

THE EFFECTS OF VOCABULARY DEVELOPMENT ON TEXT COMPREHENSION

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ABSTRACT

The study reported in this paper adopts three strategies- knowledge and use of context clues, doing structural analysis and making associations- to help ESL learners improve their vocabulary knowledge and hence their text comprehension. Forty-six secondary school ESL students participated in the study. The treatment took the form of explicit strategy instruction to acquire word meaning of selected vocabulary items from reading texts. A comparison of mean scores enabled the researchers to determine the effectiveness of vocabulary development strategies in the ESL reading classroom.

Introduction

This paper presents the findings of a study that adopted strategies to help ESL learners acquire the meaning of unfamiliar words and thus improve their text comprehension. Forty-six (46) ESL learners from a secondary school were selected for the study. They were divided into two groups: an experimental and a control group. Each group was given a pre-test comprising of a reading text based on which the learners had to answer comprehension and vocabulary questions formulated using Bloom's taxonomy. Both groups were then exposed to reading texts and related comprehension exercises over several sessions. However, the experimental group was exposed to treatment in the form of direct instructional emphasis on guessing the meanings of unfamiliar words found in the texts, while the control group engaged in activities that did not include an explicit focus on vocabulary. After the period of reading activity, the subjects took a post-test consisting of vocabulary and comprehension questions. The text used was the same text used for the pre-test. The subjects' responses to the questions were scored and the means for both groups compared in order to determine whether vocabulary development strategies might help ESL learners improve their text comprehension and deal with unfamiliar vocabulary in the ESL reading classroom.

Literature Review

It is generally believed that there is a direct association between knowledge of word meanings and understanding of what is to be read and learned (e.g. Misulis, 1999). Researchers are also of the opinion that teaching vocabulary is necessary to improve students' comprehension of a text. Many researchers have advocated different strategies for word meaning acquisition by young students. Misulis (1999) believes that for words to be truly learned, that is to be used and committed to long-term memory, they must be reinforced many times in meaningful ways. As such, teachers should assist their students to comprehend the content that they teach. To achieve this, it is suggested that a teacher assists students in understanding the vocabulary or the words related to their content areas. The first step is to select the words that are important in developing an understanding of the content. Students are encouraged to learn these words prior to reading the text. If they acquire the meanings of these words prior to reading the text, students can interact with them in context when they read the text, providing meaningful reinforcement.

Other researchers who advocate the development of vocabulary to improve text include Milligan and Ruff (1990). They also believe in the vocabulary-comprehension connection. They argue that a reader's general vocabulary knowledge seems to be the best single predictor of reading comprehension. They advocate a linguistic approach in teaching the meaning of a word. Their approach involves instruction in morphemic analysis, that is, the study of prefixes, suffixes and roots. Gamble (1997) recommends vocabulary acquisition through reading text of students' own choice. Students are required to read a variety of materials. When they discover unknown or difficult words they are encouraged to fill in a vocabulary worksheet. The worksheet requires them to write the new word, write the sentence it is found in, guess at its definition using context clues, and finally, look up the word and write down the dictionary definition. Gonzalez (1999) advocates reading newspapers and consulting a dictionary as a way to build vocabulary size. He believes that use of the dictionary allows English as Second Language (ESL) learners to compensate for their deficiencies in knowledge and become more fluent readers. The newspaper activity allows students to set goals for their individual reading and to collect and think about challenging words in meaningful contexts. Harmon (2000) suggests independent word learning strategies among students. Independent word learning refers to using context, examining word structure and referring to the dictionary. In using context, the students learn to locate possible meaning clues within words, phrases, sentences and paragraphs, consider what the clues mean, and then predict a meaning. Ediger (1999) holds to the idea that developing students' vocabularies

should be a major goal in each academic discipline. He believes that developing a rich listening, speaking, reading, and writing vocabulary is important in all curriculum areas. Vocabulary development emphasizes that pupils seek purpose in learning. Purposeful learning in vocabulary development means that pupils perceive reasons for achieving a good vocabulary. In general, these researchers believe that vocabulary development is necessary for enhanced text comprehension.

Misulis' suggestions for vocabulary development and acquisition seem to stem from McLaughlin's (1987, 1990) and Anderson's (1983, 1985) information processing models (cited in Mitchell and Myles, 1998: 85-89). In the former model, learning is viewed as a process from controlled to automatic processing via practice or repeated activation. Controlled processing requires a lot of control on the part of the learner. In the latter model, the learner first acquires knowledge in the declarative state (that is knowledge *that*) and this becomes procedural knowledge (which is knowledge *how*) after practice. The former is similar to controlled processes and the latter to automatic knowledge in McLaughlin's model. Before any form of knowledge becomes automatic, it is stored in the short-term memory (McLaughlin's model) or working memory (Anderson's model). Once the knowledge is automatized, it is stored in the long-term memory. Similarly, Misulis believes that words need to be reinforced meaningfully before they are stored in long-term memory. Among the strategies she suggested for vocabulary development and acquisition are: making associations, using contextual clues and doing structural analysis. These three strategies were incorporated in the experiment that the writers conducted.

The Study

The objective of this study is to investigate the effect of explicit vocabulary instruction in the use of context clues, structural analysis and making associations on text comprehension. It has to be remembered that the studies reviewed in this paper have dealt with a first language (L1) situation while the situation for this study is a second language (L2) situation.

Sample

The sample for the study consisted of 46 ESL students from an urban High school in Malaysia. The average age of the students was 16, and they possessed an intermediate level of proficiency. These subjects comprised two intact groups: an *experimental* group of 20 students and a control group of 26 students. The control group had a slightly higher overall command of English than the experimental group.

Procedure

Prior to reading instruction, both groups took a pre-test of 15 comprehension questions. The questions were formulated based on Bloom's taxonomy. The composition of question types used in the test is as follows: 5 Knowledge, 3 Comprehension, 1 Application, 2 Analysis, 2 Synthesis, and 1 Evaluation.

Following the pre-test, both groups were given reading instruction by the researchers over a period of 2 weeks. The instruction took place over 3 sessions of 35 minutes each per week, making the total instruction time 210 minutes per group. To reduce teacher bias, the two researchers taught one group the first week, and the other group the next.

Each week, the instruction revolved around one reading passage from the English Language textbook used by the school. Thus, the activities were based on two passages: a narrative and a news report. Both groups read the passages silently, and responded to comprehension questions and vocabulary exercises related to the passages that were provided in the textbook. In addition, the experimental group was exposed to explicit vocabulary strategy instruction, while the control group was asked to rewrite each reading passage in a different form; these activities were the only respect in which the groups differed. In the case of explicit vocabulary instruction, three types of vocabulary development strategies which focused on guessing the meanings of unfamiliar words were introduced. They were making word associations, using contextual clues and doing structural analysis. In the control group, subjects responded to comprehension questions and vocabulary exercises in the text book without any form of explicit vocabulary instruction. After the passages had been dealt with, the subjects rewrote it in the form of a dialogue (first passage) and in the form of a personal narrative (second passage). Table 1 provides a summary of the groups' activities for the two weeks.

After the two weeks of reading instruction, the groups were given a post-test consisting of the same passage and questions used in the pre-test.

Data Analysis

The students' responses in both tests were scored. To control for scorer bias, each researcher scored the tests for half of each group. The pre-test and post-test scores were then computed using SPSS. T-tests were carried out for each group, to find out if there was a significant difference between pre and post-test scores.

Table 1: Reading activities for experimental and control group

Procedure	Experimental group	Control group
Pre-reading instruction	Pre-test (1 hour)	Pre-test (1 hour)
Reading instruction activities	i. Read passages silently ii. Explicit vocabulary instruction – 3 types of vocabulary development strategies focused on guessing the meanings of unfamiliar words: (3 sessions of 35 mins. each, per week: Total 210 minutes) Word association Using contextual clues Using structural analysis	i. Read passages silently ii. Responded to comprehension questions and vocabulary exercises in text book iii. Rewrote 1 st passage in the form of a dialogue; 2nd passage in the form of a personal narrative
Post-reading instruction	Post-test (1 hour)	Post-test (1 hour)

Results

The subjects' level of comprehension of the pre- and post-tests was measured by their marks scored on answering the open-ended questions pertaining to the tests. The total score was 20. The individual and mean scores of both the experimental and control groups are presented in tables 1 and 2. Figure 1 summarizes the data collected.

The mean score of the pre-test of the control group was 12.82 or 64.22% while the mean score of the post-test was 14.67 or 73.36%. A paired-sample T-test indicated that the group scores for the pre and post-tests was significantly different at a level of $p = 0.021$ (sig. 2-tailed).

The mean score of the pre-test of the experimental group was 7.1 or 35.5 %. The mean score of the post-test was 9.92 or 49.62 %. Again a paired-sample T-test revealed that the pre and post-test scores for the experimental group was significantly different at a level of $p = 0.000$ (sig. 2-tailed). The results indicate that although

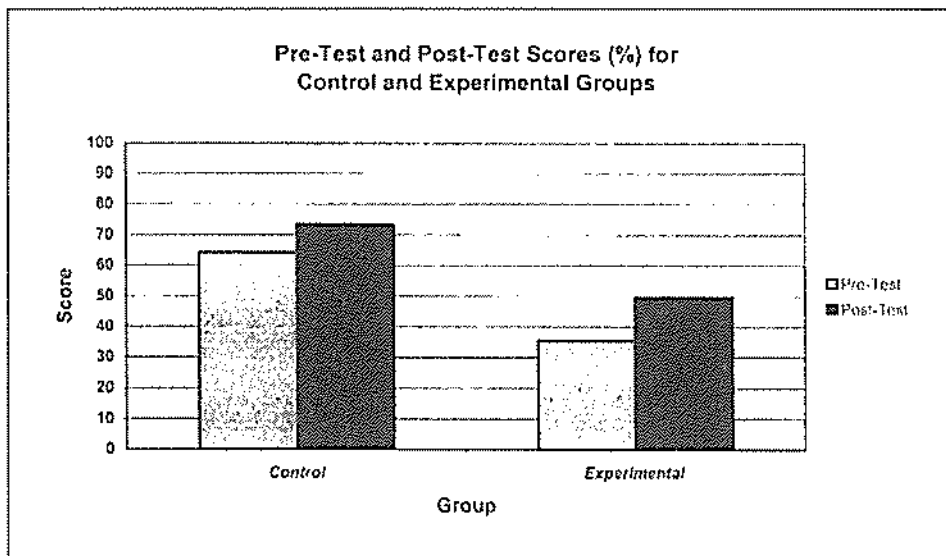


Figure 1: Pre-test and post-test scores (%) for control and experimental groups

both groups improved, the experimental groups exhibited a higher level of improvement.

Discussion

The results of this study support Misulis's suggestion that knowledge of vocabulary and knowledge of strategies to acquire word meaning (vocabulary development) will lead to the comprehension of what is to be learnt. In this study, vocabulary development has helped subjects to improve their level of comprehension of a text. The results indicated that both the groups improved significantly but the experimental group exhibited even more improvement ($p = 0.021$ versus $p = 0.000$).

The significant improvement in the control group could have been due to the activity they engaged in during reading instruction: they re-presented ideas from each reading passage in a different form (the third-person narrative was rewritten into a dialogue; the news report was rewritten in the form of a first-person narrative). This exercise would have required them to first understand the content of the passage and then manipulate the ideas in order to re-present them in a text of a different genre, thereby promoting text comprehension.

However, the results of the experimental group suggest that the use of vocabulary strategies may be more effective in improving text comprehension. The results thus show that vocabulary development will increase vocabulary knowledge and this will in turn help in the level of comprehension of a text. Thus there is a relationship (albeit an indirect one) in explicit instruction in strategies (vocabulary development)

for acquiring word meanings (vocabulary knowledge) and the comprehension of a text. The findings for the experimental group is even more significant as they were the less proficient group to begin with. The fact that a less proficient group exhibited greater improvement indicates that explicit vocabulary strategy instruction is indeed effective. The findings for this study which was set in an L2 context seem to mirror those in studies which were set in an L1 situation. The implication that can be drawn here is that vocabulary development strategies are universal in nature and they work equally well for both contexts.

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