

Factors of listening comprehension evaluated by dictation

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This research examined obligatory dictation exercises of 56 students' at Waseda University to investigate the effectiveness of the practice with dictation. The exercise required the students to dictate the BBC news selected by an instructor as their homework. Two of their homework (one in the beginning of the semester, and the other in the end of the semester) were analyzed. The effectiveness was confirmed by their rises in the scores between two of their homework. The improvement was showed in listening of function words.

1. Introduction

The practice with dictation involves both visual and auditory input. As the ground of its effect on language learning, Lambert (1986) is often quoted, which demonstrated that a single input (visual or auditory) is less effective than the double input (visual and auditory) in the second language comprehension. A researche (Sugiura, et al, 2001) showed the effect of the practice with dictation, but another (Jafarpur & Yamini, 1993) does not. Although the practice with dictation is widely used in classrooms (Davis & Rinvoluceri, 1988), though, according to Sugawara (1999), the effect can depend on the level of difficulty of the text, the researches that investigated the effect obtained different results.

Dictation as a testing device has been confirmed to be a valid test: some researches (Saegusa, 1998 and Kaga, 1991) found a high correlation between dictation and other language tests. After analyzing the learners' errors, Hio (1983) claimed that it measures two aspects of learner's language ability: to discriminate phonemes in context and the extent of acquisition of grammar.

The present study reported here, therefore, examined the effect of the practice with dictation in the context where Japanese university students do news dictation practice. It also deliberates on what the dictation improves.

2. Method

2.1 Subjects

The subjects were 55 (41 females and 14 males) freshmen and 1 sophomore (male) of the department of English language and literature at Waseda University who take an obligatory class, 'English I (comprehension)'. Although 67 students were required to submit this assignment, because 11 of them did not, the present study analyzed the rest

of them.

2.2 Materials

The tape-recorded materials were distributed to the students a week before when they submit them to the instructor. The materials were selected by the instructor from the recent BBC news, and all items of the news used in this term were about the affairs in Iraq. The practice with dictation was the full (complete) dictation. In this homework there is no regulation, such as prohibition of use of the dictionary and the times of listening to the tape. Their homework contained two items of news that consisted of about 400 words. The present study considered the first 50 words of the homework submitted on the 19th of May in 2003 as the pre-test and the first 50 words of the homework submitted on the 7th of July in 2003 as the post-test. The homework during the two tests was regarded as the treatment. Table 1 presents the fundamental information of the two texts which were used in pretest and posttest.

Table 1.

	Pre-test	Post-test
Letter per word	5.3	4.03
Syllable per word	1.71	1.57
Syllable per second	3.83	4.71
Pause per minute	25.89	26.87
Word per pause	6.43	6.67
Syllable per pause	10.69	10.47
Word per minute	178.89	194.93

To examine the similarity of the prepared two tests, the average of the letter per word and the syllable per word are compared between pre-test and post test. These are not significantly different as the following tables presents.

Table 2. (Average letters per word)

	Pre-test	Post-test
Mean	4.9	4.6
S.D.	2.837	2.381
F-value	1.419	n.s.
t-value	0.572	n.s.

Table 3. (Average syllables per words)

	Pre-test	Post-test
Mean	1.6	1.6
S.D.	0.857	0.808
F-value	1.125	n.s.
t-value	0	n.s.

Considering a word as a test item, Cronbach's coefficient alpha was calculated. The alpha in the pretest is 0.871 and that in the post-test is 0.879.

2.3 Scoring procedure

The scoring procedure applied to the present study divides the students' answers into four categories based on Nakano, et al (1999) and Kaga (1991):

- (1) Exact-word. A word is considered as a test item. If a word is written in the exact spelling and in the correct order, the item is assigned one point.
- (2) Garbling. An answer is given, not in the exact spelling. This is assigned no point.
- (3) Losing. An answer is not given and there's no space for the word. This is assigned no point.
- (4) Failing. An answer is not given and there's the blank for the word. This is assigned no point.

3. Analysis

3.1 Effect of dictation

In this research a word was considered as a test item. So the highest possible score is 50 and the lowest possible score is zero. The author marked the two tests according to the categorization of the answers above. The mean scores and standard deviations of both the pre-test and post-test are presented with the maximum and minimum in Table 4. In order to investigate the effect of the dictation, t-test was performed. The result of t-test is showed in Table 5. The effect was statistically significant at $p < .01$.

Table 4.

	Pre-test	Post-test
Mean	29.553	31.875
SD	7.321	7.755
Minimum	12	18
Maximum	46	49

Table 5.

The result of t-test	
df	55
t value	2.92788**

The histograms below, Figure 1 and 2, show the distribution of scores—the y-axis indicates frequency and the x-axis scores. The number and interval of class was decided by the formula of Sturges'.

Figure 1. (Pre-test)

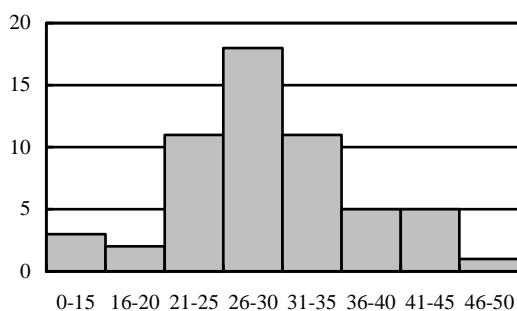
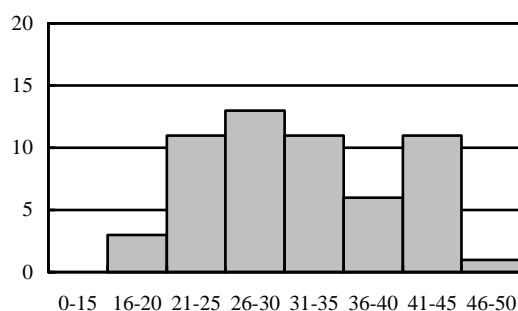


Figure 2. (Post-test)



3.2 Improvement by dictation

According to Hio (1983), a dictation test measures the ability to ‘recognize a sound in context’ and also ‘the proficiencies of morphological, morphophonemic and syntactic rules’ (1983: 13). Although this is not a precise classification, this study, for the sake of convenience, classifies the words, or items into two categories: the function words and the content word. The answers in the former can be more influenced by the proficiencies of grammar than that in the latter. The content words in listening are more difficult to infer from the knowledge of grammar than the function words. Those are, rather, inferred from the context. Table 6 shows the frequency of the answers in the pretest. In order to examine the difference in the number of exact words between the function words and the content words, the test of goodness of fit was performed. The result is statistically significant at the level of $p < .001$ as shown in Table 7. The numbers of exact words in the function words and content words are significantly different. It can be said, therefore, that the items of function words and content words measure different ability of learners’.

Table 6.

	Exact word	Garbling	Losing	Failing	Sum
Function word					
Observed frequency	518	183	181	182	1064
Proportion	0.49	0.17	0.17	0.17	1
Content word					
Observed frequency	1134	402	20	180	1736
Proportion	0.66	0.23	0.01	0.1	1

Table 7.

	Function word	Content word	Sum
Observed frequency	518	1134	1652
Expected frequency	628	1024	1652
chi-square value	19.26	11.81	31.07***

In order to examine the effect of practice with dictation on these two categories, the test of goodness of fit was performed considering the proportion of the answers in the pretest as expected proportion in the posttest. Table 8 presents the results.

Table 8.

	Exact word	Garbling	Losing	Failing	Sum
Function word (23)					
Observed frequency	801	177	177	133	1288
Expected frequency	631	219	219	219	1288
chi-square value	45.8	8.05	8.05	33.77	95.68***
Content word (27)					
Observed frequency	994	374	6	138	1512
Expected frequency	983	347	15	167	1512
chi-square value	0.12	2.1	5.4	5.03	12.65*

In the section of function words, the numbers of garbling, losing, and failing decreased but the number of exact word increased compared to the expected frequency. In the section of content words, on the other hand, the frequency of answers did not change the way of the function words.

4. Conclusion

The result of the investigation reported here indicates that the practice with dictation improves learners' ability in listening comprehension. However, because a ceiling effect was seen in the posttest as Figure 2 shows, it cannot be said that the test accurately measures learners' ability. Yet, concerning with the effectiveness of the practice with dictation, it prompts learners to use their grammatical knowledge when they listen to the target language.

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