



APPLYING SEMANTIC MAPPING TO IMPROVE STUDENTS' READING COMPREHENSION

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ABSTRACT

Reading is one of the essential skills in learning English. However, numerous English learners still find difficult to comprehend English texts. Therefore, it is importance to renders students an effective strategy to learn reading. The aim of the study was to find out to the extent to the use of the semantic mapping improve students' reading comprehension. This study applied a quasi- experimental design. The subjects of the research were the first semester students of Law Faculty class selected purposely. The data collection was done by utilizing TOEFL reading test. The data were analyzed using SPSS version 21 IBM in order to obtain the frequency, mean score, normality test, and nonparametric test (Mann-Whitney U test and Wilcoxon test). The results indicate that the application of the semantic mapping to teach reading contributes to the students' reading achievement. The result of the Man-Whitney U test demonstrated that there was a significant difference between the mean score of experimental group with the semantic mapping, and controlled group without semantic mapping (42.3 > 32.3). Meanwhile, Wilcoxon test showed that experimental group performed significant difference between pretest (29.5) and posttest (42.3). It may be inferred that the semantic mapping contributes to the enhancement of students' reading comprehension.

Key words: Semantic Mapping, Reading Comprehension

INTRODUCTION

Reading comprehension is the act of understanding what we are reading. The definition of the reading seems simply. However, the definition can be simply stated but the act is not simple to teach, to learn or to practice. According to Celce-Murcia (as cited in

Amirian, 2013:20), teaching reading skills to non-native speakers of English involves unique problems and challenges of all conceivable levels of instruction. Clearly, an article written by Smith (2012:2) illustrates how the reading activity tends to be complicated one. When a person reads a text, s/he engages in a complex

array of cognitive processes. S/he is simultaneously using his/her awareness and understanding of individual sound, relation between letters and sounds and the connection between sounds, letters and words and also ability to construct meaning from the text. Thus, it is inevitable that reading is a complicated activity not only to teach but also to learn.

In the light of the above issue, one of the problems found related to reading comprehension is that many English learners find it difficult to comprehend English texts. They get troubled when they encounter unfamiliar words. In this state, readers begin to panic and stop reading to look them up in dictionaries and it interrupts the normal reading process. It actually destroys their chances to comprehend much of the text. The relationship between knowledge of word meanings and comprehension has been documented by researchers and admitted by students. Many of them admit that sometimes they do not understand what they are reading because the words are too hard for them.

The above aforementioned condition, for example, occurred in Christian University of Indonesia Paulus (UKIP Makassar). Researcher's experience in teaching English as a public lecture at the university often found the students misunderstanding in respect by reading text assigned by her in the class at the time, and only a few of them actively responded to the lecturer's questions, and the

rest of them were just becoming listeners. As results, the learning process runs ineffectively.

As solutions for the condition, Blachowicz and Fisher (as cited in Tateum, 2007:5) maintain that to acquire meaning for new words while reading, it is necessary to use prior knowledge making predictions about meaning and gradually refine that meaning while in learning reading. In addition, Anderson (1999:11) delineates that background insight (schema referring to the reading literature) including all experiences that a reader brings to a text: life or educational experiences, knowledge of how to text organized rhetorically, of how one's first language works and so forth can influence reading comprehension and skill. Anderson further reveals that the prior knowledge impacting reading comprehension that meaning does not merely come from in the written material, but the reader brings certain knowledge to the reading that influences comprehension. Therefore, it is sufficient to say that in reading learning process; it is essential to activate the students' prior knowledge since the prior information is important for comprehension of new knowledge.

One of the several strategies emphasizing on the important role played by prior knowledge or schemata in the learning process of reading is a semantic mapping. The concept maps render a powerful way to help students initially to obtain, to organize, and to understand knowledge. Semantic mapping or graphic organizer is a process for constructing

visual displays of categories and their relationships. As defined by Antonacci (1991:174), it is a visual representation of knowledge, a picture of conceptual relationship. Furthermore, Sinatra, Stahl-Gemake & Berg (1984:22) consider as a graphic arrangement showing the major ideas and relationships in a text or among word meanings.

Little and Box (2001:25) contends that visual aids like graphic and advance organizers help students to develop students connection between prior knowledge and new knowledge. Teacher need to aids students in building prerequisite knowledge or remind them, through review, what they already know before introducing new reading material. Fisher and Frey (cited in Little and Box, 2005:26) say that studies have shown that providing students with background information on a topic through the use of specific pre-reading strategies such as advance or graphic organizers implemented before reading or studying the topic is likely to assist in schema building. Therefore, it enhances vocabulary and reading comprehension.

Regarding to the above issue, there have been numerous empirical studies conducted by scholars to examine the language-learning benefit using semantic mapping in both acquisitions of vocabulary and reading skill. Most of them generally confirm the beliefs of beneficial impact on EFL and ESL learners' reading skill development. For example, Junaid

(2005) shows in his research that the strategy affected the students' reading comprehension performance of scientific texts. Another research carried out by Little & Box (2011) shows in their research that semantic mapping can significantly affect students who previously had a lack of prior knowledge on new content reading material by helping them to better understand the vocabulary and content of the reading material prior to actually reading the material.

Therefore, the researcher necessarily conducted a further research to experiment on semantic mapping as a strategy to teach reading skill to solve the problem in student's UKIP. This research aims at find out the extent of the use of the semantic mapping strategy enhances students' reading performance.

METHODOLOGY

Research Design

This research applied a quasi-experimental design, which used two groups - experimental group with the semantic mapping and controlled group without semantic mapping or conventional one. In the experimental group, the students work individually, fairly, and group. In learning process, they made list of topic-related words and made a graphic organizer while in the controlled group, the teacher simply explained learning material or teacher center, asked questions and worked individually. The research instruments were test (TOEFL reading

section). This research was conducted to the third semester students of law faculty of UKIP. It encompassing of 3 classes (class A, B, and C) with total population was 120. The number of samples of this research were 80 consisted of two classes.

Method of Collecting Data

Data collection was conducted by utilizing instruments test. Both groups were given a pretest before the teaching and a posttest after the teaching. On the pre-test and post-test, students were asked to answer TOEFL reading test.

Technique of Analyzing the Data

The data obtained from the test was scored and classified based on scoring classification of the students' learning outcomes on English Reading adapted from Nunan (1991). The results of the students' test were then analyzed using statistical software (SPSS version 22) to obtain the frequency, the mean score, the result of normality test, and the nonparametric test (Mann-Whitney U test and Wilcoxon test).

Steps in Data Analysis

The steps of the data analysis were chronologically arranged in the following order:

(1) The researcher did the pretest to both groups; (2) The researcher taught for several meetings in both groups. (3) The researcher did the post-test in both groups. (4) the researcher scored and classified the students' score. (5)

The researcher discussed some theories related to the findings.

FINDINGS

The findings encompass the development of students' reading ability from the experimental and control groups.

The extent of Students' reading performance

In the following explanation, the researcher presented the students' reading ability in the pretest and posttest in experimental and control groups. It aimed to compare the students' reading ability in both groups before and after the treatment using semantic mapping and conventional one.

The finding of this research is that the result of the given measurements after the treatments indicates a difference between the mean scores of the two groups. The mean scores of students who were taught reading using semantic mapping were higher than those who were not ($42.3 > 32.3$). Nevertheless, to be statistically confident about the significance of the differences, the two mean scores were tested using at the .05 level of significance using the Mann-Whitney U test. The result shows the probability value were .002, which was lower than .05 ($p < .05$). This means that the mean scores of the two groups were not equal.

In other words, there was a significant difference between the mean scores of those groups after accepting dissimilar treatments. Moreover, to ascertain statistically whether there were a significant difference from pretest

(29.5) to posttest (42.3) in the experimental group, Wilcoxon test was run. The upshot shows that probability value (P) is $0.000 < 0.05$. This means that there were a significant difference between the pretest and posttest of the experimental group or it signified that the statistical hypothesis of H_0 was rejected or H_1 was accepted. On the other words, there was an improvement from the pretest to the posttest of the experimental group after implementation of Semantic Mapping in teaching reading. This implies that the application of the semantic mapping strategy contributes to the improvement of the students' reading skill.

DISCUSSION

The first question of the current study is sought to investigate the extent of the semantic mapping strategy to enhance students' reading skill. To answer this question, Wilcoxon test were run. It resulted that the application of the semantic mapping strategy did improve the students' reading ability. Some of findings were indicated to be in partial of accordance with a number of previous studies such as Malendez (1991), Junaid (2005), Little & Box (2011), Supramaniam (2011), Agustina et al (2012), which supported that semantic mapping as a teaching strategy does improve the students' reading ability.

Related to the application of semantic mapping strategy, the researcher found that the strategy to teach reading was more effective than conventional one. It helped

students in learning process of reading to comprehend a text, including before, during, and after reading the text. That was in line to what Heimlich & Pittelman (1986) and Antonacci (2011) who stated that the strategy was not only effective in pre- reading phase but also in post-reading one. Through the strategy, it provided students with a good preparation before reading the text so they had sufficient knowledge of the words or vocabularies, and even rich vocabularies when students were asked to make list of the topic-related words or vocabularies. It also aided students to store information acquired from the text, and when to use the semantic mapping or to make the graphic organizer, they facilitated students to remember and arranged the attained information or what had been learned from the reading text.

In addition, the strategy integrated new information with prior knowledge in the brainstorming phase or pre-reading. It enabled students to activate their pertinent knowledge and made learning more meaningful. Related to that case, Little & Box (2011), explains the essence of a reader's pertinent knowledge and experience about events, concepts, vocabulary, and objects illustrated in a text passage is able to provide a significant effect on the meaning the students acquire from a text. These process permit students to quickly obtain new knowledge and/or relate prior knowledge associated with the conceptual topics of the reading assignment. Anderson (1999) revealed

that the prior knowledge impact reading comprehension that meaning did not merely come from the written material, but the reader brought certain knowledge to the reading that influenced comprehension. Therefore, the information obtained in this pre-reading activity was directly related to the new knowledge and experiences obtained by students prior to reading about the topic.

Furthermore, another thing and the most important one supporting the students' enhancement of reading skill through the semantic mapping was the strategies that can engage students actively in learning process such as interacting and cooperating with other in building up the students' insight into understanding a text. For instance, the students discussed among others in their groups and also between the lecturer in pre-reading, whilst-reading, and post-reading. This activity gives students benefit of sharing ideas or vocabularies or helping one another to categorize them in the concept map. As the results, the concept mapping provides the student's interaction to share their ideas and acquire information among the groups. Harmer (2001) states that students who work together in a group will communicate each other have responsibility in problem-solving and be able to share ideas or solution of problems

It is also crucial to convey that making a concept map or graphic organizer is to give students a benefit in understanding structure of a text. Students, for example, made list of the

topic-related words and put them in a concept map. It enables them to understand the structure of the text such as main ideas and details while making the concept map. It shows that most of the students are in the same opinion that this strategy aids them to understand both words and structures of a text. This is also in line to what Plotnik as quoted in Phantharakphong&Pothitha, (2014), states that attempts of semantic mapping enhancing reading skill is the use of visual symbols rendering benefits in learning reading on a concept map, so they are easy to recognize, to scan for a specific word or general idea, and it also allows for more holistic understanding of the concept.

CONCLUSIONS AND SUGGESTIONS

The result of the Wilcoxon test as a paired t-test showed that probability value (P) was less than 5% at the level of significance ($0.00 < 0.05$). This statistical output indicated that there was a significant difference between the students' mean score gained in pretest ((29.5) and posttest (42.3) which means the null hypothesis (H_0) was rejected. On the other words, there is an improvement of the ability of the experimental group after the use of the semantic mapping strategy to teach reading. it increased 13 points.

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