

The Effects of Studying Aloud on English Vocabulary Learning by Japanese Learners

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Keywords

Vocabulary learning, Read aloud, *Katakana* words, Phonological rules

Abstract

The purpose of this study is to examine the effects of studying aloud on English vocabulary learning by Japanese learners. It was hypothesized that studying aloud is more effective than silent study. On the contrary, no effectiveness was found for studying aloud. An additional questionnaire survey was conducted and it revealed that many of the subjects used *katakana* words when they read the target words and they didn't care about the correct pronunciation of the target words.

1 Introduction

This paper is intended to investigate the effects of reading aloud on English vocabulary learning by Japanese learners. Vocabulary building is inevitable in foreign language learning. This task needs continuing effort with great perseverance. Although there is no 'best way' for vocabulary learning, there seem to be a number of better ways. Here I will examine the effects of reading aloud and try to ease the burden of language learners.

2 Earlier Studies on Studying Aloud

Seibert (1927) stated that silent repetition of vocabulary lists is not the most efficient way of learning if the learning has productive purposes, saying words aloud brings about faster learning and better retention.

According to Craik and Lockhart (1972), words do not stay long in memory if they do not receive full attention. When we try to memorize English words, it is likely that we write the words several times without paying enough attention to the words themselves. If we read the words aloud while writing them, however, we have to concentrate on the task. Aloud study forces us to put attention on the words and

therefore it can be said to be an effective way of learning vocabulary.

Craik and Lockhart also suggested the probability of learning depends on the levels at which words are processed. Words that are processed shallowly at the level of “visual characteristics” are less well retained than words that are processed at the level of “sound.”

Adepoju and Elliott’s study (1997) compared the effectiveness of aural feedback, the picture presentation and written foreign word presentation, and found that aural feedback was the most effective feedback procedure. In aloud study, learners read words aloud, and at the same time they hear their own voice reading the words. This helps learning because hearing the words read by themselves has the effect of aural feedback.

According to Nation (2001), in a program training to improve spelling ability, it is important to relate spoken forms to written forms at a variety of levels: the word level, the rhyme level, the syllable level, and the phoneme level.

3 Pilot Experiment

Five undergraduate students from the Faculty of Education at Gunma University participated in the pilot experiment voluntarily. All of them were sophomores majoring in English. One of them was male and four of them were female.

The subjects took a pre-test which contained 30 Japanese words. They were told to write English word equivalents for each of the Japanese words. The test time was ten minutes. The test sheets were collected and graded.

Then the subjects were given two pieces of blank paper and a list of the 30 English words that were on the pre-test. The subjects were told to memorize all the words on the list by writing and reading them aloud. The study time was 30 minutes. At the beginning of the study time, they practiced the pronunciation of the 30 English words. They listened to the 30 words which had been tape-recorded by a native English speaker and repeated them after the recording.

One week after the study, the subjects took the post-test. It was in the same style as the pre-test, but the words were in a different order.

After the post test, the subjects were asked four questions about the appropriateness of the study sessions and the tests they took in this pilot experiment.

According to the test scores and the answers to the question survey, the number of words used in the main experiment was changed to 20. There seemed to be no need to change any other conditions.

4 Main Experiment

4.1 Subjects

Thirty-three students participated in this experiment. Ten of them were students who majored in English from the Faculty of Education at Gunma University, ages 18 to 22. Twenty-three of them were students at Gunma Prefectural College of Health Sciences, ages 18 to 33. They voluntarily participated in this study. All of the subjects were native Japanese speakers and English was their foreign language.

The subjects were divided into two groups (Group A and Group B) randomly. When making groups, the number of the English major students and the number of the other students was balanced in order to avoid a lopsidedness of English abilities between the two groups.

4.2 Materials

Twenty words were used in this study. Ten were nouns and the other ten were verbs.

4.3 Procedure

There were two groups. The subjects in Group A studied the words silently. In the study session, they studied the words through writing without reading them aloud. The subjects in Group B studied the words through writing and reading them aloud. The length of the study session was 30 minutes.

Pre-Test

The subjects of both groups took a pre-test. They were given a test sheet which had 20 Japanese words on it. They were told to write English word equivalents for the Japanese words on the test sheet. The test time was ten minutes.

Study Session

After a ten-minute break, the subjects of both groups went through a 30-minute study session. They were told to memorize the 20 English words on the list. The list contained 20 English words and their meanings. The subjects in Group A (silent study) studied the words only through writing. The subjects in Group B (aloud study) listened and repeated the English words at the beginning of the study session and then studied the words through reading them aloud while writing.

Post-Test

One week after the study session, the subjects were tested to see if they were

able to remember the English words. The test style was the same as the pre-test, but the word order was altered.

5 Results

The pre-test and the post-test were graded. Two points were given for each of the perfectly correct answers and one point was given for partly correct answers.

Table 1 shows the scores of individual subjects for the pre-test and the post-test and how the score improved in the post-test compared to the pre-test. There were eight subjects in Group A (numbers from 1 to 8). All the subjects in this group marked zero points on the pre-test. On the post-test, the highest score was 12 and the lowest was two. Group B consisted of seven subjects. One subject marked two points and all the other subjects marked zero point for the pre-test. On the post-test, the highest score was 12 points and the lowest was zero. Three subjects marked zero points for the post-test. To

Table 1 Improved Scores of the Individual Subjects

Group	Subject Number	Pre-Test	Post-test	Improved Score
Group A n=8	1	0	2	2
	2	0	2	2
	3	0	4	4
	4	0	2	2
	5	0	11	11
	6	0	12	12
	7	0	8	8
	8	0	4	4
Group B n=7	9	0	0	0
	10	0	4	4
	11	0	0	0
	12	0	0	0
	13	0	1	1
	14	0	12	12
	15	2	12	10

see how much the individual subjects improved through the study session, the subjects' improved score was calculated by subtracting the score of the pre-test from the score of the post-test.

The mean of the improved score of Group A (silent) is 5.63 and that of Group B (aloud) is 3.86. We can see that the subjects who studied silently learned more than those who studied while reading the words aloud.

6 Discussion

The comparison of Groups A and B shows us that there was no effectiveness in studying aloud. Moreover, there seems to be a slight advantage of silent study over aloud study. There are several plausible explanations for this unexpected result.

First of all, the study session of the read-aloud group included pronunciation practice while the study session of the silent group didn't. The pronunciation practice was 145 seconds long, which means that the subjects in Group A (silent) tried to remember the words by writing them silently for 30 minutes while the subjects in Group B (aloud) tried to remember the words by writing and reading them aloud only for 27 minutes and 35 seconds. This shortness of the study time in Group B(aloud) could have caused the low scorers for that group.

Second, there is a possibility that the amount of pronunciation practice for Group B (aloud) was not enough for some subjects. The subjects in Group B listened to the target words and repeated them aloud, twice each at the beginning of the study session. In the post-study questionnaire survey, some subjects wrote that the pronunciation practice was not enough to know the correct pronunciation for all twenty words on the list. The subjects participating in the pilot test were all majoring in English, and four subjects out of five answered that listening to and repeating words twice was enough to learn the pronunciation of the 30 words on the list. However in the main experiment, more than half of the subjects were not English majors and many of them were not very good at English. For those students, the pronunciation practice in this study might have been insufficient.

Third, the study session was held in a group. Therefore, in Group B (aloud), the subjects could hear the voices of other subjects in the classroom. This might have prevented some of the subjects from concentrating on learning the words. In addition, some of the subjects felt embarrassed to be heard by other subjects and did not study aloud enough. They might have thought that their pronunciation was not good or not correct. Many of them were almost whispering and the room was rather quiet even though I asked them to be louder.

Finally and most importantly, there is a possibility that knowing the correct pronunciation of the words did not help the subjects learn the target words. In the post-study questionnaire survey, a subject in the study aloud group said that to memorize the word ‘rescind’, she read the word ‘re-su-si-n-do’ even though she knew the correct pronunciation of the word. Another subject in the study aloud group said that she said ‘su-ku-ru’ to memorize the word ‘skull’ knowing how this word was correctly pronounced. These subjects knew the pronunciation of the words but they didn’t use them to remember new words. This seems to be their strategy for learning new words. To know what strategy the subjects use when remembering new words, a questionnaire survey was carried out on the students at the other school.

7 Questionnaire Survey

A survey using a questionnaire form was conducted in order to investigate what learners are doing while they are trying to learn English words in more detail. Thirty-two students enrolled in an English class at a nursing school completed the questionnaire form about learning English words. In this class, the students took a ‘weekly quiz’ every week. The quiz consisted of ten questions. Half of the questions were asking for the Japanese words from five English words and the other five questions asking for English words from five Japanese ones. The students had learned the meaning and practiced the pronunciation of the ten words in the class the week before. They also studied for the quiz at home. Most of the students were highly motivated and hardworking, so the average scores of the weekly quizzes were very close to full marks (ten points) every time (Table 2). In the questionnaire, the students were asked some questions regarding the words they had studied for the weekly quiz.

Table 2 Average Scores of the Weekly Quiz

Quiz Number	1	2	3	4	5	6	7	8	9
The Average Score	8.2	8.7	8.3	9	9.3	9.4	9	9.4	9.6

The First Section

The first section of the questionnaire was to discover how they memorized the

words in the weekly quiz. Most of them answered that they studied the words by writing and reading them aloud. The way of reading aloud was, however, different from what I had assumed it to be. Although they had practiced the pronunciation of the words, they didn't read the words in the way they had practiced. In Japanese, a letter and pronunciation correspond on a one-to-one basis but it's not so in English. Japanese learners of English often find this non-correspondence difficult and try to apply the rule which we use when we write Japanese in the Roman alphabet. Basically, 'a, i, u, e, o' are converted into 'ア, イ, ウ, エ, オ,' 'ka, sa, ta, na' into 'カ, サ, タ, ナ' in this technique. Nakamura (2002) called an English word pronounced in this way a 'katakana word.' By using a *katakana* word, we can read most of the English words somehow or other, even if the pronunciation is not correct. Moreover, because this technique imposes a one-to-one correspondence between a sound and a letter, spelling out words is made easier for students who are not very familiar with English spelling rules. Some of the examples of *katakana* words used by the students are in Table 3. *Skull* was read as 'スクール(su-ku-ru),' *pancreas* became 'パンクレアサ(pa-n-ku-re-a-sa)' or 'パンクリイス(pa-n-ku-ri-i-su),' and so on.

Table 3 Examples of *katakana* words from the Survey

skull	スクール (su-ku-ru)
pancreas	パンクレアサ (pa-n-ku-re-a-sa) パンクリイス (pa-n-ku-ri-i-su)
temperature	テンパラチュレ (te-n-pa-ra-tu-re) テムペラチュレ (te-mu-pe-ra-tu-re)
ankles	アングレズ (a-n-ku-re-zu)
surgery	サーゲリー (sa-ge-ri) スーゲリー (su-ge-ri)

The Second Section

In the second section, students were given a pair of words and asked which one was easier to memorize and why they thought so. The first pair was 'urology' and 'ophthalmology' (Table 4). The number on the right of the word 'urology' represents the number of the students who answered that the word was easier to memorize than the

other one. Below is the reasons and the number of the students who gave the reason. As shown in Table 4, all of the 32 subjects answered that ‘urology’ was easier to memorize. Twenty-five of them wrote that it was because ‘urology’ was shorter than ‘ophthalmology’ and seven said that ‘urology’ was easier to read.

Table 4 Comparison of ‘urology’ and ‘ophthalmology’

n=32

urology 32

The reasons

It is shorter. 25

I used a *katakana* word. 7

ophthalmology 0

Same 0

Table 5 Comparison of ‘kidney’ and ‘gallbladder’

n=32

kidney 32

The reasons

It is shorter. 14

I used a *katakana* word. 11

Spelling it is easy. 1

The sound is easy. 1

Kidney is more familiar than gallbladder. 1

I already knew this word. 3

gallbladder 0

same 0

The second pair of words was ‘kidney’ and ‘gallbladder.’ As Table 5 indicates, all the subjects said ‘kidney’ was the easier one to memorize. Fourteen of them said it was because ‘kidney’ was shorter than ‘gallbladder’ and twelve said it was because they could easily make a *katakana* word for ‘kidney.’

The third pair was ‘pancreas’ and ‘gallbladder.’ As Table 6 shows, twenty-three subjects felt ‘gallbladder’ was easier, two felt ‘pancreas’ was easier, and seven found no difference between difficulties of the two words. Of the students who felt ‘pancreas’ was easier, 13 wrote it was because it was easy for them to make a *katakana* word for ‘pancreas.’ Two subjects chose ‘gallbladder’ as being easier and one of them said the reason was he/she could break the word into smaller parts.

Table 6 Comparison of ‘pancreas’ and ‘gallbladder’

n=32

pancreas 23

The reasons

It is shorter.	6
I used a <i>katakana</i> word.	12
The sound is easy.	1
Spelling it is easy.	1
It is easy to use keyword technique.	1

gallbladder 2

The reason

I broke the word into smaller parts.	1
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Same 7

The fourth pair was ‘windpipe’ and ‘kidney.’ We see from Table 7 that nineteen subjects answered that ‘windpipe’ was easier, eight said that ‘kidney’ was easier, and six said they were the same. Of the 19 subjects who answered that ‘windpipe’ was easier, 15 said that the word could be split into two parts, ‘wind’ and ‘pipe,’ both of which they had already known. Three subjects said ‘windpipe’ was easier because visualizing the word was easy. One thought the word was easy to pronounce. Out of the seven subjects

who chose ‘kidney,’ five said the reason was that the word was short.

Table 7 Comparison of ‘windpipe’ and ‘kidney’

n=32

windpipe 19

The reasons

I split it into ‘wind’ and ‘pipe.’ 16

Visualizing it is easy. 3

I used a *katakana* word. 1

kidney 7

The reasons

It is short. 5

I already knew this word. 2

I used a *katakana* word. 1

Same 6

The last pair was ‘esophagus’ and ‘rectum.’ As Table 8 indicates, six subjects thought ‘esophagus’ was easier, 21 thought ‘rectum’ was the easier, and five found no difference. Out of 21 subjects who answered ‘rectum’ was easier, 17 said the reason was that the word was shorter.

To summarize this questionnaire survey, the number one factor which made memorizing English words easy was the shortness of the word. We can see this is logical when we think of a situation in which we try to memorize a sequence of numbers. The shorter the sequence is, the easier it is to memorize the sequence. It was also found that a lot of the subjects used *katakana* words to memorize English words. The results of this question survey show that many of the subjects who successfully memorized the English words did not use the correct pronunciation of the words when memorizing them. Because the spelling of English words does not always correspond with their sound on a one-to-one basis, knowing the correct pronunciation did not help the subjects memorizing the words and their spellings. Consequently, the subjects considered learning the correct pronunciation of the target word to be “extra work.” In

Table 8 Comparison of 'esophagus' and 'rectum'

n=32

esophagus	6	
The reasons		
I used keyword technique.	2	
I already knew this word.	2	
rectum	21	
The reasons		
It is short.	17	
I used a <i>katakana</i> word.	4	
Same	5	

the pre-test and the post-test of this study, pronunciation was not tested so the subjects didn't need to know or practice the correct pronunciation of the words. Rather, they used the *katakana* word which makes memorizing words easier by giving the words a one-to-one correspondence to their sounds. Although this seems to thoroughly contradict the hypothesis that reading aloud is effective in learning foreign vocabulary, many of the subjects did use *katakana* words to memorize English words and succeeded in memorizing them.

8 Conclusion

The effectiveness of studying aloud was not found in this experiment. Several possible explanations for this unexpected result are as follows: (1) The study time for the study aloud group was shorter than that of the silent study group because the pronunciation practice was included in the study time for the study aloud group. (2) The pronunciation practice given to the study aloud group might have been insufficient to enable the subjects to learn the correct pronunciation of all 20 words on the list. (3) Studying in a group might have prevented the subjects from concentrating on study. Some seemed to be disturbed by the voices of other subjects reading words aloud, and others seemed to hesitate to read unfamiliar words aloud and be heard by other subjects. (4) There might have been no need for the subjects to know the correct pronunciation of

the word and say it aloud in order to memorize a word. It was easier for them to use *katakana* words to memorize the word's spelling. If knowing the pronunciation of the word is not required in the test, practice of the pronunciation was just extra work for them.

Among these possible explanations, the last one is worth emphasizing. Many of the subjects in this experiment thought that knowing the correct pronunciation of the word did not help them memorizing the spelling of English words and they chose to use *katakana* words. However, this strategy is effective when only the spelling is required in the test. If the purpose of learning English is *to use* English, knowing the spelling and the meaning of words is not enough. Nakamura (2002) indicated that Japanese EFL learners who use Japanese Katakana words tend to pronounce English words as *katakana*, and stated that 'it is very important that native language interference with the pronunciation of an L2 word is reduced for L2 learners who have not yet mastered the phonological system of the target language (p.65).' Thus, English teachers should teach students more phonological rules when teaching vocabulary. Knowing the rules of pronunciation and spelling can make students spell easily without using *katakana* words. When the students realize that they can use their knowledge of phonology, they should stop relying on using *katakana* words and be willing to learn the pronunciation of English words. Although getting some phonological knowledge before learning English vocabulary seems to be a roundabout way, it is an effective way in reality.

References

- Adepoju, A. A. and R.T. Elliot. (1997). Comparison of different feedback procedures in second language vocabulary learning. *Journal of Behavioral Education*, 7, 477-495.
- Aliva, E. and M. Sadoski. (1996). Exploring new applications of the keyword method to acquire English vocabulary. *Language Learning*, 46(3), 379-395.
- Craik, F. I. M. and R. S. Lockhart. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior*, 11, 671-684.
- Craik, F. I. M. and M. J. Watkins. (1983). The role of rehearsal in short-term memory. *Journal of Verbal Learning and Verbal Behavior*, 12, 599-607.
- Ellis, N. C. (1995). Vocabulary acquisition: psychological perspectives and pedagogical implications. *The Language Teacher*, 19, 12-16.
- Griffin, G. and T. A. Harley. (1996). List learning of second language vocabulary. *Applied Psycholinguistics*, 17, 443-460.
- Laufer, B. and T. S. Paribakht. (1998). The relationship between passive and active

- vocabularies: Effects of language learning context. *Language Learning*, 48(3), 365-391.
- Lawson, M. J. and D. Hogben. (1996). The vocabulary -- Learning strategies of foreign-language students. *Language Learning*, 46, 101-135.
- Nakamura, T. (2002). *Vocabulary learning strategies: The case of Japanese learners of English*. Kyoto: Koyoshobo.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Seibert, L. C. (1927). An experiment in learning French vocabulary. *Journal of Educational Psychology*, 18, 294-309.
- Solman, R. T. and A. A. Adepoju. (1985). The effect of aural feedback in second language vocabulary learning. *Journal of Behavioral Education*, 5, 433-445.
- Wang, A. Y. and M. H. Thomas. (1995). Effect of keywords on long-term retention: help or hindrance? *Journal of Educational Psychology*, 87, 468-475.

要旨

日本人学習者による英語語彙学習における音読の効果

遠藤 真知子

語彙学習は、外国語学習において欠くことのできない重要な要素である。本稿では、日本人学習者による英語語彙学習における音読の効果を調べた。被験者を音読群（英単語を覚える際に、英単語を声に出して読みながら書く）と非音読群（声を出さずに書いて覚える）に分け、単語リストの20語の英単語を覚え、そのあとで、覚えた単語を日本語から英語に変えるテストを受けてもらった。テストの点数から、仮説に反し、非音読群の方がより多くの単語を覚えたことがわかった。アンケート調査の結果などから、被験者は英単語を覚えるときにその単語をローマ字読みにして覚えることが多いことがわかった。例えば、‘rescind’を覚えるときに、「‘rescind’→‘レスシンド’→‘無効にする’」と結び付けている。したがってここでは、この単語の正しい発音は必要がなく、制限時間内で多くの英単語を覚えるには、発音のことは考えず、英単語の綴りとローマ字のリンクだけを覚えたほうが効率がいい。それどころか、正しい発音を覚えようとすることは、英単語の綴りとローマ字読みのリンクを阻害することになってしまう。このことが非音読群の方が点数が高いという結果につながったと考えられる。しかし英語の語彙学習の目的はその語彙を使用することであるから、綴りだけでなく、正しい発音も覚えなければならない。今回の実験の単語テストでは、英単語の綴りのみを問うたので、被験者は正しい発音を覚えることは不要と判断した可能性がある。したがって単語テストは、単語の綴りや意味だけでなく、英単語を聞いてわかるか、また発音できるかも調べるものであることが望ましい。また、学習者がローマ字読みに頼ることなく、単語の正しい発音と綴りと意味を覚えられるようにするには、英語学習の早い段階で、音と綴りの決まりを身につけさせることが重要である。