary learning behaviors are selected.

The 78 vocabulary learning behaviors are divided into seven major parts namely metacognitive regulation, guessing strategies, dictionary strategies, note-taking strategies, memory strategies (rehearsal), memory strategies (encoding) and activation strategies. Respondents are asked to rate each statement on a 4-point scale, ranging from Extremely Untrue of Me (1) to Extremely True of Me (4). The Passive Vocabulary Test for passive vocabulary size (Nation, 1990), one out of the three vocabulary tests in the Vocabulary Levels Test, is used to measure the respondents' passive vocabulary knowledge. The Passive Vocabulary Test measures passive vocabulary knowledge and is originally based on words from five word-frequency levels namely the first 2,000 words, 3,000 words, 5,000 words, the University word level (beyond 5,000 words) and 10,000 words. However, in this study only the first four levels are used. Each level is intended to relate to specific vocabulary learning objectives. According to Nation (1990), the 2,000- and 3,000-word levels contain the high-frequency words that all learners need to know in order to function effectively in English. For instance, it is difficult for learners to read unsimplified texts unless they know these words. The 5,000-word level represents the upper limit of general high-frequency vocabulary that is worth spending time on in class. Finally, words at the University level should help students in reading their textbooks and other academic reading materials.

As for the format, the Passive Vocabulary Test involves word-definition matching although, in a reversal of the standard practice, the respondents are required to match the words to the definitions. That is, the definitions are the test items rather than the words. Each frequency level of the test comprises six sections and each section includes 6 words and 3 definitions. In other words, there are 36 words and 18 definitions at each level. Although there are only 18 words at each level, Nation (1990) argues that 36 words are tested because the respondents need to check every word against the definitions in order to make the correct matches. Words in each level of the test are representative of all the words at that level. In fact, the test is designed to be sensitive to any vocabulary knowledge held by the respondents. Therefore, each word in the test is distinctly different within each set of words being tested. The words for each level are also selected on a random basis but with proper nouns and compound nouns excluded so that the results of the test give a reasonable indication of what proportion of the total number of words at each frequency level the learner has some knowledge of.

In addition, all the words in each group belong to the same word class in order to avoid giving any grammatical clue as to the correct definition. On the other hand, apart from the correct matches, care is taken not to group together words definitions that are related in meaning. The test is intended as a broad measure of word knowledge, without the respondents to distinguish between semantically related words.The Passive Vocabulary Test has 72 items (18 in each level). It tests the target words out of context because context might provide clues to their meanings. The researcher is only interested in the number of words the students could understand without any clues, rather than their guessing ability. The answers are scored as correct or incorrect. Each correct answer is given one point. Since the test has 72 items, the maximum score is therefore 72. "A weak score at any level is defined as knowing fewer than 15 out of 18 items, or less than 83%" according to Nation's experience using the test (Nation, 1990, pg. 140).

Findings

Research Question 1: Do the students prefer metacognitive regulation as their vocabulary learning strategy?

Table 1 presents the descriptive statistics of the students' metacognitive regulation preference level. In this study metacognitive regulation is made up of two entities namely selective attention such as having a sense of which word meanings could be guessed and which could not and self-initiation for instance deciding to read other English reading materials besides textbooks to expand one's vocabulary knowledge. Semester One students seem to prefer metacognitive regulation the most as their vocabulary learning strategy compared to Semester Two and Semester Three. As for selective attention and self-initiation, all the students rank selective attention higher than self-initiation. Nevertheless, the overall results indicate that metacognitive regulation is not their preferred vocabulary learning strategy.

Table 1: Students' Metacognitive Regulation Level

VOCABULARY LEARNING QUESTIONNAIRE						
	Semester 1		Semester 2		Semester 3	
Categories and Strategies	M	SD	M	SD	M	SD
Metacognitive regulation	2.85	.32	2.74	.32	2.83	.34
Selective attention	2.90	.34	2.87	.37	2.89	.36
Self-initiation	2.78	.45	2.58	.49	2.74	.49

Research Question 2

What is the correlation between the students' metacognitive regulation and their passive vocabulary knowledge?

According to Table 2, metacognitive regulation positively correlates with passive vocabulary knowledge and it is significant at the 0.01 level (2-tailed) (r= .15, p= .004). The two metacognitive regulation variables, the selective attention (r= .13, p= .017) and self-initiation (r= .11, p= .029) also positively correlate with passive vocabulary knowledge and are significant but at the 0.05 level (2-tailed). The results suggest that higher metacognitive regulation preference level is associated with higher level of passive vocabulary knowledge and vice versa.

Table 2: Correlation between Metacognitive Regulation and Passive Vocabulary Test Results

Vocabulary Learning Strategies	Passive Vocabulary Test
Metacognitive Regulation	.15**
Selective attention	.13*
Self-initiation	.11*

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Discussion

The respondents do not prefer metacognitive regulation as their vocabulary learning strategy. However, there is a positive correlation between metacognitive regulation and passive vocabulary knowledge. These findings open a discussion on why metacognitive regulation should not be rejected as one of the vocabulary learning strategies. When ESL learners reject metacognitive regulation as their vocabulary learning strategy, according to Sanaoui (1995), they could be categorized as unstructured learners who depend more on class materials, take less initiative and do less regular review. As a result, they are not in command of their own learning because for Pintrich, Wolters, and Boxter (2000), there are three main components of metacognition which could lead learners to be independent. The first component is metacognitive knowledge which entails cognitive learning strategies which the learner uses to regulate the process of knowledge acquisition such as note-taking. The second, metacognitive monitoring, consists of metacognitive strategies such as planning and monitoring learning activities. The third, self-regulation and control, is dedicated to resource management and self management such as time management and management of the learning environment.

In addition, David Nunan (1999) in his book, *Second Language Teaching & Learning*, reveals that metacognitive regulation is needed to be employed to increase one's vocabulary knowledge because formal classroom instructions were insufficient. In fact, he also reported that motivation, a preparedness to take risks, and the determination to apply one's developing language skills outside the classroom- all are the components of metacognitive regulation- characterized good language learners. Next, metacognitive regulation is a powerful vocabulary learning strategy because it promotes incidental vocabulary acquisition. The fact that incidental vocabulary acquisition takes place in second language is generally acknowledged among researchers. Most scholars agree that except for the first few thousand most common words, L2 vocabulary is predominantly acquired incidentally (Huckin & Coady, 1999). Furthermore, Eyraud et al. (2000) put forward, "most vocabulary growth takes place through incidental learning, that is, through exposure to comprehensible language in reading, listening, discussions, bulletin board displays, videos, and so forth" (p. 2).

Incidental vocabulary acquisition actually involves acquiring vocabulary implicitly and explicitly. Angelika Rieder (n.d) in her article entitled *Implicit and Explicit Learning in Incidental Vocabulary Acquisition* defines the terms "implicit" and "explicit" as the absence or presence of conscious operations. Incidental vocabulary acquisition can be regarded as implicit because it does not involve an explicit learning intention; the overall goal of the learners is text comprehension and not vocabulary acquisition. With regard to the role of "consciousness" in incidental vocabulary acquisition, two contrasting viewpoints can be highlighted. An implicit viewpoint would suggest that incidental vocabulary acquisition takes place without awareness, involving implicit processes only (Krashen, 1989). What the implicit viewpoint fails to consider is the fact that learners are active and strategic information processors. An explicit viewpoint thus would argue that incidental vocabulary acquisition also involves explicit or conscious learning processes. Therefore, applying metacognitive regulation would enable ESL learners to acquire more words because the learners are acquiring the words implicitly and explicitly. Then, metacognitive regulation should not be rejected as one of the vocabulary learning strategies because usually vocabulary is not covered enough in the curricula, materials, and courses.

Evidence may come from ESL learners themselves on how well they are able to function in the L2. Keith S. Folse (2004) in his book, *Vocabulary myths: Applying second language research to classroom teaching*, states that one of the greatest frustrations in trying to learn any language is when one is trying to speak in the target language but one does not know the word that he or she needs at that particular moment. The ESL learner then quickly search for another word in his brain but cannot find one either. He tries to manage in broken language, sometimes successfully but oftentimes not. The same occurs in writing. In written work, for instance, ESL learners rarely use any new vocabulary unless told to do so. They often make do with the vocabulary that they already know. When listening to a news dip or a listening passage, ESL learners' comprehension problems are seldom due to listening issues but rather language issues, notably vocabulary. No matter how good ESL learners' "listening" abilities are, they cannot comprehend materials that contain many words that they do not know.

In addition to ESL students' language production problems due to vocabulary, their wishes as expressed in student surveys also tell the same story. Adult learners are aware of their "vocabulary plight". They see acquisition of vocabulary as their greatest source of problems (Green & Meara, 1995; Meara, 1980). In surveys of ESL students in intensive academic programs (Folse, 2004), the students expressed a strong desire for vocabulary instruction. In many surveys, ESL students ranked vocabulary development second only to opportunities to speak in class. Clearly, L2 learners believe that vocabulary is extremely important. In this study, the students basically have been learning English language for approximately 13 to 15 years. Yet most of them still have problems in the four language skills- reading, listening, writing, and speaking. Their problems are mostly related to the insufficient vocabulary knowledge. In spite of these issues, vocabulary is not dealt with sufficiently. Some teachers do cover some vocabulary but this is hardly ever done very systematically. Vocabulary is something that everyone assumes that learners will somehow pick up, much the same way everyone assumes that students will just pick up good pronunciation (Folse, 2004).

Finally, metacognitive regulation exposes ESL learners to various updated means of acquiring vocabulary. Technology nowadays changes the world. Technology changes the way ESL learners learn, play, communicate, and even thought. Present ESL learners can be classified as Net Generation- generation that grows up in a digital era. Don Tapscott (2009) in his book, *Grown Up Digital*, reveals that students at present are bombarded with high-end and sophisticated technology. Even email is already outdated. High-speed broadband internet access for them is now common. What is more, they can tap into a world of knowledge from far more places- from their BlackBerry, for example, or their mobile phone, which can surf the internet, capture GPS coordinates, take photos, and swap text messages. Just about every kid has an iPod and a personal profile on social networking sites such as Facebook, which enable these Net Geners monitor their friends' every twitch all the time. All these expose and give the ESL learners more opportunities to increase their vocabulary knowledge. Thus, if they reject these modern lifestyles, they would be at the losing end.

Conclusion and Recommendations

The significance of metacognitive regulation to be employed as a vocabulary learning strategy is revealed empirically in the finding of this study; there is a positive correlation between metacognitive regulation preference level and passive vocabulary knowledge. Yet ESL learners do not prefer metacognitive regulation as one of their vocabulary learning strategies. Thus, teachers have to find teaching approaches which can maximize vocabulary retention. In addition, teachers should make use of activities that will specifically increase the number of times learners will encounter the words. According to Nation (2001), the three most important components of activities that foster L2 vocabulary growth are *noticing*, *retrieval*, and *creative or generative use of the words*. *Noticing* means learners need to notice the word and be aware of it as a useful language item. Noticing a word requires *decontextualization. Decontextualization* does not mean that there is no context.

Rather, it means that the word is removed temporarily from the message context in which it occurred so that the learners can focus on the form and the meaning of the word (Folse, 2004). One of the ways to decontextualize a word is learners can pull words out of their natural context and discuss their meanings such as pulling out certain words from a dialogue. Studies (Ellis, Tanaka & Yamazaki, 1994; Newton, 1995) have shown that words that are negotiated when encountered are retained much better than words that are not negotiated. Furthermore, Nation (2001) highlighted another interesting fact about negotiation studies: Learners observing negotiation of meanings retain vocabulary just as well as those learners who were actually involved in the negotiation (Ellis, Tanaka & Yamazaki, 1994; Newton, 1995; Stahl & Clark, 1987). This finding has implications for teachers of large classes or teachers in cultures where classes are usually teacher-centered such as in Malaysia. It is not imperative that all learners be involved in the negotiation for learning of L2 vocabulary to take place; observing the learners also seems to suffice.

Retrieval is the second of the components that Nation (2001) believes can enhance L2 vocabulary retention. According to the Information Process Model as explained by Padilla and Sung (1990), retrieval and rehearsal are central in helping move information from short-term memory to long-term memory. In the learning phrase, Nation (2001) notes the sequence in which a word may be first noticed by the learner and then comprehended by the learners. After this, the next important step is to solidify the new word's meaning and usage in the learner's head. Nation (2001) points out the differences between tasks that make use of *receptive retrieval* and *productive retrieval*. *Receptive retrieval* requires the learners to retrieve the meaning of a word that is seen (in reading) or heard (in listening). In *receptive retrieval,* the learners are able to retrieve the meaning of a word that was produced by someone else. Sample exercises can be found in *Intermediate Reading Practices, 3rd edition* (Folse, 2004).

Several researchers (Atkins & Baddeley, 1998; Baddeley, 1990) stress the importance of not only retrieval but the number of retrievals and the timing of the retrievals because each retrieval strengthens the neurological link between the form of the word and its corresponding meaning. It is believed that the stronger this link is, the easier subsequent retrievals are. Another point is that research (Atkins & Baddeley, 1998; Baddeley, 1990; Pimsleur, 1967) also indicates that retrieval is most effective when the intervals between retrievals gradually increase. In other words, there would be a rather short interval between the initial learning of a word and its meaning and the next retrieval of the word's meaning, but this interval would gradually increase between subsequent meetings. Creative or generative use of new words is the third component of Nation's (2001) list of components for enhancing word retention. Creative or generative use of a word refers to using the word in a way that is different from the original encounter. For example, if the learners encountered the word *abandon* in the sentence "How could she abandon her own child?' and then "She abandoned herself to grief", they will have to retrieve the meaning that they had assigned to *abandon* (i.e., to leave someone you are responsible for) and then test it out in the new situation.

In conclusion, rejecting metacognitive regulation as a means to improve one's vocabulary knowledge is actually not a wise decision. There might be some unknown reasons that lead to such a phenomenon. Thus by applying Nation's teaching approaches, mending the rejection of metacognitive regulation as a vocabulary learning strategy hopefully would be possible.

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