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Quantifying L2 Vocabulary Learners' Changes in Metacognitive Knowledge: A Pilot Study

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Abstract

The study described in this paper is a pilot study for the second part of a larger research project into the possible changes in metacognitive knowledge (Flavell, 1979) of a group of learners due to the content of a year long course on L2 (specifically English) vocabulary learning and teaching. The previous study (Hamatani, 2008; 2009) traced the changes in the metacognitive knowledge of the learners in the course by employing an open-ended, retrospective, self-report questionnaire, which was semi-structured and written. This study statistically confirms the results of that first study which indicated the possibility that the course contents along with practical application of those contents contributed to the changes apparent in the learners' metacognitive knowledge.

By their very nature, languages are complex systems making it understandable that learners may not clearly understand how they can go about effectively learning a second language. Learners do, however, generally have certain ideas (knowledge/beliefs) about second language (L2) learning and themselves as learners which may influence how they approach the task of L2 learning (e.g., Goh, 1997, 1999; Graham, 2006; Victori, 1999).

The term metacognitive knowledge was coined by Flavell (1979) to identify such ideas (knowledge/beliefs). He defines metacognitive knowledge as "that segment of your (a child's, an adult's) stored world knowledge that has to do with people as cognitive creatures and with their diverse cognitive tasks, goals, actions and experiences" (1979, p. 906). In other words, "in a broad sense, metacognitive knowledge includes all facts learners acquire about their own cognitive processes as they are applied and used to gain knowledge and acquire skills in varied situations" (Wendon, 1991, p. 34). Victori (1999) puts it another way: "the knowledge that a person develops about his or her own cognitive processes and about the nature and requirements involved in undertaking a cognitive task" (538).

Flavell (1979, 1981) distinguishes three types of metacognitive knowledge: *person, task* and *strategy.* Wendon (1991, pp. 35-43), who has adapted Flavell's framework for language learning, describes *person knowledge* as general knowledge learners have about how learning takes place and how different factors like age, aptitude and learning styles can influence language learning. It also includes what learners know about themselves as learners and the beliefs they have about what leads to their success or failure in language learning. *Task knowledge* is what learners know about the purpose, demands and nature of learning tasks. It also includes their knowledge of the procedures required to carry out these tasks. *Strategy knowledge* is what learners know about strategies. Specifically, it means knowing which strategies are likely to be effective in achieving learning objectives. It includes how best the learner can approach language learning (35-43).

Research into metacognitive knowledge in the area of L2 language learning (e.g., Goh, 1997, 1999; Graham, 2006; Moir & Nation, 2008; Vandergrift, 2003; Victori, 1999; Victori & Lockart, 1995; Vogely, 1995; Wendon, 1993) has consistently demonstrated that learners' problems in approaching a learning task basically reflect a lack of or deficiency in awareness of the requirements or processes needed for carrying out the task; specifically, they lack metacognitive awareness or knowledge. In the area of vocabulary learning, Gu & Johnson's (1996) research on the vocabulary learning strategies of Chinese university learners of English was not specifically investigating metacognitive knowledge, but they did find that two metacognitive strategies studied: "self-initiation, and selective attention," emerged as positive predictors of general proficiency (659-660). Moir & Nation (2008) found deficiencies in learners understanding of how to personalize the learning task, and in both language and learning strategy awareness.

Although a fair amount of research has investigated learners' metacognitive knowledge behind learning a L2, research has not yet specifically probed the metacognitive knowledge of L2 learners as they learn vocabulary to see what they know about themselves as learners, the task involved in learning L2 vocabulary or how they can best go about such a task. Nor has any research looked at how the metacognitive knowledge of vocabulary learners can be enhanced. These are the goals of this research.

The quantitative research described in this paper is a pilot study for the second part of a larger research project. The previous study, the qualitative part of this larger research project (Hamatani, 2008, 2009), took place over the course of a year and traced the changes in the metacognitive knowledge of the learners in a university course by employing an open-ended, retrospective, self-report questionnaire, which was semi-structured and written. That study attempted to find if the range and type of vocabulary learning strategies could be increased due to exposure to the course content which was

fairly explicit instruction but without the implication that what the learners were doing was somehow not right or in need of change. Additionally, the first study attempted to discover to what extent the learners themselves were aware of the effects on their own learning of what they had learned throughout the course.

Although no direct causative links could be confirmed between the learning objectives of the course and the learners' advances in metacognitive awareness and knowledge, the results did show such advances. The results indicated that a possibility exists that the knowledge acquired during the course, along with the chance to put that knowledge to the test through vocabulary learning that was part of the course, and the encouragement to explore the processes and results all contributed to the changes apparent in these learners' metacognitive knowledge. However, quantitative data is essential to back up such claims. The purpose of the present study, for which this is a pilot, is to provide that proof.

The Present Study

The study reported in this paper attempts to measure statistically any change that occurred in the metacognitive knowledge of the learners from the first day of the course to the end of the course. The course was taught by the same instructor with the same contents but in the year following the previous study. The learners in the course for this study were not the same individuals, but were equivalent in age, English proficiency level, vocabulary level (as measured by Schmitt's (2000b) Levels Test), and purposes for taking the course. As much as possible the two courses were equivalent.

Research questions

(1) Was there significant change in the learners' overall metacognitive knowledge (person, task, strategy knowledge) between the beginning and the end of the course?
(2) Which of the three types of metacognitive knowledge changed the most: person, task, or strategy? Were any of the three changes significant?
(3) As determined by Schmitt's (2000b) Vocabulary Levels Test (1), which proficiency level (the higher or lower) gained the most metacognitive knowledge over the duration of the course Vocabulary level is tied to proficiency level (Schmitt, 2000c, p. 164), so vocabulary level here is measured by the Vocabulary Levels Test and used as a rough determination of proficiency level.

Methodology

Participants

As in Hamatani (2008, 2009), this study is based on a course, taught by the researcher, on L2 vocabulary acquisition and teaching at a good women's university in Japan for 27 female, mostly third and fourth year English majors (20 and 21 year olds) who planned

to become teachers of English in high schools, junior high schools or perhaps elementary schools. The 90 minute, once a week, year long course (two 13 week semesters: April-July; Sept.-Jan.) was organized as a series of modules covering the following topics: introduction to vocabulary learning: e.g., word knowledge (what does knowing a word mean? (e.g., Nation, 2001)); what makes a word difficult to learn (Laufer, 1997); the mental lexicon (how words are retained in long-term memory and then retrieved (e.g., Aitchison, 1987)); vocabulary learning strategies; incidental & intentional learning; vocabulary assessment; collocations; and applications to teaching in the form of mini-teaching demonstrations. The course also encouraged the learners to apply what they were learning to their own weekly vocabulary learning (with quizzes) and to evaluate the strategies they used. In the first semester, students were strongly encouraged to make word cards following Schmitt & Schmitt's (1995) guidelines. During the second semester, students were free to pursue any type of intentional learning they chose.

A separate questionnaire (see Appendix B), administered on the first day of the course in April and answered by the 17 students who completed both questionnaires, revealed that 94% believed that vocabulary was their weakest, second, or third weakest ability in English out of reading, writing, speaking, listening, grammar, and vocabulary.

Materials

In order to answer the research questions, a Likert scale questionnaire (from 1 (strong agreement) to 5 (strong disagreement)) with statements to elicit agreement was developed which attempted to touch upon as many aspects of each of the three types of Flavell's (1979, 1981) metacognitive knowledge as possible. The statements reflected Victori's (1999) taxonomy and research and Paris & Winograd's (1990) dimensions of metacognition: agency, instrumentality, control and purpose. Statements were made for each of the three types of Falvell's (1979, 1981) metacognitive knowledge: person, task, and strategy. Some statements were written both in a positive and a negative form (some elicited agreement, some disagreement), e.g., 'I am good at learning English vocabulary' / 'I am not good at learning English vocabulary', in order to determine if the form of the question would influence responses. This resulted in the need to reverse the scores of the negative items in recording the data in order to ensure consistency in the responses (see below). Also, some statements were similar in that they investigated the same facets of the construct but with different wording, again to determine if responses would be influenced, e.g., 'I think about the methods (strategies) I use for studying English vocabulary to find which ones are most effective for me' / 'When I find that a study method (learning strategy) I am using is not working well for me, I try using another method (strategy)'.

The number of items in the original questionnaire was then reduced, and the final

items were divided into three separate shorter questionnaires (Forms 1, 2, 3) (see Appendix A for the complete questionnaire). Each form has questions on person, task and strategy knowledge. The forms contained some statements that were common across one or two of the other forms; other statements were unique to the particular form. Three reasons were behind the division into three forms. The first was to avoid participant fatigue and boredom when a questionnaire was too long (Mackey & Gass, 2005) and to reduce response time during class to 15 minutes (Graham, 2004). The second reason was that the participants would no doubt notice the positive and negative questions in the same questionnaire, possibly influencing their responses. The third reason was that around 60 students were initially expected to be enrolled in the course, which would have resulted in each item on the total questionnaire having 20 responses. Unfortunately, the total number of students who completed all three forms for both questionnaires (April, 2007, and the following January, 2008) was much smaller at only 17 thereby creating possible problems with the statistical results.

Procedure

For all three research questions, the questionnaires were administered twice: first in April, 2007, during the first class of the school year, and secondly in January, 2008, during class at the end of the school year. The three forms of the questionnaire (A, B & C) were each distributed randomly to the same number of students on the first day of class in April, 2007. The participants who completed Form 1 in April completed exactly the same Form 1 in January, 2008; the same procedure was followed for Forms 2 & 3. In addition, in May, 2007, the students completed Schmitt ŝ (2000b, pp. 192-200) Vocabulary Levels Test to assess their level of vocabulary for the third research question.

The responses to the statements eliciting disagreement as the preferred response were reversed to make them in line with the responses to the statements eliciting agreement. Thus a response of 5 (totally disagree) to a statement eliciting disagreement was recorded as 1 (totally agree). (2)

The data was recorded and SPSS was used to conduct paired T-tests for the first two research questions.

Results of Statistical Analysis

Number of subjects: 17, labeled ‘ A ’ to ‘ Q ’

Form 1: 5 Subjects, A to E, 19 statements

Statements eliciting Person Knowledge: 5	(2 shared across Forms 2 & 3; 1 in Form 3)
Statements eliciting Task Knowledge: 6	(1 shared across Forms 2 & 3)

Statements eliciting Strategy Knowledge: 8 (2 shared across Forms 2 & 3)

Form 2: 7 Subjects, F to L, 20 statements

Statements eliciting Person Knowledge: 8 (2 shared across Forms 1 & 3; 1 in Form 3)

Statements eliciting Task Knowledge: 5 (1 shared across Forms 1 & 3)

Statements eliciting Strategy Knowledge: 7 (2 shared across Forms 1 & 3; 2 in Form 3)

Form 3: 5 Subjects, M to Q, 18 statements

Statements eliciting Person Knowledge: 7 (2 shared across Forms 1 & 2; 2 in Form 2)

Statements eliciting Task Knowledge: 5 (1 shared across Forms 1 & 2)

Statements eliciting Strategy Knowledge: 6 (2 shared across Forms 1 & 2; 4 in Form 2)

Table 1 Descriptive data of totals for responses to statements: All 3 forms combined

April, 2007 n=17

Category	Mean	S.Dev.	Max¦Min	Variance	Sum
Person	19.647	3.790	27 ¦ 14	14.368	334
Task	11.882	3.100	18 ¦ 8	9.610	202
Strategy	20.706	3.424	26 ¦ 14	11.721	352
MetaCog.	52.235	6.300	62 ¦ 43	39.691	888

January, 2008 n=17

Category	Mean	S.Dev.	Max¦Min	Variance	Sum
Person	15.941	2.926	27 ¦ 9	8.559	271
Task	9.294	3.197	17 ¦ 6	10.221	158
Strategy	18.353	4.271	28 ¦ 12	18.243	312
MetaCog.	43.588	7.953	58 ¦ 28	63.26	741

Research questions 1 & 2

(1) Was there significant overall change in the learners' metacognitive knowledge (person, task, strategy knowledge) between the beginning and the end of the course?
(2) Which of the three types of metacognitive knowledge changed the most: person, task, or strategy? Were any of the three changes significant?

As ordinal scales were used and no directional assumptions were made about the data, SPSS was used to conduct two-tailed, paired T-tests on the differences in means between April and the following January for each category (type of metacognitive

knowledge): person, task, and strategy, as well as for the entire set as a measure of overall metacognitive knowledge. The results show that the differences between responses in 2007 and 2008 were statistically significant for all three categories and for overall metacognitive knowledge.

Table 2 Results of T-tests on Paired Differences: April '07 with January '08

Person Knowledge					
Mean	S.Dev.	SE of Mean	t-value	df	2-tail Sig
3.7059	3.771	.915	4.05	16	.001
Task Knowledge					
Mean	S.Dev.	SE of Mean	t-value	df	2-tail Sig
2.5882	1.770	.429	6.03	16	.000
Strategy Knowledge					
Mean	S.Dev.	SE of Mean	t-value	df	2-tail Sig
2.3529	4.122	1.000	2.35	16	.032
Overall Metacognitive					
Mean	S.Dev.	SE of Mean	t-value	df	2-tail Sig
8.6471	7.441	1.805	4.75	16	.000

With maximum agreement at ‘ 1 ’ and minimum agreement at ‘ 5 ’, it would be expected that a decrease in the means for the category as a whole indicates a trend by students to increase metacognitive knowledge during the academic year. This hypothesis has been supported by the statistics so far.

It can also be seen that the category task knowledge displayed the largest decrease in the means indicating the largest increase in metacognitive knowledge. The t-tests showed a .84 correlation between the responses to task knowledge in April and January, significant at P=.000 ! This means that changes in student responses must have been fairly uniform (all in the same direction and degree). None of the other categories show such a remarkable correlation: Agreement over time for person knowledge was r= .39 (P=.06) and strategy knowledge was r= .44 (P=.03).

Research question 3

(3) As determined by Schmitt’s (2000b) Vocabulary Levels Test, which proficiency level (the higher or lower) gained the most metacognitive knowledge over the duration of the course ? According to Schmitt (2000c, p. 164), vocabulary level is related to proficiency level, so vocabulary level here is measured by the Vocabulary Levels Test and used as a rough determinate of proficiency level.

Originally, it was thought to compare the 4-6 higher scoring students with the 4-6 lower scoring students, but this turned out to be unrealistic as the total number of participants was so small and since the lowest level students did not complete the course. The reason was probably due to the fact that the course was entirely in English and the level was necessarily fairly high so the lowest level students were not able to keep up. The vocabulary levels of the 17 students who completed both questionnaires and the Levels Test were all within a fairly narrow range. (3)

Table 3 Changes in student responses: '07 to '08.

Student	PKdif	TKdif	SKdif	MCdif
A•	-2	1	-3	-4
B	1	-2	9	8
C•	-5	-4	-1	-10
D	-2	-2	-7	-11
E••	-2	-1	-1	-4
F	-3	-2	2	-3
G**	-7	-2	-6	-15
H•	-4	-3	-8	-15
I	-12	-5	-7	-24
J••	5	0	-2	3
K••	-4	-3	-4	-11
L*	-7	-2	-1	-10
M	-8	-3	-4	-15
N	-5	-2	1	-7
O	-1	-5	0	-6
P	-4	-2	-5	-11
Q	-3	-6	-3	-12

PK=person knowledge, TK=task knowledge, SK=strategy knowledge

MC= assessment of overall meta-cognitive awareness

• (single bullet)=low level; ••(double bullet)=high level; * (single star)=course lowest achiever); ** (double star)=course top achiever

Results on this question were not completely clear. It appears that the students on the lower end of the vocabulary levels ' scores might have gained the most with some exceptions. Students E, J, & K had the highest scores on Schmitt's (2000b) Vocabulary Levels Test, but only K showed a marked change in metacognitive knowledge; J actually regressed a bit. A, C, & H were at a low level of proficiency, and actually C & H seemed to have increased their knowledge during the year, while A did not gain much. For the students who were in between in terms of vocabulary level, student I

changed quite a lot, but B actually slipped considerably.

Discussion

In first discussing the results of this study in conjunction with the previous study, it can be said that the quantitative results of this study confirm the qualitative results from the previous study and point to the possibility that the contents of the course did, in fact, cause the metacognitive knowledge of the learners (including all three aspects of that knowledge: person, task and strategy) to increase. However, a caveat is necessary as the course in question not only included fairly explicit instruction (declarative knowledge) (4) but also encouraged the students to specifically apply what they were learning to vocabulary learning during the course and to evaluate the results of their learning (so that they should be acquiring procedural knowledge as well). It cannot be claimed that the acquisition of the declarative knowledge in the course contents alone brought about the increase because it was probably a combination of that knowledge plus the practical application of it that contributed to the changes apparent in these learners ' metacognitive knowledge.

The questions on the semi-structured questionnaire in the previous study addressed themselves to strategy knowledge and the results reflected this with the greatest increase appearing in strategy knowledge. In spite of this, quite an increase in person knowledge also emerged. As for this study, the fact that task knowledge showed the greatest increase among the learners may be due to the fact that the course really focused on aspects of task knowledge. But perhaps the information became real to the learners with the practical application of that knowledge during the course. The greater increase in task knowledge might also reflect the fact that the questionnaire in this study was more balanced than the previous one; this one had fairly equal numbers of questions for each type of knowledge.

In order to find if the wording of the statement influenced the results, some of the statements were paired so that there was both a positive and a negative version. Then each of the pairs appeared on different forms so that the same participants would not receive both versions. Results were both interesting and somewhat inconclusive. For example, the negative version, 'I am not good at learning English vocabulary ' appeared on Form 1 and actually showed a decrease in person knowledge over the year. However, the positive version, 'I am good at learning English vocabulary ' was on Form 3 and showed a good increase in person knowledge. Without follow-up interviews, it is difficult to assess the reasons for this: the form of the statement or the make-up of the particular group of girls who responded to that form of the questionnaire.

Interestingly, it appears that the students who responded to Form 1, in comparison with

those who responded to Forms 2 & 3, displayed somewhat less self-confidence in that they fairly consistently showed smaller increases in metacognitive knowledge. This may stem from the fact that this group had two of the learners with the lowest vocabulary levels and only one of the higher vocabulary level learners out of a total of five. Those responding to Form 2 had three higher level learners and two lower level ones out of seven. These students seemed to show more change over the year. The five students responding to Form 3 were all in the middle as far as the results of the Vocabulary Levels Test, and they also showed more change. The three forms were given out on a purely random manner on the first day of the course in April. There was no way to know at that time who had higher or lower scores on the Vocabulary Levels Test. In retrospect, it would have been better to have given all of the participants the same questionnaire and paired questions were not necessary with such a small number of participants.

As for the relation between vocabulary levels and metacognitive knowledge gain, of the students (research question 3), E, J, & K, who had the higher scores on Schmitt's (2000b) Vocabulary Levels Test, only K showed a marked change in metacognitive knowledge; J actually regressed a bit. Since these three had higher levels of vocabulary when they entered the course, they probably already had task knowledge and were using a variety and combinations of strategies to learn words. As a result, their metacognitive knowledge was already more developed than the others in the class. In addition, all three were students with regular attendance, conscientious attention to homework and top grades on exams and class work. In short, they were already "good students". A follow-up interview would have been helpful to clarify results.

A, C, & H were at the lower end of the Vocabulary Levels Test scores. Both C & H made greater gains in metacognitive knowledge than did the higher level learners in all three types of knowledge, although especially in task knowledge. However, H greatly increased her strategy knowledge as well. Both of them had good attendance and did good work. In spite of having lower levels of vocabulary, they were also "good students". A, on the other hand, did not gain much in any of the three types of knowledge. Her vocabulary level was the next to the lowest in the class; her attendance was not regular, and she did homework sporadically. It is possible that due to her lower level of vocabulary and probably proficiency, she lost motivation for the class, or it could be that this was her normal behavior in all her classes. Unfortunately, without an interview, it is impossible to know.

G and L were respectively the highest and lowest performing students in the class. L had the lowest vocabulary level; G had a high level but not the highest. Both of them showed gains in all three types of knowledge; L showed a large increase in person knowledge but very little in the other two. G showed the greatest gain in both person and strategy

knowledge but less in task probably because she was already aware of task knowledge. Exposure to additional strategies may have increased her person knowledge. As for other students, student I gained quite a lot in all three types of knowledge but especially in person knowledge. However, B actually slipped considerably overall but especially in strategy knowledge. Both were " good students " with fairly high levels of vocabulary. Follow-up interviews would have been informative particularly of I & B but also of A, H and J and perhaps of K. Unfortunately, this was not possible at the time.

Conclusion

Although this pilot study did show statistically significant increases in Flavell's (1979, 1981) three types of metacognitive knowledge: person, task and strategy confirming the results of the qualitative study which preceded it, it is obvious that some adjustments in the instrument and the procedure are required for the final study. Although it did not complicate the statistics in this study, one change necessary to create a questionnaire consistent with other Likert scale instruments is to reverse the scale so that ' 1 ' is totally disagree and ' 5 ' is totally agree. Additionally, eliminating the middle choice of ' 3 ' would force the participants to make more definite responses toward either agree or disagree.

Three forms are not necessary. All the participants should respond to the same statements. Especially if the number of participants is small, the statistics will be more conclusive. Also, with the small number of participants, it is not necessary to have paired statements with positive and negative versions. Such statements perhaps cloud the issue more than they clarify it as each participant's responses more strongly influence the results when participant numbers are small.

And finally, follow-up interviews are most necessary to get at the reasons for some of the results. The research reported in this paper would have been more enlightening had interviews been able to clarify the reasons behind the data.

However, in spite of the drawbacks, this little study has, quite amazingly, considering the small number of participants, statistically confirmed the results of an earlier qualitative study of the positive changes in metacognitive knowledge among L2 vocabulary learners in a university course in teaching and learning L2 vocabulary. A form of explicit instruction in learning that includes the reasons for and background behind strategies (in the form of theory and research), combined with encouragement to apply their learning to vocabulary learning tasks and to evaluate the results seems to be able, in fact, to influence Japanese learners' awareness of their own vocabulary learning. The results here may also possibly indicate that such explicit instruction combined with practical application might best serve the needs of relatively lower

proficiency level learners although more research is necessary on this in the form of follow-up interviews.

Zimmerman & Martinez-Pons (1992) have suggested that learners should be encouraged to fully explore links between what they do to learn and the outcomes of that learning. Perhaps this research project is going some way in confirming the importance of such exploration.

Notes

(1) The Vocabulary Levels Test was first written by Paul Nation (1990). Schmitt (2000b) wrote a second version. Although there is no accepted standardized test of English vocabulary, this is the closest there is to such a test. It does not measure total vocabulary size; it measures receptive knowledge of word meaning at four frequency levels: 2000, 3000, 5000, and 10,000. There is also a special level for academic English words. " The test measures threshold meaning knowledge of the target words. Because the test gives estimates of vocabulary size at five levels, it is useful for placement purposes and diagnosing vocabulary gaps " (Schmitt, 2000c, p. 174). In this case, it was used to show the learners how much vocabulary they had already learned and what frequency level of vocabulary they should be concentrating on in their own vocabulary learning. In terms of the research reported here, it was a rough means of determining the learners with the highest and lowest vocabulary/proficiency levels in the class.

(2) An example of a question with elicited disagreement is 'When I have a lot of trouble learning some words, I sometimes just give up,' the elicited response in terms of metacognitive knowledge is 5 (totally disagree). That score of 5 was changed to 1 to put it in line with 1 being the normal elicited (totally agree) response.

(3) The four highest level students, E, J, K, & G, on the test displayed scores which showed they had basically acquired the Academic Word List (see Nation, 1990, pp. 235-239; 2001, pp. 407-411; Schmitt, 2000a) and the 5,000 word level. Their vocabulary levels were all between 6,000 and 10,000 words but close to the 10,000 word level. The lowest level students, A, C, H, & L, on the test had scores which showed they had only just begun to acquire the Academic Word List and were between the 3,000 and 5,000 word level, closer to the 3,000 word level. The rest of the students had scores which indicated they were around the 4,000 word level, with at least half of the Academic Vocabulary List. It should be noted that this test tests receptive knowledge of meaning only. Test results cannot show test takers knowledge of other types of vocabulary knowledge or of their productive knowledge.

(4) " Declarative knowledge is information that consists of consciously known facts, concepts or ideas that can be stored as propositions. " Procedural knowledge, on the other hand, " is knowledge concerning things we know how to do but which are not consciously known, such as how to ride a bicycle. Procedural knowledge is acquired gradually through practice, and underlies the learning of skills " (Richards & Schmidt, 2002, p. 144).

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Works Cited

Aitchison, J. (1987). *Words in the mind: An introduction to the mental lexicon.* Oxford, UK: Blackwell.

Alatis, J. E. (Ed.), *Proceedings of the Georgetown university roundtable of languages and linguistics 1993.* Washington, DC: Georgetown University Press.

Flavell, J. (1979). Metacognition and cognitive monitoring: A new era of cognitive developmental inquiry. *American Psychologist, 34,* 906-911.

Flavell, J. (1981). Monitoring social cognitive enterprises: Something else that may develop in the area of social cognition. In J. H. Flavell & R. Ross (Eds.), *Social cognitive development: Frontiers and possible futures.* Cambridge: C.U.P.

Flavell, J. & Ross, R. (Eds.). (1981). *Social cognitive development: Frontiers and possible futures.* Cambridge: C.U.P.

Goh, C. C. M. (1997). Metacognitive awareness and second language listeners. *ELT Journal, 51* (4), 361-369.

Goh, C. C. M. (1999). How much do learners know about the factors that influence their listening comprehension ? *Hong Kong Journal of Applied Linguistics, 4* (1), 17-41.

Graham, S. (2004). Giving up on modern foreign languages ? Students ' perceptions of learning French. *The Modern Language Journal, 88,* 171-191.

Graham, S. (2006). Listening comprehension: The learners 'perspective. *System, 34,* 165-182.

Griffiths, C. (Ed.). (2008). *Lessons from good language learners.* Cambridge: C.U.P.

Gu, Y. & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning, 46* (4), 643-679.

Hamatani, E. P. (2008). Metacognitive strategic knowledge and second language vocabulary learners. *Tsuda Review, 53,* 87-112.

Hamatani, E. P. (2009). Learner awareness of metacognitive person and task knowledge.

Tsuru University Graduate School Journal, 13, 33-56.

Jones, B. F. & Idol, L. (Eds.). (1990). *Dimensions of thinking and cognitive instruction.* Hillsdale, NJ: Erlbaum.

Laufer, B. (1997). What's in a word that makes it hard or easy: Some intralexical factors that affect the learning of words. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy* (pp. 140-155). Cambridge: C.U.P.

Mackey, A. & Gass, S. M. (2005). *Second language research: Methodology and design.* Mahwah, NJ: Lawrence Erlbaum.

Moir, J. & Nation, P. (2008). Vocabulary and good language learners. In C. Griffiths (Ed.), *Lessons from good language learners* (pp. 159-173). Cambridge: C.U.P.

Nation, I. S. P. (1990). *Teaching and learning vocabulary.* New York: Newbury House.

Nation, I. S. P. (2001). *Learning vocabulary in another language.* Cambridge: C.U.P.

Paris, S. C. & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction* (pp. 15-51). Hillsdale, NJ: Erlbaum.

Richards, J. C. & Schmidt, R. (2002). *Dictionary of language teaching and applied linguistics.* London: Longman.

Schmitt, N. (2000a). Appendix B: The academic word list. In N. Schmitt, *Vocabulary in language teaching* (pp. 182-186). Cambridge: C.U.P.

Schmitt, N. (2000b). Appendix F: Vocabulary levels test: Version 1. In N. Schmitt, *Vocabulary in language teaching* (pp. 192-200). Cambridge: C.U.P.

Schmitt, N. (2000c). *Vocabulary in language teaching.* Cambridge: C.U.P.

Schmitt, N. & McCarthy, M. (Eds.). (1997). *Vocabulary: Description, acquisition and pedagogy.* Cambridge: C.U.P.

Schmitt, N. & Schmitt, D. (1995). Vocabulary notebooks: Theoretical underpinnings & practical suggestions. *English Language Teaching Journal 49* (2), 133-143.

Shunk, D. H. & Meece, J. L. (Eds.). (1992). *Student perceptions in the classroom.* Hillsdale, NJ: Erlbaum.

Vandergrift, L. (2003). From prediction through reflection: Guiding students through the process of second language listening. *Canadian Modern Language Review, 1* (1), 425-440.

Victori, M. (1999). An analysis of writing knowledge in EFL composing: A case study of two effective and two less effective writers. *System, 27,* 537-555.

Victori, M. & Lockart, W. (1995). Enhancing metacognition in self-directed language learning. *System 23* (2), 223-234.

Vogely, A. (1995). Perceived strategy use during performance on three authentic listening comprehension tasks. *Modern Language Journal, 79* (1), 41-56.

Wendon, A. (1991). *Learner strategies for learner autonomy.* Hemel Hempstead, U.K.: Prentice Hall.

Wendon, A. (1993). Strategic interaction and task knowledge. In J. E. Alatis (Ed.),

Proceedings of the Georgetown university roundtable of languages and linguistics 1993. Washington, DC: Georgetown University Press.

Zimmerman, B. J. & Martinez-Pons, M. (1992). Perceptions of efficacy and strategy use in the self-regulation of learning. In D. H. Shunk & J. L. Meece (Eds.), *Student perceptions in the classroom* (pp. 185-207). Hillsdsale, NJ: Erlbaum.

Appendix A

Total Questionnaire

This is the total questionnaire before it was divided into three forms 1, 2, 3. The form and the item number in that form appear after each question. Due to space limitations, the individual forms for the participants do not appear.

Use this score for your answers. Write the number for your answer in the blank next to the statement.

1. Totally agree
2. Agree
3. Don t know
4. Disagree
5. Totally disagree

Person Knowledge

1. ___ I am not good at learning English vocabulary. (Form 1, 1)
2. ___ I have confidence in my ability to learn English vocabulary. (Form 3, 1)
3. ___ I am not satisfied with my progress in learning English vocabulary. (Form 2, 1; Form 3, 2)
4. ___ I am good at learning English vocabulary. (Form 2, 2)
5. ___ I have many problems with learning English vocabulary. (Form 1, 2; Form 2, 3; Form 3, 3)
6. ___ I know some English words better than other English words. (Form 1, 3; Form 2, 4; Form 3, 4)
7. ___ I think I don t know enough English vocabulary; I want to/must learn more. (Form 3, 5)
8. ___ Learning English words is fun. I just enjoy learning English vocabulary. That is the main reason I learn it. (Form 1, 4)
9. ___ I feel happy or satisfied when I know I have mastered some new vocabulary. (Form 2, 5)
10. ___ If I learn a lot of vocabulary, my English ability will improve. (Form 3, 6)

11. ___ I have to put a lot of effort into learning English vocabulary. (Form 2, 6; Form 3, 7)
12. ___ Generally, I do not enjoy studying English vocabulary. (Form 2, 7)
13. ___ When I have trouble learning some words, or I cannot seem to learn them, I usually try a different way to study. (Form 2, 8)
14. ___ When I have a lot of trouble learning some words, I sometimes just give up. (Form 1, 5)

Task Knowledge

1. ___ If I only know the Japanese translation of an English word, I can use that word in both speaking and writing. (Form 1, 6)
2. ___ The only thing I need to know about an English word is the Japanese translation of that word. If I know the meaning, I know the word. (Form 2, 9)
3. ___ I need to know more about a word than its meaning to be able to say, 'I know the word.' (Form 3, 8)
4. ___ If I want to use an English word in speaking, I must know more information about that word than if I want to recognize it in reading. (Form 2, 10)
5. ___ If I want to use a word in speaking, my knowledge about that word must be automatic, without thinking. (Form 1, 7)
6. ___ All English words are learned in the same way. (Form 3, 9)
7. ___ Some English words are more difficult to learn than other English words. (Form 1, 8; Form 2, 11; Form 3, 10)
8. ___ I usually put the same amount of effort into learning each English word. (Form 3, 11)
9. ___ I put different amounts of effort into learning different words; some words require more effort than others to learn. (Form 1, 9)
10. ___ All English words can be learned in the same way. (Form 1, 10)
11. ___ I really want to learn a lot of English vocabulary. (Form 2, 12)
12. ___ Generally, I learn more about words than I need for tests. (Form 1, 11)
13. ___ I don't usually expect to be very successful when I study English vocabulary. (Form 3, 12)
14. ___ Studying English vocabulary is a positive experience for me; I know I will learn the words. (Form 2, 13)

Strategy Knowledge

1. ___ I use a lot of different methods to study/learn (learning strategies) when studying English vocabulary. (Form 1, 12)
2. ___ Although I have tried using many different methods (strategies) for learning

English vocabulary, I usually use only one or two. (Form 2, 14)

3. ___ Before I try to learn some words, I usually try to think about how I can best learn them. (Form 3, 13)

4. ___ I don t usually plan how to study words. (Form 2, 15)

5. ___ When I am trying to learn some English words, I test myself occasionally to see if I am learning them. (Form 1, 13)

6. ___ I sometimes try new methods (learning strategies) for learning English vocabulary to see if they are good for me. (Form 2, 16; Form 3, 14)

7. ___ I think about the methods (strategies) I use for studying English vocabulary to find which ones are most effective for me. (Form 3, 15)

8. ___ I don t know if my study methods (learning strategies) for English vocabulary are good for me or not; I use them because I am used to them. (Form 1, 14)

9. ___ I always tend to use the same study methods (learning strategies) for studying English words because those methods are easy for me to use. (Form 2, 17; Form 3, 16)

10. ___ I use some methods (strategies) for learning some English words and different methods (strategies) for learning other English words; which strategy I use depends on the word I want to learn. (Form 1, 15)

11. ___ When I find that a study method (learning strategy) I am using is not working well for me, I try using another method (strategy). (Form 2, 18)

12. ___ I use a lot of different kinds of self-study materials for studying/learning vocabulary, e.g., vocabulary self-study books, CD-Rom self-study materials, self-study materials on the Internet, etc. (Form 1, 16)

13. ___ I often use methods for getting information about words besides/in addition to a dictionary, e.g. ask a native speaker or teacher about a word, collocation dictionary, vocabulary text books, etc. (Form 1, 17; Form 2, 19; Form 3, 17)

14. ___ It is good to think about study methods for English vocabulary and to change methods if a method is not working well. (Form 1, 18)

15. ___ When studying English vocabulary, it is good to put the words into some sort of groups. (Form 1, 19; Form 2, 20; Form 3, 18)

Appendix B

This is the additional questionnaire that was administered on the first day of class in April with the first questionnaire.

How do you rate each of your own abilities in English? From 1- 6 rate your abilities (1 = your weakest ability; 6 = your strongest ability) Each ability should have a number.

___ reading ability

___ writing ability
___ speaking ability
___ listening ability
___ grammar ability
___ vocabulary ability

I do well in _____ (your #6) because
___ I'm just good at that sort of thing.
___ It's just luck.
___ I try hard.
___ I use good techniques or strategies.
___ We're given easy work.

I don't do well in _____ (your #1) because
___ I'm just not good at that sort of thing.
___ It's just bad luck.
___ I don't try very hard.
___ I use poor techniques or strategies.
___ We're given difficult work.

I do well in English vocabulary because
___ I'm just good at that sort of thing.
___ It's just luck.
___ I try hard.
___ I use good techniques or strategies.
___ We're given easy work.

I don't do well in English vocabulary because
___ I'm just not good at that sort of thing.
___ It's just bad luck.
___ I don't try very hard.
___ I use poor techniques or strategies.
___ We're given difficult work.