USING MIND MAPPING TECHNIQUE TO IMPROVE READING COMPREHENSION OF THE SECOND YEAR STUDENTS

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Abstract

This research aimed at finding out that the use of Mind Mapping Technique can improve Reading Comprehension. This research applied pre-experimental research design to the second year students of SMP Negeri 2 Kasimbar. The sample was the second year students XIII B chosen by cluster sumpling technique. The data were collected through observation, and test. The data from observation were analyzed descriptively, whereas the data of the test were analyzed statistically. The results of the data showed that there is a significant difference between pre-test and post-test. It is proved by the result of the t-counted 13.18 which is higher than t-table 1.725. By applying 0.05 level of significance with 20 samples, this research found that there was a significant difference from the improvement of the students' reading comprehension through mind mapping technique. It means mind mapping technique was effective.

Keywords: Improve, Reading Comprehension, Mind Mapping.

INTRODUCTION

Reading is an important role in human being context. In learning reading comprehension the students are expected to be able to get meaning from the written language and enhance their English. However, teaching and learning reading is not easy because there is some factors which influence it. Wallace (2000:03) states:

> "The most important resource that any potential reader possesses, whether reading in a first or any other language, is an awareness of the way in which we use language. For reading is above all to do with language. There are two things which we all know about language: first, that we use it for a purpose; second, that it only makes sense in context that is as part of a larger text or in a situation."

Furthermore, Bond (1984:2) argues, "Reading is the recognition of patterns of written symbols serves stimulus to recall meaning that are building up through reader past experience."

Terry and Thomas (1997:284) define, "reading as the perception of written symbols as meaningful involving recognitions of words, fluency, and comprehension. In addition,

Smith (1978:56) points out that "reading comprehension means the understanding, evaluating, utilizing of the information and gained through an interaction between reader and author." Meanwhile, Heilman, et al (1981:242) state, "Reading comprehension is a process of making sense of written ideas through meaningful interpretation and interaction with language."

According to Smith (1980:107), reading comprehension skills are divided into 4 levels: Firstly, literal comprehension, Smith (1980:170) states that "literal reading involves the idea and fact that are directly stated in the printed pages." Secondly, according to Smith (1980:170), interpretative reading is considered to be a higher level of thinking. Thirdly, critical reading, Rubin (1982) define, "critical reading is at higher level than the other two levels such as literal and interpretative comprehensions since it involves evaluation, making of personal judgment, the reader must be able to collect, interpret, apply, analyze, and synthesize the information." The last is Creative reading, according to Harras and Sultianingsih (1997:29), creative reading is a reading process to get benefit of new knowledge in the reading passage by identifying prominent ideas or combining the knowledge they get before.

. There are two reading techniques commonly used: scanning and skimming. Nuttal (1982:34) argues that:

> "Scanning is glancing rapidly through a text either to search for a specific piece of information (a name, a date) or to get an initial impression of whether the text is suitable for a give purpose. Scanning is the ability to locate specific information as rapidly as possible. Scanning also is used to find out the details information from the passage."

Another technique is skimming. Nuttal (1982:34) defines skimming as:

> Glancing rapidly through a text to determine its gist, for example in order to decide whether a research paper is relevant to our own work (not just to determine its field which we can find out by scanning), in order to keep our selves superficially informed about matters there are not great importance of us.

There are some kinds of text in reading; one of the texts is descriptive text. Turbill (2004:138) states, "Descriptive text has sentence that work together to present and single description of person, a place, a thing, an event or idea". Furthermore Gerot and Wignell (1995:4) define," Descriptive Text is a kind of text with a purpose to give information.

Mind mapping technique is one of the techniques that can improve the english ability of the students. Mind mapping itself is popularized by Buzan in 1964. Buzan (2007:19) states, "Mind-map is the chosen instrument that could help a person to sharp the

memory." It is a useful technique that help the students learn more effectively, improves the way that we record information.

According to Buzan (2007:116), mind mapping gives many advantages as follows:

1. Memorize everything permanently
2. Master the fact, number and the formula easily
3. Increase the concentration and motivation
4. Memorize the names, the events in history, and the drama taxt
5. Rememorize again the information easily
6. Decrease a half of the studying time

The researcher formulated the research question: *Can the use of mind mapping technique improve the reading comprehension of the second year students of SMP Negeri 2 Kasimbar?* The objective of this research was to find out that mind mapping can improve reading comprehension of the second year students of SMP Negeri 2 Kasimbar.

METHODOLOGY

The researcher used pre-experimental research design. It means that in conducting the research, the researcher used one class as sample without control group. By using this design, the researcher administered pre-test before the treatment and post-test was conducted after the treatment. Best (1981:59) proposed the research design as follows:

$$0_1 \ X \ 0_2$$

Where:
0_1 = Pre-test
X = Treatment
0_2 = Post-test

The population of the research was the second year student's of SMP Negeri 2 Kasimbar. It consists of three classes. The distribution of the students in each class can be seen in the following table

Table 3.1
Population distribution

No	Class	Number of students
1	VIII A	21

No		
2	VIII B	21
3	VIII C	20
	Total	62

Furthermore, to determine the sample of this research, the researcher used cluster sampling technique. The sample in this research was the second year students of SMP Negeri 2 Kasimbar especially year XIII B.

In this research, the researcher used two variables; they were dependent and independent variables. Therefore, the independent variable is mind mapping technique and dependent variable is the students' reading comprehension.

There are two tests administered to the students. They are pre-test and post-test. It consists of three types: they are multiple choice test, essay tests and true- false. The distribution of score in each item can be seen in the table below

Table 3.2
The scoring systems of test

No	Kinds of test	Number of items	Score of each Correct answer	Maximum score
1	Multiple choice	10	1	10
2	True- false	5	1	5
3	Essay	5	3	15
	Total	20		30

The treatment was given after the students get pre-test. In this part, the researcher applied mind mapping technique to improve reading comprehension of the students. The researcher carried out the treatment for seven meetings. The post-test was given after the treatment. The number of post-test was the same as in pre-test. This was intended to measure the students' comprehension in reading and to know whether the treatment is effective or not.

To compute the individual scores, the researcher used a formula proposed by Sutomo (1985:123) as follows:

$$\text{Individual score} = \frac{\text{Obtained score}}{\text{maximum score}} \text{ x } 100$$

To compute the students mean score, the researcher used a formula as stated by Best (1981:225) as the following:

$$M = \frac{\Sigma X}{N}$$

Where:

M = Mean score

N = Sum of distribution

$\sum x$ = the number of score

To compute the students' mean deviation, the researcher applied the formula as stated by Arikunto (2002:276) as the following:

$$Md = \frac{\sum d}{N}$$

Where:

Md = Mean of deviation of pre-test and post-test

$\sum d$ = Sum of deviation

N = Number of students

To compute the total of square deviation the researcher used the formula proposed by Salombe (2004:23) is as follows:

$$\sum x^2 = \sum d^2 - \frac{(\sum d^2)}{N}$$

Where:

$\sum x^2$ = the sum of squared deviation

$\sum d^2$ = Sum of squared deviation

N = Number f students

Then, the researcher calculates the test score using the formula proposed by Best (1981:225) as the following:

$$t = \frac{Md}{\sqrt{\frac{\sum x^2 d}{N(N-1)}}}$$

Where:

t = the mean of t-counted

Md = the mean deviation of pre-test and post-test

$\sum x^2 d$ = the sum of square deviation

N = number of students

1 = constant number

FINDINGS

Before giving treatment, the researcher examined the students' ability in reading comprehension using a test called pre-test. It was applied to measure the students' reading

comprehension before they got treatment. The following table 4.1 presents the results of the pre-test.

Table 4.1.
The Students' Pre Test score

| No | Initials | Types of Test | | | Total Score | |
		Multiple Choice	Essay	True false	Raw Scores	Individual Scores
1	Ais	5	7	3	15	50
2	Aly	4	8	4	16	53,33
3	Amb	6	5	2	13	43,33
4	Ayu	9	8	5	22	73,33
5	Dew	8	6	2	16	53,33
6	Jan	8	5	3	16	53,33
7	Kis	8	8	5	21	70,00
8	Mag	7	9	4	20	66,67
9	Mir	9	9	5	23	76,67
10	Moi	6	6	1	13	43,33
11	Mor	6	7	5	18	60,00
12	Nin	6	7	4	17	56,67
13	Nur	9	9	4	22	73,33
14	Nun	9	9	5	23	76,67
15	Ret	6	8	5	19	63,33
16	Saf	6	7	3	16	53,33
17	Sul	7	0	3	10	33,33
18	Wah	6	7	3	16	53,33
19	War	8	9	5	22	73,33
20	Zay	9	9	3	21	70,00
21	Zul	8	7	1	16	53,33
	Total	**150**	**150**	**75**	**375**	**1250**

The result of the pre-test above shows that the highest score is 76.67 and the lowest score is 33.33. To find out the mean score of the students, the researcher applied the mean formula as follows:

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

$$= \frac{1250}{21}$$

$$= 59.52$$

After conducting the treatment to students, the researcher gave post-test in order to know their progress as well as to find whether or not the students' ability in reading comprehension can be improved through the use of mind mapping technique. The result of the post-test was presented in the following table.

Table 4.2
The Students' Post-Test Scores

No	Initials	Types of Test			Total Score	
		Multiple Choice	Essay	True false	Raw Scores	Individual Scores
1	Ais	8	5	4	17	56,67
2	Aly	6	9	3	18	60,00
3	Amb	6	8	3	17	56,67
4	Ayu	10	9	5	24	80,00
5	Dew	8	7	4	19	63,33
6	Jan	7	6	5	18	60,00
7	Kis	9	9	5	23	76,67
8	Mag	8	9	4	21	70,00
9	Mir	10	12	5	27	90,00
10	Moi	5	8	5	18	60,00
11	Mor	8	9	4	21	70,00
12	Nin	10	6	4	20	66,67
13	Nur	9	10	5	24	80,00
14	Nun	10	10	5	25	83,33
15	Ret	7	10	5	22	73,33
16	Saf	7	9	3	19	63,33
17	Sul	5	3	5	13	43,33
18	Wah	7	8	5	20	66,67
19	War	8	12	5	25	83,33
20	Zay	8	10	5	23	76,67
21	Zul	8	9	3	20	66,67
	Total	**164**	**178**	**92**	**434**	**1446,66**

Based on the table above, the researcher counted the mean score of post-test as follows:

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

$$= \frac{1446.66}{21}$$

$$= 68.88$$

The result of the above calculation showed that there was significant difference between the students' mean score on pre-test and post-test. The students' mean score on pre-test 59.52 was lower than that of on the post-test 68.88. In other words, the students' achievement got improved.

After counting the students mean score of both pre-test and post-test, the researcher calculated the deviation and square deviation of the students' scores on pre-test and post-test as shown in the following table.

Table 4.2.1
Deviation of Pre-test and Post test

No	Initials	Students Scores		Deviation (X)	X
		Post-test	Pre-test		
1	Ais	56,67	50	6,67	44
2	Aly	60	53,33	6,67	44
3	Amb	56,67	43,33	13,34	178
4	Ayu	80	73,33	6,67	44,49
5	Dew	63,33	53,33	10	100
6	Jan	60	53,33	6,67	44
7	Kis	76,67	70	6,67	44
8	Mag	70	66,67	3,33	11
9	Mir	90	76,67	13,33	178
10	Moi	60	43,33	16,67	277,89
11	Mor	70	60	10	100
12	Nin	66,67	56,67	10	100
13	Nur	80	73,33	6,67	44,49
14	Nun	83,33	76,67	6,66	44,36
15	Ret	73,33	63,33	10	100
16	Saf	63,33	53,33	10	100,00
17	Sul	43,33	33,33	10	100
18	Wah	66,67	53,33	13,34	178
19	War	83,33	73,33	10	100
20	Zay	76,67	70	6,67	44,49
21	Zul	66,67	53,33	13,34	177,96
	Total	**144667**	**1249.97**	**196.7**	**2056.31**

To know the mean deviation score of pre-test and post-test, the researcher used the formula below:

$$\text{Md} = \frac{\Sigma d}{N}$$

$$= \frac{196.7}{21}$$

$$= 9.36$$

The mean deviation score of pre-test and post-test was 9.36. The researcher then computed the sum of squared deviation as shown below:

$$\sum \text{x}^2 = \sum \text{d}^2 - \frac{(\sum d)^2}{N}$$

$$= 2056.31 - \frac{(196,7)^2}{21}$$

$$= 2056.31 - \frac{38690.89}{21}$$

$$= 2056.31 - 1842.42$$

$$= 213.58$$

After getting the sum of squared deviation of experimental group, the researcher continued to count the t-test score to figure out whether the research hypothesis was accepted or rejected. The computation was presented in the following:

$$t = \frac{M\text{d}}{\sqrt{\frac{\sum x^2 \text{d}}{\text{N (N}-1)}}}$$

$$= \frac{9.36}{\sqrt{\frac{213.58}{21\,(21-1)}}}$$

$$= \frac{9.36}{\sqrt{\frac{213.58}{21\,(20)}}}$$

$$= \frac{9.36}{\sqrt{\frac{213.58}{420}}}$$

$$= \frac{9.36}{\sqrt{0.50}}$$

$$= \frac{9.36}{0.71}$$

$$= 13.18$$

The result above indicates that the t-test score of experimental group was 13.18.

DISCUSSION

In regard with the student's comprehension in learning English especially reading, the researcher found most of the students had more than enough ability in comprehending content of the text presented by the researcher through mind mapping during the classroom activities and the students could comprehend better.

In line with the students' interest in reading the researcher found that the students involved actively in discussing the reading questions. They were enthusiastic to respond the lessons because by mind mapping the students can remember the content of text and rememorize again the information in reading easily. This case shows that the mind mapping also overcome the student's problems in reading comprehension.

After the researcher conducted her observation, she gave the students test. The first test was conducted before treatment called pre-test. The result of the data analyses shows that pre-test mean score result of the students was 59.52. After that, the researcher taught the students. She taught the students by applying mind mapping technique. The researcher wanted to overcome the problems of students in reading comprehension. After doing the treatment, the researcher gave post-test to the students' the mean score 68.88. It shows that the post-test result of the students was higher than the result of pre-test.

The result of research above shows that the students' ability in reading comprehension can be improved by using of mind mapping technique. In other words, the results can be found that there was significant difference between this research with previously research. It has been found that mind mapping technique was effective to improve the students' reading comprehension of the second year students of SMP Negeri 2 Kasimbar.

CONCLUSIONS AND SUGGESTIONS

After analyzing the data descriptively and statistically, the researcher draws some conclusions. Firstly, the result of the data analysis shows that the use of mind mapping technique can improve students' reading comprehension of the second year of SMP Negeri 2 Kasimbar especially year XIII B. Secondly, the researcher concludes that the hypothesis of the research was accepted. This case shows there is significant difference between the pre-test and post-test result. The last is, the students responses are the students involve in

comprehending the idea and the meaning context of reading and they acquire information explicitly stated in the text.

In connection with conclusions above, the researcher would like to give the English teacher and the students of SMP Negeri 2 Kasimbar some suggestions. Firstly, for the English teacher, they should be more creative in teaching so that the students will be interested in learning English subject. Secondly, the teacher can use mind mapping technique because it can help the students to comprehend content of the text. Finally, for the students; if the students find difficulties in understanding the technique or the instruction given, they should ask the teacher for clearer explanation and the students should be active in participating during the lesson.

REFERENCES

Arikunto, S. (2002). *Prosedur Penelitian Suatu Pendekatan Praktek*. Jakarta: PT Rineka Cipta.

Best, J.W. (1981). *Research In Education*. New Jersey: Prentice Hall

Bond, (1984). *Teaching Reading Comprehenshion*. New Jersey: Prentice Hall Inc.

Buzan, T. (2007). *Mind Map Untuk Anak-Anak*. Jakarta: Gramedia Pustaka Utama.

Gerot, L & Wignell, P. (1995). *Making Sense of Functional Grammar.* Australia: Antipadean Educational Enterprises *(AEE)*.

Harras, & Sultianingsih, L. (1997). *Materi Pokok Membaca 1*. Jakarta: Departemen Pendidikan dan Kebudayaan.

Heilman, A.W,Blair, T.R & Rupley, W.H (1981). *Principles and practices of Teaching Reading.* Colombus: Charles E.Merril Publishing Company.

Nuttal, C. (1982). *Teaching Reading Skills in a Foreign Language.* London: Heineman Education Books.

Markus, S. (2004). *Research II*. Palu: Tadulako University Press

Rubin, D. (1982). *A Practical Appoach to Teaching Reading*. New York: CRS College Publishing

Smith, R,J. (1978). *Definition of Reading Comprehension*. Retrieved on 2/december/2012 at 9 pm from http://amin –limpo blogspot.com

_____ (1980). *Teaching Children to Read*. Newbury House: Published Inc.USA

Sutomo. (1985). *Tehnik Penilaian and Penelitian*. Surabaya: Bina Ilmu.

Terry & Thomas. (1997). *Tactics in Reading*. New Jersey: Prentice Hall Inc.

Turbill, J. (2004). *Guided writing*. Tasmania: University of Wollonging.

Wallace, C. (2000). *Reading.* Oxford: Oxford University Press.