The relationship between Japanese EFL learners' listening ability and vocabulary

Yumiko Imai

Machiko Yoshimura

Kuniko Fuse

Yoko Hiraiwa

Hiroshi Mine

Yasuyo Edasawa

(Doshisha Women's College of Liberal Arts)

Key Words: EFL learners, listening, vocabulary

Introduction

Dealing with vocabulary in language teaching is always a crucial concern for EFL teachers. While teaching listening courses at a Japanese college, we have become interested in how large a vocabulary is necessary for Japanese college-level EFL learners to comprehend authentic listening materials, because vocabulary is one of the key elements for learners to comprehend another language. Schmitt (2000) points out that vocabulary research has tended to focus on reading; there are few empirical studies about the relationship between listening ability and vocabulary.

This research investigates four things:

1) How Japanese EFL learners' listening ability relates to their vocabulary;

2) Whether a 3000-word level could be a threshold for Japanese undergraduate EFL learners to be able to comprehend authentic listening materials;

3) What differences there are among different level groups of listening proficiency;

4) What strategies Japanese EFL learners use for listening and vocabulary learning.

No one would argue against the claim that vocabulary plays an important role for listening comprehension. Gazzaniga, Ivry, and Mangun (1998) say, "everyone agrees that a

1

mental store of word meanings is crucial to normal language comprehension and production" and "the listener is confronted with enormous variability in input: the rate of speech, the dialect of the speaker, and the sex of the speaker, to name a few. In spoken language, the perceptual analysis of auditory input must account for all these variables".

Schmitt (2000) also suggests that listening is more difficult than reading because "learners have limited control over the rate of input" and "spoken language does not have clear word boundaries." Bonk (2000) examined the direct relationship between lexical knowledge and listening comprehension and showed significant correlation (.446) between lexical recognition and comprehension.

Then, how much vocabulary is necessary for foreign language learners to comprehend authentic listening discourse? The results of Laufer's research (1992) for second language learners' reading comprehension suggest that the lexical threshold is 3000 word families. Schmitt (2000) mentions, "2,000 words seems to be the most commonly cited initial goal for second language learners. In addition to allowing basic conversation, this number of words is seen as providing a solid basis for moving into more advanced study." Nation (2001) suggests that learners would need at least 95% coverage of the running words in the auditory input in order to gain reasonable comprehension. Nation also claims that studies of spoken language, especially colloquial spoken language used in informal situations, indicate that a vocabulary of around 2000 word families can provide over 95% coverage. These studies imply that a 3000-word level could be a threshold for EFL learners to comprehend authentic listening materials.

To have good listening ability, EFL learners should develop many listening skills. Richards (1983) points out that there are 33 micro-skills for EFL learners to comprehend a conversational discourse and 18 micro-skills for academic listening. They include the ability to recognize: stress patterns, vocabulary used in core conversational topics, parts of speech, and so on. According to Oxford (1990), language learning strategies are divided into two major classes: direct and indirect. These two classes are subdivided into a total of six groups: memory, cognitive, and compensation strategies under the direct class; metacognitive, affective, and social strategies under the indirect class.

About listening strategies used by ESL learners, O'Malley and Chamot (1990)

claim that: "Listening comprehension entails active and conscious processes in which the listener constructs meaning by using cues from contextual information and from existing knowledge, while relying upon multiple strategic resources to fulfill the task requirements". The task requirements and the strategies used have three phases, "Perceptual processing, Parsing, and Utilization."

Regarding learning vocabulary, Schmitt's taxonomy (1997) of vocabulary learning strategies (Determination, Social, Memory, Cognitive, and Metacognitive strategies) was organized according to both the Oxford system and the Discovery/Consolidate distinction. Schmitt mentions that many of the strategies that become more important with age involve 'deeper processing' such as imaging, association, and analysis.

Procedure

For this research, we administered two different tests and a questionnaire:

1) The Test of English for International Communication (a.k.a. TOEIC) ;

2) The Vocabulary Levels Test Version 2 (hereafter VLT2) by Schmitt, Schmitt, and Clapham (2001) ;

3) A questionnaire about the learners' listening ability and vocabulary learning.

The subjects were 156 Japanese female second-year English-major college students. The subjects took the TOEIC ($n = 156$) and the VLT2 ($n = 147$) in January, 2005. For the VLT2, the subjects were given 30 minutes to finish the test. The 2000-, 3000-, Academic-, and 5000-word levels were used for our study. The 10000-word level was excluded from the data because we assumed that this level was too difficult for the subjects to finish within the given time. The questionnaire was given to the subjects during the last class of the semester in January, which was one week after the VLT2 was administered.

We used a questionnaire on listening ability and vocabulary learning to investigate two things: 1) Whether there is a specific pattern of language learning strategy use depending on the subjects' listening proficiency and vocabulary level; and 2) What strategies the subjects frequently use to improve their listening abilities and vocabulary. We adopted three parts from Oxford's Strategy Inventory for Language Learning (hereafter SILL):

Part A, related to memory strategies,

Part B, related to cognitive strategies, and

Part C, related to compensation strategies.

These three parts cover the direct class of language learning strategies. Following these three parts of SILL, we added two original parts:

Part D, regarding listening activity, and

Part E, regarding vocabulary learning.

In the questionnaire, there were 50 items responded to on a five-point scale.

Results and Discussion

The following tables show the results of this study. Table 1 shows the descriptive statistics of the TOEIC and the VLT2.

Table 1 Descriptive statistics

	n	*mean*	*SD*
TOEIC-Listening	156	282.40	55.96
TOEIC-Reading	156	230.64	61.98
TOEIC-TOTAL	156	513.04	103.50
VLT2-2000	147	27.07	2.41
VLT2-3000	147	23.22	4.16
VLT2-Academic	147	19.88	4.83
VLT2-5000	147	15.03	4.72

Table 2 shows the correlation coefficients of the TOEIC scores and the scores of the VLT2. The results indicated that every section of the TOEIC scores and every level of the vocabulary test scores had statistically significant correlations.

4

Table 2   Correlation coefficients of TOEIC and VLT2

	Listening	Reading	TOEIC	VLT2-2000	VLT2-3000	VLT2-Academic
TOEIC-Reading	0.57					
TOEIC-TOTAL	0.88	0.89				
VLT2-2000	0.37	0.56	0.53			
VLT2-3000	0.40	0.55	0.54	0.65		
VLT2-Academic	0.37	0.52	0.50	0.62	0.68	
VLT2-5000	0.36	0.55	0.51	0.49	0.59	0.62

They also revealed that scores of the VLT2 showed higher correlation with the scores of the reading section of the TOEIC than with those of the listening section. In the listening section, the scores of the 3000-word level of the VLT2 had the highest correlation, 0.40, with those of listening.

To see the relationships between the learners' listening ability and their vocabulary levels, three groups (High, Mid, and Low) were generated according to the quartile scores of the TOEIC listening section. The numbers of subjects in each group were 42, 74, and 40.

$$- \text{High } x \geqq 320 \qquad n = 42$$
$$- \text{Mid } 250 \sim 315 \qquad n = 74$$
$$- \text{Low } 245 \geqq x \qquad n = 40$$

To confirm the differences among the three groups, the TOEIC-Reading scores, TOEIC-Total scores, and the scores of the 2000-, 3000-, Academic-, and 5000-word levels of the VLT2 of the three groups were analyzed by analysis of variance. Table 3 presents the means and F values of TOEIC and VLT2 scores in the TOEIC-Listening groups.

Table 3   Means and F values of TOEIC and VLT2 scores in the TOEIC-Listening groups

	Low	Mid	High	F	p
TOEIC-Reading	177.50	240.00	264.76	30.16	0.00
TOEIC	388.00	523.38	613.93	135.35	0.00
VLT2-2000	25.39	27.63	27.60	13.69	0.00
VLT2-3000	20.53	23.82	24.58	11.97	0.00
VLT2-Academic	17.47	19.90	22.03	9.38	0.00
VLT2-5000	12.61	15.34	16.68	8.01	0.00

The results revealed that there were significant differences in all the groups between the TOEIC-Listening scores and the TOEIC-Reading, TOEIC-Total, and all VLT2 scores at the 1% significant level. The High group alone gained over 600 on the TOEIC. Considering these results and the average TOEIC scores of 613.9, it is suggested that the 3000-word level of vocabulary knowledge is a critical boundary to get a TOEIC score of 600. These results show that vocabulary knowledge makes an important contribution to the learners' listening ability. In other words, if learners reach a greater level of vocabulary proficiency, they can earn a better score on a listening comprehension test.
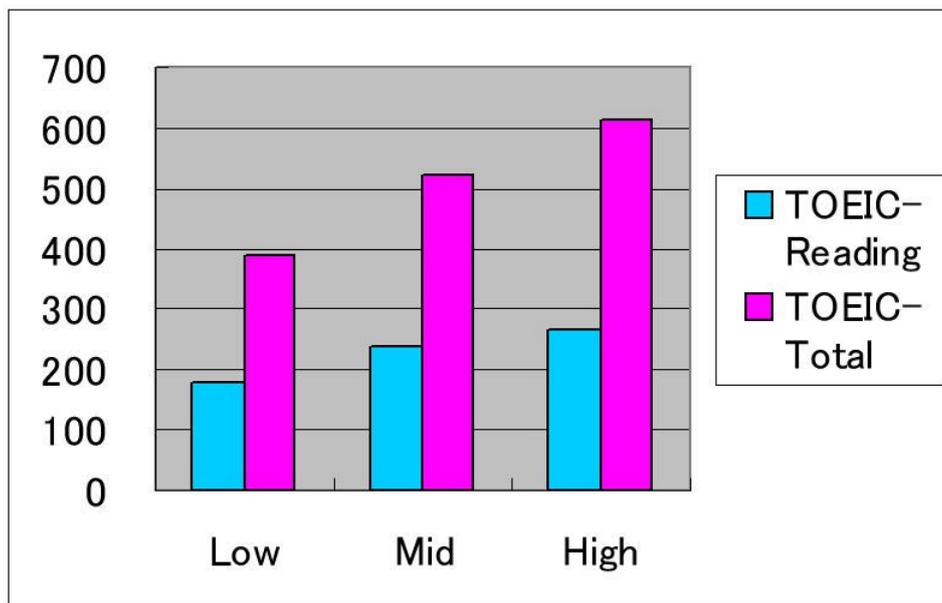

Figure 1. TOEIC results of three groups.

At the 2000-word level, all three groups obtained an average score of over 25 out of 30, scoring more than 80%. This proves that they have achieved that level and have reached the initial stage leading to academic study. At the 3000-word level, the score of the High group is 24.58, the Mid group is 23.82, and the Low group is 20.53. The High group alone gained over 80%, having mostly mastered this level.
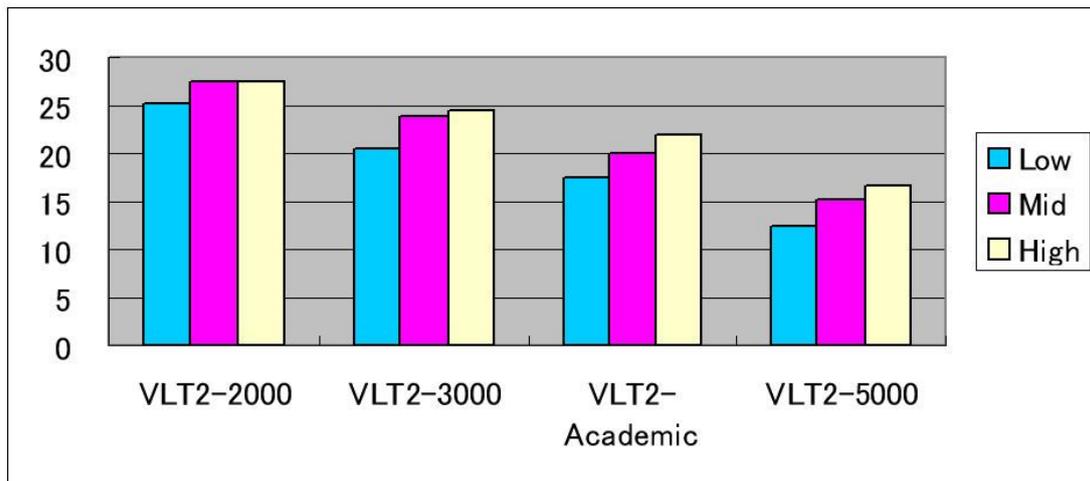
Figure 2. VLT2 results of three groups.

In addition, the answers to the 50 strategy questions were analyzed to observe the general tendencies of what strategy could contribute to the score on the TOEIC-listening test. The results of analysis of variance showed that there were significant differences in seven questions among the three listening groups, as given in Table 4. The scores of questions Q16, Q29, Q41, Q43, and Q48 showed significant difference at the 1% level, and those of Q44 and Q45 showed significant difference at the 5% level.

Table 4 Means and F values of Questionnaire scores in the TOEIC-Listening groups

	Low	Mid	High	F-value	p
Q16	1.74	1.70	2.21	4.47	0.01
Q29	3.21	3.66	4.02	8.42	0.00
Q41	2.10	1.85	2.50	6.30	0.00
Q43	2.64	2.68	3.36	6.99	0.00
Q44	3.18	3.53	3.79	3.23	0.04
Q45	2.77	3.15	3.29	3.25	0.04
Q48	3.18	3.63	4.05	6.66	0.00

As for Q16, "I read for pleasure", the Low and the Mid groups obtained extremely low scores; the High group had slightly higher scores than the other two groups. Because vocabulary knowledge of the Low and Mid groups had not reached the 3000-word level,

they had some difficulty in reading for pleasure. On the other hand, the High group alone has reached an 80% score of the 3000-word level, and was able to read for pleasure.

All groups showed rather high scores for Q29 and Q48 in order of High, Mid, and Low. Regarding Q29, "If I can't think of an English word, I use a word or phrase that means the same thing," the High group scored 4.02, a very high score on a five-point scale, showing that this group had the ability to control its vocabulary knowledge and to paraphrase difficult vocabulary. For Q48, "I check my English ability by taking language proficiency tests such as TOEIC, TOEFL, and STEP," the High group obtained the highest score of 4.05, which also is a very high score, indicating that the group was able to make self-evaluations of their English proficiency.

Q41 and Q43 concerned listening practice. Q41 is "I try to listen frequently to news broadcasts in English such as CBS, CNN, or NHK," and Q43 is "I try to make as much time as possible for listening practice." The results of these questions revealed that the High group scored the highest. It seems that the Low and the Mid groups had little interest and felt difficulty in practicing listening with authentic materials, which had not been adapted for EFL learners. Their listening ability has not developed sufficiently to comprehend authentic materials such as English news broadcast, so it would be discouraging for them to continue listening to those materials without scripts. On the other hand, the High group tried to listen to English as much as possible. This means that they have higher motivation to attempt authentic English material.

The scores of Q44, "If I hear English around me I focus on it and try to understand what is being said," were significantly high for both the High and the Mid groups. The High group had a tendency to try to listen carefully to English spoken nearby. Regarding the scores of Q45, "I understand what parts of speech words are being used as," the Low group gained the lowest score. Not having a clear perception of parts of speech, the Low group had difficulty in parsing utterances and grasping sentence structure.

Conclusion and Implication

This study has revealed that there are significant differences on the TOEIC and the VLT2 among the three proficiency groups based on the subjects' TOEIC Listening scores.

Especially, in the 3000-word level, only the High group obtained a higher score than the 80% of criterion scores. In other words, it can be said that if Japanese learners want to gain a score of over 600 on the TOEIC, they need to master 3000 word families. Therefore, the 3000-word level may be a threshold for Japanese undergraduate EFL learners to comprehend authentic listening materials.

Regarding the Academic-word level of the VLT2, no groups obtained 80% of criterion scores. However, there is a significant difference in the scores between the High group and the Low group. This may indicate that Japanese EFL learners need to master the vocabulary in the *Academic Word List* to have better comprehension of authentic spoken materials and to be successful listeners. Especially, the Low group showed that they had insufficient scores in the 3000- and Academic- word levels. We assume that this might have resulted in their poor listening ability.

As for listening strategies, this study has found that the subjects of the High group are keen to have more opportunities of listening to English, and use more strategies for listening skills and vocabulary learning than the Mid and Low groups. Also, this suggests that the High group tends to employ more flexible tactics of studying English than the other groups do. In other words, the High group can use different strategies very actively, listen successfully, and learn English vocabulary, whereas the Low group uses strategies less frequently than the other groups.

This was our first study of the relationship between Japanese EFL learners' listening ability and vocabulary levels; further studies will be necessary to see, for example, whether we can get the same results if we use other listening tests and vocabulary tests. Also, we need to improve the questions to see what strategies Japanese learners use for listening skills and vocabulary learning.