Effect of Key Word Identification Tasks on Reading Comprehension*

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key words: key word, reading comprehension, active reading

1. Introduction

In the field of autonomous and self-access language learning, great importance is attached to the learning process, learning- and leaner-centeredness [1]in theory and task oriented activities in practice. Wenden (1991) points out:

> In effect, 'successful' or 'expert' or 'intelligent' learners have learned how to learn. They have acquired the learning strategies, the knowledge about learning, and the attitudes that enable them to use these skills and knowledge confidently, flexibly, appropriately and independently of a teacher. Therefore, they are autonomous. (p.15)

The same is true in reading pedagogy. Recent research indicates that becoming more conscious of what readers are doing on their reading process, is important for developing reading efficiency (Carrell 1989; Carson et al. 1990; Shih 1992).

We chose in the study, key word tasks to foster while-reading strategies to make learners aware of their reading in order to build their comprehension of the text. By the tasks, which will be explained later, we expect that the learners will grasp the main ideas and some, but not all, of the details of a given passage.

Helping students attend to main information has been one of the accepted goals of reading instruction. Noting main ideas and supporting

Received May 24, 1999

*Presented at The Foreign Language Education and Technology Conference III, 1997

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details are the comprehension activities frequently used in classrooms and in textbooks. Schelinngs (1995) points out that identifying main points is a basic skill in constructing meaning from texts. It is also a critical component of the summarization process.

As main idea identification tasks, Cunningham and Moore (1986) introduced nine tasks : Gist, Interpretation, Key Word, Selective Summary/ Selective Diagram, Theme, Title, Topic, Topic Issue, and Topic Sentence/ Thesis Sentence. For example, questions like "What is the topic of this passage? What would be a good title for the selection?" are common reading comprehension questions. Learners can follow the same reading process by trying to find a theme, title or topic of a given passage and reach the main idea as a result of the process. But some students may be good at giving very unique and catchy titles, which may be challenging for teachers to evaluate. It can also be difficult to judge if the students really understand the content. Therefore, we chose key word tasks in order to be more reliable than multiple-choice type questions, which allow the students to do wild guessing.

In our key word tasks, readers are required to identify important words from the words used in the text to understand the context of the passage. Notice that our key word task is not related to the keyword approach/method, which is known as a powerful memory technique for learning the meanings of first- and second-language vocabulary items.

The term key words may be a taken-for-granted concept, but the reality is that the concept is not absolute. Textbooks define key words as those giving information on WHO did WHAT. Others use the term interchangeably with signal words and transition words. Therefore we have to clarify the term as used in our study.

We define key words as words which are used in a given text and are crucial to understand the content. They can be nouns, verbs , adjectives or adverbs. As to the definition of word, unrelated items of meaning are considered as different words. Inflectional forms of the

same unit of meanings are considered one word. Some researchers consider an idiom that forms one unit of meaning to be one word. In this study, however, we exclude idioms to make data collection easier to handle.

The below is the definition we gave to our subjects:

「本研究で言う key word とは，与えられた英文の中で用いられていて，英文の内容を理解するために重要と思われる単語とする。名詞（books, English），動詞（play, entered）や動名詞（going），形容詞（pretty, quiet），副詞（happily, slowly）などがそれにあたり，ハイフンで結ばれた語（anti-government, self-service）もひとつの key word とする。」

For the practical reason of ease in constructing distracters and analyzing results, we define words other than key words as non-key words, which are further categorized as follows:

(1) High frequency words: used more than once in the passage
(2) Low frequency words: words which appeared only once.

2. The Study

2. 1 The purpose of the study

The primary purpose of the current study is to examine the effect of the key word tasks on post-reading performance on a comprehension test. Proficiency level is also examined to determine whether it has an effect on the selection of key words.

2. 2 Subjects and Groups

Subjects in this study were 141 first-year university students who were native speakers of Japanese. All were non-English majors. Forty-four students were assigned to a control group. Forty-seven students were put in experimental group A, in which they were asked to choose key words from a list supplied to them. Fifty students were assigned to group B, in which they were asked to select key words from the passage with no assistance. Random assignment was not possible because of timetable and curriculum restrictions, and therefore each group was made up of a pre-assigned class.

2．3 Tasks and Procedure

Each of the groups was given the same reading passages in the same order (information of readability and topics of the passages is given in the appendix). Passages were taken and comprehension questions were adapted from Timed Readings, Third Edition, Book Two (1989, Jamestown Publishers). One passage was read each class period, once a week for eight weeks. The groups were taught by two different teachers using the same procedure. All students were given comprehension questions and the two experimental groups were given key word identification tasks. The procedure was as follows:

STEP 1-1 Passage Reading

The students were given 11 minutes to read a 400-word passage and they were told that they would be answering comprehension questions on the passage. They were encouraged to underline, circle, mark and take notes in the space provided.

STEP 1-2 Key Word Identification Tasks

While reading the passage, students in group A were asked to choose 5 key words among 15 choices in the list provided. Of the 10 non-key words, 5 of them were what we call high frequency words, and 5 of them were low frequency words.

Students in group B were asked to select 5 key words from the passage and write them down on the task sheet. The students in the control group were not required to do any tasks at this time.

The procedure of choosing key words is as follows: 5 key words were chosen by each of the two atuthors separately. If the same words were not chosen, the authors discussed and agreed on the most appropriate five.

STEP 2 Comprehension Questions

After the 11-minute reading, all students were given five minutes to answer eight comprehension questions on a separate sheet. They were not allowed to look back at the passage, but the notes they had taken were visible and could be referred to while answering the questions.

The questions were multiple choice with three distracters per question. Among the eight questions one of them was to choose the best title for the passage, and two of them were concerning main ideas and information gained from the whole passage. The others were questions about details.

Answer sheets were collected and scored. Key words were determined by each researcher independently and those words which both researchers identified as key words were chosen as correct answers for the key word tasks.

2. 4 Type of Data

We collected three types of data to analyze.

(1) English test:

To examine any differences in English language levels among the treatment and control groups we used the Structure section of CELT (Comprehensive English Language Test for Learners of English Form A) : which consists of 75 items to finish in 45 minutes. Each item consists of a short written conversation between two people with one word missing. The subjects were required to choose one out of four possible answers to fill in the gap to complete the conversation.

(2) Key word identification scores

(3) Comprehension question scores

2. 5 Analysis and Results

(1) Comparison of Three Groups on CELT (before treatment)

TABLE 1 Descriptive Statistics of CELT

	Mean	SD	mn−mx
group A (n= 47)	54.743	9.460	31−69
group B (n= 50)	54.200	8.345	35−68
control (n= 44)	52.750	8.442	35−65
whole (n=141)	53.929	8.738	31−69

TABLE 2 Results of One-way Factorial ANOVA

SV	SS	df	MS	F	P
B	96.105	2	48.052	.626	.5362 ns
W	10593.186	138	76.762		

TABLE 3 Multiple comparison by Fisher PLSD

group A vs. group B	.7601 ns
group B vs Control	.2797 ns
group A vs Control	.4247 ns

Table 1 shows basic statistics (the means and the SDs) for CELT for the two experimental groups and the control group. A one-way ANOVA was run on the results. Tables 2 and 3 show the results, which reveal that there were no significant differences among the three groups before the treatment. Therefore, we regarded those three groups as homogeneous in terms of their English levels.

(2) Comparison of Groups A and B

To see which key word task appeared to be more demanding for the students, we compared the distribution of answers of the two groups. The percentage of correct answers was higher in each case for students of group A, who were required only to choose key words from a list. Percentage of correct answers of group A ranged from 64.6% to 81.4%, and from 43.8% to 66.4% for group B. A look at incorrect answers shows that students in group B were more likely to select high frequency words than were those in group A. (see Chart 1 in Appendix)

Table 4 shows the mean scores for the two key words identification tasks. The p-value of the t-tests between the two tasks was $p<.0001$. A highly significant difference was observed between the two tasks. This indicates that unassisted identification of key words was more

demanding for the students than choosing from a list. This also suggests that the students in non-assisted group (group B) engaged more actively in the reading process than students in the other group, showing an effect on learning outcomes which is reflected in their reading comprehension scores. (See TABLE4 below.)

TABLE 4 Comparison of two key word tasks

	Mean	SD	n	mn−mx
group A	3.576	.381	47	31−69
group B	2.767	.420	50	35−68

df=95 t=9.924 p<.0001

(3) Effects of key word tasks

Table 5 shows basic statistics of comprehension scores for the control and experimental groups. The results of the ANOVA appear in Table 6, and indicate that differences among three groups are highly significant.

Further analysis of multiple comparison, shown by Table 7, found that there were significant differences in the comprehension scores between the A and B groups, and between the A and the control groups, and that the difference was extremely significant between the B and the control groups.

TABLE 5 Descriptive Statistics of Comprehension scores

	Mean	SD	mn−mx
group A (n= 47)	4.889	.743	3.5−7
group B (n= 50)	5.223	.636	3.5−6.75
control (n= 44)	4.539	.868	2.75−6.625
whole (n=141)	4.898	.796	2.75−7

TABLE 6 ANOVA

SV	SS	df	MS	F
B	10.977	2	5.489	9.756***
W	77.636	138	0.563	

***p<.0001

TABLE 7 Multiple comparison by Fisher PLSD (p value)

group A vs group B	.0302
group A vs Control	0.0273
group B vs Control	<.0001

We conclude that this is evidence that the treatment actually led in the direction of promoting better reading behavior, and also particularly effective for the group B : students were asked to select key words from the passage with no assistance.

(4) How were the key words perceived by Japanese EFL readers of different proficiency levels?

We assigned the upper 30 % as a higher level group and 30% as a as a lower level group, and analyzed how each key word task discriminated between comprehension groups.

As to the key word choosing task, the higher level group of students got higher scores than the poor group in 7 passages out of 8, but the differences are statistically significant only in passages #2 and #7. (see CHART 2 in Appendix) In the key word writing task, the same tendency was observed and significant differences were seen in 5 passages, #1,2,3,4 and 6, out of 8. (see CHART 3 in Appendix). From these results we concluded the task that requires key word identification with no assistance showed a little better discrimination power than the task that requires choosing key words from a list.

3. Conclusion

By doing key word tasks, readers became more conscious of their reading and they processed the text actively. The activities served to increase the learner's overall attention to the new text and required more effort than in reading without the tasks. The text that required deeper levels of activity was consequently encoded more deeply.

As a tentative conclusion, we can say that the above were the effect of key word tasks as a generative activity. The key word tasks are helpful additions to a classroom activity and can be a substitution for some other techniques, such as summary writing or interpretation, in order to check learners' reading comprehension. In addition, in terms of key words identification, it is also found that the difference between higher and lower level of learners is more significant in more difficult tasks.

As mentioned in 2.2, random selection of subjects was impossible because of various restrictions, although the sub test, CELT, shows the even distribution of the subjects of the study. It should be beneficial if we have another opportunity to conduct this method by random selection. We also hope to continue to examine the relationship between key word identification and reading comprehension by some other methods such as summary writing.

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APPENDIX

Information of Readability and Topics of Passages

	1.listen	2.swim	3.hibernate	4.nutrient	5.animal	6.diet	7.mount	8.theater
readability index	3.91	4.53	3.55	4.82	5.35	5.98	4.00	4.19
grade	4th	5th	4th	5th	5th	6th	4th	4th
Flesch	86.846	82.045	88.856	80.093	75.573	71.246	85.034	86.721
Fog	6.144	6.447	5.824	6.925	8.411	8.215	5.898	6.763
# of words	400	404	404	396	403	407	398	402
wrds/sntnc	11.111	10.919	10.811	11.000	10.605	10.711	10.474	12.182

Chart 1

Distribution of Answers(%):Comparison of Group A and B

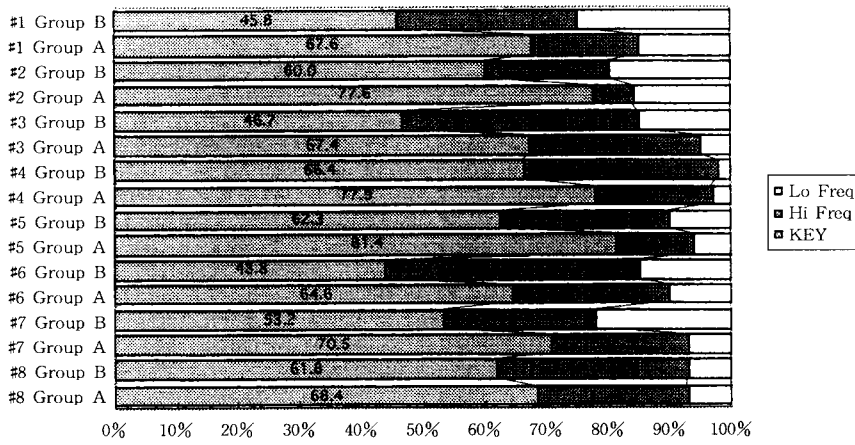

Chart 2

Distribution of Answers(%):

Comparison of Higher & Lower Groups in choosing Key Words Task

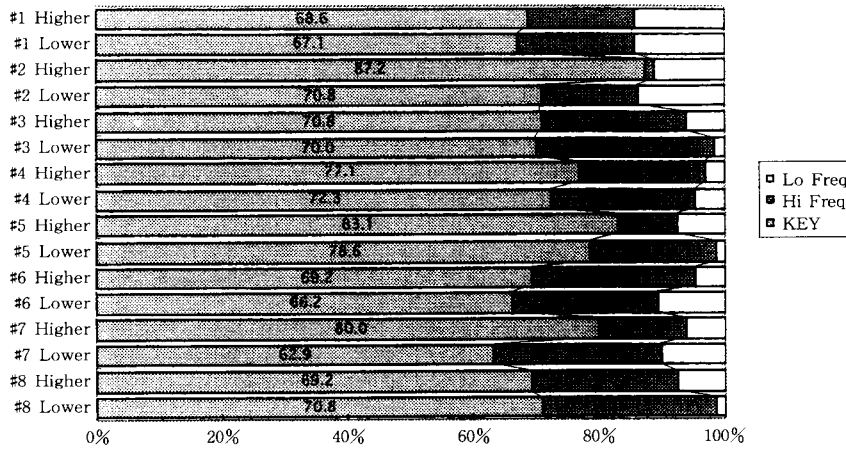

Chart 3

Distribution of Answers(%):

Comparison of Higher & Lower Groups in Writhing Key Words Task