THE EFFECT OF MIND MAPPING TO STUDENTS' ABILITY IN READING COMPREHENSION AT THE EIGHTH GRADE STUDENTS OF SMP SWASTA AL-MUKMIN

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ABSTRACT

The students of the eighth grade at SMP Swasta Al-Mukmin had difficulty in understanding the text which caused them could not find the main essence of the text. Thus, this research was conducted to know the effect of mind mapping on students' ability in reading comprehension. This research was conducted using a quantitative quasi experimental design. The sample was divided into two groups, namely experimental group and control group which consisted of 35 students for each. This research used pre-test and post-test in the form of reading comprehension test as the research instrument. The research result concluded that the students who were taught by mind mapping had a better reading comprehension. The data analysis showed the pre-test mean score of experimental group was 55.4 while the control group was 54.5 and the score was increased after applying mind mapping. The post-test mean score of experimental group was 77.7 and 69.5 for control group. The value of mean score of both groups was calculated using T-test. It was obtained the value of T-count was 3.96 while T-table was 1.66 under the degree of freedom 68 and the degree of significance 5%. Since T-count value was higher than T-table value, the hypotheses were proved. Therefore, it is stated that Ha (alternative hypothesis) was accepted and Ho (null hypothesis) was rejected. Based on this research result, it is suggested that the English teachers apply mind mapping technique since this technique is one of many ways teacher can apply to enhance students reading comprehension of texts easily and efficiently.

Keywords: mind mapping, students' ability, reading comprehension

ABSTRAK

Siswa kelas delapan SMP Swasta Al-Mukmin mengalami kesulitan dalam memahami teks yang menyebabkan mereka tidak dapat menemukan intisari teks. Oleh karena itu, penelitian ini dilakukan bertujuan untuk mengetahui pengaruh mind mapping terhadap kemampuan membaca pemahaman siswa. Penelitian ini dilakukan dengan menggunakan desain kuasi eksperimen kuantitatif. Sampel dibagi menjadi dua kelompok yaitu kelompok eksperimen dan kelompok kontrol yang masing-masing terdiri dari 35 siswa. Penelitian ini menggunakan pre-test dan post-test dalam bentuk tes pemahaman membaca sebagai instrumen penelitian. Hasil penelitian menyimpulkan bahwa siswa yang diajar dengan mind mapping memiliki pemahaman bacaan yang lebih baik. Analisis data menunjukkan nilai rata-rata pre-test kelompok eksperimen adalah 55,4 sedangkan kelompok kontrol adalah 54,5 dan skor meningkat setelah menerapkan mind mapping. Nilai rata-rata post-test kelompok eksperimen adalah 77,7 dan 69,5 untuk kelompok kontrol. Nilai mean skor kedua kelompok dihitung menggunakan uji-T. Diperoleh nilai T-hitung sebesar 3,96 sedangkan T-tabel sebesar 1,66 dengan derajat kebebasan 68 dan derajat signifikansi 5%. Karena nilai T-hitung lebih tinggi dari nilai T-tabel, hipotesis terbukti. Dengan demikian, dinyatakan bahwa Ha (hipotesis alternatif) diterima dan Ho (hipotesis nol) ditolak. Berdasarkan hasil penelitian ini, disarankan agar guru Bahasa Inggris menggunakan teknik mind mapping karena teknik ini adalah salah satu dari banyak cara yang dapat diterapkan guru untuk meningkatkan pemahaman membaca teks siswa dengan cara mudah dan efektif.

Kata kunci: *pemetaan pikiran, kemampuan siswa, pemahaman membaca*

A. Introduction

Reading is a basic language skill in the life of every human being. Humans in every aspect of their lives require reading activities to obtain various information needed in living their daily lives. Therefore, reading skills are important things that must be mastered. Reading is an interactive process in which readers involved in, exchanging ideas with author through the text. Exchanges usually cover a goal and take place in the chosen context or setting. Burnes and Page (1991) stated that reading understands written discourse. In line with Burnes, Hornby (1995) stated that understanding is a process of comprehension of the text. Thus, students are able to inform themselves by understanding the content of reading texts. In addition, Heilman (1981) also stated that reading comprehension is a multi-faceted process full of multi-faceted thinking and language skills that can be a process of thinking about the sense of a written idea through meaningful interpretation and interaction.

Reading is not only just reciting written symbols, but it also requires the readers to understand number of information exists in the text they read. Therefore, it can be said that actually the essence of reading is understands. Anderson (2003) stated that 'meaningful reading' consists of four main parts, namely reader, text, strategy, and fluency. When a reader reads a text, he or she combines the background of a particular topic with data from the text to create meaning that encourages understanding. Readers use good reading strategies in reading the text. To get a faster and better understanding, he uses his ability to read at an appropriate speed (fluency). Therefore, reading comprehension learning needs to be taught seriously in junior high schools by using the right model. Thus, it is obvious that one of the goals of reading for students is to understand the content of the reading and not only just to be able to read.

Reading English in Indonesian system of formal education is one of the language skills that students should learn from education levels ranging from elementary school to university. Since in Indonesia that English is still learned as foreign language, thus, reading has important role in the learning process and that reading English texts has important role in foreign language learning plans.

Given the important role of reading comprehension in learning activities in junior high school, reading comprehension is an important skill for students to master. But in reality, the intermediate reading comprehension students is still low. Facing students with low reading comprehension skill and low reading interest, teachers must be creative and wise to choose the right way or strategy in carrying out their teaching process to achieve the goals or objectives of the lesson or create a teaching and learning process that can facilitate students to learn English language easily and more fun.

If you look at the problems that occur, it is suspected that one of the causes is the use of learning models that are less effective. The learning model is a systematic procedure or pattern used as a guide to achieve the expected learning objectives. An effective learning model can help to improve students' activity and learning outcomes. One of the effective learning models as an effort to understand reading is the Mind Mapping model. According to Suyanto (2015), the concept of Mind Mapping rests on how the brain stores information. The brain has the flexibility to store significant information from word to word and even columns. In order to remember quickly, the brain needs a way so that its stored parts are often expressed in various forms. Asmiaty (2001) in Patria, Sukirlan, and Simanjuntak (2013) also stated that mind mapping is good to train students' reading comprehension because it helps the students easier to understand the story and make them more creative and imaginative in drawing pictures and symbols. According to Moi & Liane (2007) in Patria et al. (2013), mind mapping helped students show an understanding the text better because they can see the content relationship visually, and look for the keywords of answering the questions. Mind mapping learning model is a model designed to assist students in the process of understanding reading, storing information, and helping students compile

the important points of a reading. Through the Mind Mapping learning model, students will know the main topic of reading, determine the main sentence, and then make their own mind maps according to their creativity.

B. Research Method

This study was performed quantitatively by quasi-design of experiments. McMillan and Schumacher (2006) found that quasi-experimental studies are not true experiments, but they are superior in their studies because they reasonably control the causes of most ineffectiveness and are usually more powerful than pre-experimental designs. It states that it may be a design. Because quasi-design of experiment focuses on treatment and outcomes, we take information from pre-tests and post-tests to understand whether mind mapping is more effective than descriptive methods in improving student reading comprehension.

The total sample in this research was 70 students and they were divided into experimental group and control group. Each group consisted of 35 students. The researcher used pre-test and post-test in the form of reading comprehension test as the research instrument.

There were some techniques applied to obtain the research data.
1. Pre-test
   Pre-test was a treatment applied for experimental group and control group before implementing the treatment.
2. Post-test
   Post-test was done as the final exam after completing the treatment for both groups. It was intended to see if mind mapping is effective or not to boost students' reading comprehension.

The quantitative data were collected from the score of pre-test and post-test of both groups. The scores then were calculated to obtain the average value (mean score) of both groups. The mean scores then were compared to find out the difference before and after the treatment were carried out. The mean score of both groups then were calculated and analyzed using the following formula.

$$M = \frac{\sum x}{N}$$

Where:
M : the mean obtained
$\sum x$: the sum of the students' value
N : the quantity of subject

Below formula was used to calculate the variance.

$$s^2 = \frac{\sum(xi - \overline{x})^2}{n - 1}$$

Where:
s = deviation standard
$\sum$ = sum of sample score
x_i = individual score
$\overline{x}$ = sample mean
n = sample size

C. Result and Discussion

This research was conducted at SMP Swasta Al-Mukmin of the eighth grade students. Prior to the implementation of the treatment, students were given a pre-test as an effort to determine the students' initial abilities. It was obtained the students' initial score before carrying out the treatment was 55.4 for experimental group and 54.5 for control group. Table 1 shows the overall scores of pre-test and post-test for both groups.

Table 1. **Pre-test and Post-test Score of Experimental Group and Control Group**

Meeting	Pre-Test	Post-Test
Experimental Group	55.4	77.7
Control Group	54.5	69.5

From the above table, it is seen that there are differences of score between pre-test and post-test of both groups. In experimental group, the mean score increased from 55.4 in pre-test to 77.7 in

post-test. Meanwhile in control group, the mean score increased from 54.5 in pre-test to 69.5 in post-test. The experimental group experienced an increase of 22.3 points and the control group experienced an increase of 15 points. This difference of scores showed that there was significant effect of using mind mapping in teaching reading comprehension. It was proved by the higher score achieved by experimental group which was taught by using mind mapping than the control group which was taught descriptively.

Below table shows the percentage of the increasing score for each group.

Table 2. **Percentage of Score Experimental Group and Control Group**

Variable X (Experimental group)	Variable Y (Control group)
52 %	47 %

Table 2 above shows that there is difference by 5% between variable X (52%) and Y (47%) which indicates that experimental group score is higher than control group score.

The data showed in table 1 above was then calculated statistically using T-test formula and obtained that T-count value was 3.96 and the T-table value was obtained as 1.66 with the degree of freedom 68 and under the degree of significance 5%. Formerly, an assumption was made as "if T-count is higher than T-table, the alternative hypothesis is accepted". Thus, after finding out the result that T-count was higher than T-table, it was concluded that the alternative hypothesis was accepted which meant that using mind mapping gave effect to the improvement of students' reading comprehension. The result can be written statistically as T-count > T-table (3.96 > 1.66).

The research data comparison of the pre-test score and post-test score in experimental group also showed improvement. The percentage score in pre-test of experimental group was 81 which

was categorized as good and the percentage was increased to 86 which was categorized as very good as shown in below calculation.

$$P = \frac{1939}{2,380} \times 100\%$$
$$= 81$$

Percentage of Pre-test Experimental Group.

$$P = \frac{2720}{3,150} \times 100\%$$
$$= 86$$

Percentage of Post-test Experimental Group.

Where:
P   = Percentage of the students' reading comprehension
S   = total points of students' scores
M = Maximum score points (the highest score x the number of students)

Based on the current research circumstances, it can be said that the students felt easier in comprehending the reading text using mind mapping. Thus, it can be inferred that mind mapping can be the right option among other techniques to assist students in reading comprehension. During the implementation of treatment, the students also tried to involve actively by answering the questions given and responding the instructions as well.

Comparing both groups, this research also figured out that there was found obstacles in control group which was taught descriptively or without mind mapping. While in experimental group, during the teaching learning process when the treatment was given, it was found that mind mapping motivated students more. After giving elaboration of mind mapping, some students actively asked some difficulties they experienced. The class felt better and less noise since they focused on understanding the steps of mind mapping. Students also actively participated in discussing the texts and assignments given. They also responded to the instructions given and paid more attention to the lesson.

Mind mapping model has been proved in many researches that it can help students to be more engaged not only in reading but other skills. One of the researches conducted previously was by Panggabean, Lubis, and Lubis (2010). The research was implemented for the eighth grade students at SMP N 6 Padang Sidempuan and concluded that mind mapping had a great influence on the students' writing. Another research was conducted by Kamelia, Agustina, and Sudarmaji (2018) focusing as well on students' writing ability. The result showed that there was a difference in students' writing ability before and after being taught by mind mapping. Another research conducted by Lastari and Saraswati (2018). The result indicated that there was a significant improvement in the subjects' writing skill after the implementation of mind mapping.

This current research was conducted to prove that mind mapping is effective as well for reading comprehension. The result shows there is significance effect on students' reading comprehension using mind mapping and this strategy can be used as a good strategy to improve student's reading comprehension.

D. Conclusion and Suggestion

This research examined if the applying of mind mapping make students easier in comprehending the texts such as finding main ideas in the story, obtaining necessary information from the story, and many others. Referring to the assumption made prior to conducting of the research that "if T-count is higher than T-table, the alternative hypothesis is accepted" and it was obtained that T-count was higher than T-table, then it was concluded that the alternative hypothesis was accepted. This means that using mind mapping is effective in teaching reading comprehension for the students. Therefore, it is suggested for other researcher to conduct the same research topic using mind mapping for other genres of texts and with other teaching approach in order to find out more the effectiveness of mind mapping in reading comprehension.

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