

The Effect of Using A Spidergram Technique on the Eighth Grade Students' Reading Comprehension Achievement at SMPN 5 Situbondo.

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Abstract

English as international language is learnt by some countries as a foreign language and in other countries as a second language. Reading is one of the skills that plays an important role in learning English because through reading we can get knowledge and information. Through reading, readers can get information needed and it can be gained from various printed forms. The purpose of this research was to know whether or not there was a significant effect of using a spidergram technique on eighth grade students' reading comprehension achievement at SMP Negeri 5 Situbondo. The research design was quasi experimental research. The population of this research was the Eighth grade students of SMPN 5 Situbondo in the 2014/2015 Academic year. The respondents of this research were the students of class VIII B as the experimental group and the students of class VIII C as the control group. The supporting data were obtained from the interview with the English teacher of the eighth grade of SMP Negeri 5 Situbondo. The primary data of this research were obtained from the students' score of homogeneity test. The Homogeneity test was administered to know whether all classes of the eighth grade were homogenous or not. The result implied that the population was homogeneous. Thus, two classes chosen as the experimental and control groups were chosen by using lottery. Based on the lottery, two classes were chosen VIII B as the experimental group and VIII C as the control group. The post test was administered to both the experimental and the control groups. The experimental group (VIII B) received a treatment, that was teaching reading by using a spidergram technique meanwhile the control group (VIII C) received no treatment (taught by using lecturing and question-answer techniques). The materials for both the experimental and the control groups were all the same, except the activities in teaching reading comprehension. The post test result was analyzed statistically by using SPSS (*Statistical Package for the social science*) especially with Independent sample t-test to know whether the mean difference between the experimental group and the control group was significant or not. The result of computation showed that was a statistically significant difference between the experimental and the control groups or there was a significant effect between those two groups.

Based on the results of this research, there was a significant effect of using a spidergram technique on the eighth grade students, reading comprehension achievement at SMPN 5 Situbondo in the 2014/2015 Academic Year.

Keywords: *quasi Experimental Research, A Spidergram Technique, Reading Comprehension Achievement, Significant Effect.*

INTRODUCTION

English as one of the main international languages, plays an important function in communication in the world. Many people all over the world speak English either as the first language or as the foreign language. English as a foreign language plays an important role in educational system in Indonesia, as it is used as a medium of knowledge in transferring science, arts, culture and technology. English has become one of the primary subjects in the curriculum. In the 2006 Institutional Level Curriculum for junior high school, it is stated that one of the objectives of teaching English is to develop the students' ability of communication in English which can be reached by mastering the four English skills: reading, writing,

listening and speaking. Reading is one of the skills that plays an important role in learning English because through reading we can get knowledge and information.

Through reading, readers can get information needed and it can be gained from various printed forms. Carrel et al. (1988:1) state that learning reading is the most important skill. For Indonesian students, reading is important because it is a bridge to understand scientific books which are written in English. Meanwhile, in English classes of SMP/MTS, reading is learned in order to get meaning from reading passages of various genres or text types. In line with this idea, Grellet (1996:8) also confirms that reading comprehension should not be separated from the other language skills. It means that reading comprehension

becomes the basic skill of the other language skills in learning English because many materials provided in the form of printed materials should be read. Through reading, the students are able to comprehend the text or the material given. Therefore, every teaching learning activity in English class involves reading activity. Thus reading needs a great attention. According to Boss and Vaugh (1991:93), we can use our knowledge and language skill to guide the reading comprehension process. In this reading process the students not only understand the meaning of word by word, sentence by sentence, but they should comprehend the content of the whole text. Reading is an interactive process that goes on between the reader and the text which result in comprehension. The reader actively creates meaning by memorizing, constructing, and generating, relationship within the text and their ideas. However not all students have the ability to understand and gain the meaning of the text that they read for some reasons. Firstly, they cannot relate what they have read with what they have already known about the topic or they cannot organize well the information that they have got from the text in building the whole meaning in their thinking process. Second, it happens because the students cannot sketch well the message of the text or what they have interpreted in their mind. Gillet and Temple confirm (1990:261) that students can understand and comprehend the text more clearly if they can relate what they have read to their prior knowledge, besides they can also find the text organization in their thinking process while they read the text.

To overcome the student's problem with reading comprehension, the teacher's role becomes important in the teaching and learning process especially in choosing the best teaching method and materials which would be suitable in the purpose of reading itself. Teacher as instructional expert should choose and apply the appropriate teaching materials and methods to help students understand the information from reading text in the process of reading. Therefore, the teacher needs an appropriate technique for the students to enable the teacher helps students activate, develop, organize and become aware of their relevant prior knowledge to make the prediction about the content of the text. The teacher also helps the students get more information, details and examples after the reading activity, so that the students can understand the text well.

One of the teaching techniques to overcome the students' problem in reading comprehension and to activate their prior knowledge is a spidergram technique.

According to the cooper (1992:21) spidergram is a good technique for helping students in organizing their ideas. They can organize, relate, review and make a systematical concept about what they have read in a visual way. It is also confirmed that spidergram is a way of organizing ideas about a particular topic so that the relationship among the various subtopics can be displayed visually. Organizing and categorizing a text which involve selecting key content ideas from the passage and presenting it in some sort of visual display such as circles, connecting lines, boxes or diagrams in which the relationship among the key ideas

within a body of information are made explicitly (Cooper:1992; Carrel, 1988:249).

Dealing with the explanation above, it can be seen that spidergram offers a chance to solve the students' problem in learning English. Therefore, the researcher was interested in conducting a quasi-experimental research to investigate whether spidergram was effective or not in teaching reading comprehension for the eighth grade students of SMPN 5 Situbondo.

RESEARCH METHOD

The research design in this research was a quasi experimental with post test only control group design. Arikunto (2006:3) notes that quasi experimental research observes a cause and effect relationship. Thus, this design was appropriate with the aim of this research, that is, to know whether or not there was a significant effect of using spidergram technique on the eighth grade students' reading comprehension achievement at SMPN 5 Situbondo.

The design of this present research was quasi experimental research with post test-only control group design. The area of this research was SMP Negeri 5 Situbondo. This school was determined purposively. In purposive method, the researcher selected particular elements from the population representative about the topic (Mc Millan, 1992:76). SMPN 5 Situbondo was chosen based on the consideration of the following factors. First, a spidergram technique had never been applied in this school (the result of preliminary study when the researcher asked some questions to the English teacher informally before the real research was conducted). Second, the researcher had got permission from the Principal of SMP Negeri 5 Situbondo to conduct the research at this school and the English teacher agreed to have the present research conducted. The population of the research was the eighth grade students of SMPN 5 Situbondo in the 2013/2014 academic year consisting of six classes; they were VIIIA, VIIIB, VIIIC, VIIID, VIIIE, VIIIF.

The methods of collecting data include reading comprehension achievement test, interview, and documentation. Related to the reading comprehension test that was used in this research, there was two kinds of tests namely homogeneity and post test. The homogeneity test that was given was an objective test in the form of multiple choice. The total number of the test was 20 items and the time allocation for doing the test was 40 minutes. The post test used was also a teacher made-test. The post test was done after the treatment had been given to the experimental group.

The students scores of homogeneity test was analyzed by using ANOVA (Analysis of variance) to know whether there was a significant difference or not among the whole eighth grade students. ANOVA is one of SPSS program that is used to count the mean difference between two samples or more (Suharto, 2013:19). The experimental and the control group was chosen randomly by lottery since the value of variance is more than (0,05) or 5% significant level (it means the population is homogeneous or there is no statistically significant difference).

Meanwhile Post test was given to the experimental and control groups after both of the groups had been given treatment. The treatment was teaching reading using a spidergram technique for the experimental group and a conventional technique (Question – Answer and lecturing techniques) for the control group. The post test was given to both groups on the same day after the teaching learning process was over.

Before the post test was administered to the experimental and control groups, the try out was conducted to the eighth grade students of SMPN 5 Situbondo which did not belong to either the experimental or the control group. The purpose of the try out was to assure whether or not the teacher made-test had the qualification of reliability, validity and difficulty index. Sudjana (1990:135) states a good test must be valid and reliable. Furthermore, Hughes (1996:22) states that the test is said to be valid if it measures accurately what is intended to be measured. According to Arikunto (2000:223), the purposes of establishing the try out are to know: 1) the test validity, 2) the test reliability coefficient, 3) the difficulty index of the test items.

In this research, Content validity was necessary to be established because the test items constructed by the teacher referred to the material that is stated in the 2006 Institutional Level Curriculum for Junior High School. The reading comprehension was measured by involving the indicators of; word comprehension, sentence comprehension, paragraph comprehension, and text comprehension. Henning (1997:269) states that to understand a written text needs the basic comprehension units in reading: words, sentences and paragraphs. Those comprehension units should be organized and related well to form a meaning.

The data of try out was analyzed by using Product moment correlation formula and continued by applying Spearman-Brown odd-even technique (Sudijono,1996:218). It was used to estimate the reliability of the test with the following procedures:

- a. administering the try out and giving the scores for each item
- b. listing the score of each items into the table by giving 1 (one) for the correct item and 0 (zero) for the wrong item.
- c. dividing the scores into two parts according to odd-even numbers.
- d. giving sign (X) for odd numbers and (Y) for the even numbers.
- e. analyzing the correlation between X and Y, the formula are as follows:

$$r_{xy} = r_{hh} = r_{11} = r_{22} =$$

$$\frac{\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\} \{N\sum Y^2 - (\sum Y)^2\}}}$$

Note:

r_{xy} : Reliability coefficient for half of the test items
 $\sum XY$: The total number of odd and even items
 $\sum X$: The total number of odd items

$\sum Y$: The total number of even items

N : The total number of the respondent

f. Estimating the reliability index of the whole test by using Spearman Brown formula as follows:

$$r_{11} = \frac{2 r_{\frac{11}{2}}}{1 + r_{\frac{11}{2}}}$$

Note :

r_{11} = Reliability coefficient for the whole items

$r_{\frac{11}{2}}$ = Reliability coefficient for half of the test items
 (Sudijono, 1998:219)

In this research, the analysis of the result of the try out was analyzed using the degree of the test item difficulties. The formulae is as follows:

$$P = \frac{b}{s}$$

P : The difficulty index

b: The number of students who answer the questions correctly

s: The number of students who join the test.

The criteria of difficulty index as follows:

- 0.00 – 0.19 : Difficult
- 0.20 – 0.80 : Sufficient
- 0.81 – 1.00 : Easy

(Sudijono, 1996:372)

Data analysis method is a way to analyze the data of reading comprehension test and the result was analyzed by using t-test formula. The result was used to know whether or not there was an effect of using a Spidergram Technique on the Eighth grade students' reading comprehension achievement at SMPN 5 Situbondo. The data of post test was analyzed by using independent sample t-test in SPSS program. The result of data analysis was consulted to the t-table of 5% significant level (confidence interval 95%) to know whether the result was significant or not. The null hypothesis was rejected since the result of t-computation was lower than that of the t-table, it means the result of this research was significant. In order to know how far the effect of using a spidergram technique gave contribution to the effectiveness of students' reading comprehension achievement, the degree of relative effectiveness of the treatment used in teaching reading comprehension was obtained from the following formula:

$$DRE = \frac{Mx - My}{My} \cdot 100\%$$

Notes:

DRE = the Degree of Relative Effectiveness.

Mx = mean of pre-test

My = mean of post-test

(Masyhud, 2000:61)

RESEARCH FINDING AND DISCUSSION

The Homogeneity test was administered to know whether all classes of the eighth grade were homogenous or not. The Homogeneity test was conducted on August 4th and 5th August 2014. It has been explained in Chapter III that the population of the research was the eighth grade students of SMP Negeri 5 Situbondo in the 2014/2015 academic year consisting of six classes. So, this test was given to all of the eighth grade students of SMP Negeri 5 Situbondo in the form of Reading Test. The result implied that there was no differences on the students' reading ability among those six classes. In other words, the population was homogeneous. Thus, two classes chosen as the experimental and control groups were chosen by using lottery. Based on the lottery, two classes were chosen VIII B as the experimental group and VIII C as the control group.

In this research, the experimental group (VIII B) received a treatment, that was teaching reading by using a spidergram technique meanwhile the control group (VIII C) received no treatment (taught by using lecturing and question –answer techniques). The teaching learning process was conducted in two meetings. In the first meeting “Animal” was taught to the students and the topic was about “A Particular Place” was taught to the students at the second meeting. The activities in the control and experiment group were done based on the schedule of the English subject of each class of SMPN 5 Situbondo. The materials for both the experimental and the control groups were all the same, except the activities in teaching reading comprehension.

The post test was administered to both the experimental and the control groups on August 16th 2014 after the students had been given the treatment. The post test result was analyzed statistically by using SPSS (*Statistical Package for the social science*) especially with Independent sample t-test to know whether the mean difference between the experimental group and the control group was significant or not. Then, it was consulted to the t-table significant level of 5% to test the hypothesis. Based on the output of independent sample t-test by using SPSS program, the value of significant column of Lavene's test was lower than 0.05 (confidence interval 95%). The column that had to be read was the significant (2-tailed column. That was the column that showed the result of computation of significant level of independent sample T-test. In this research, the researcher formulated the null hypothesis (H_0) that was “There is no significant effect of using a spidergram technique on the eighth grade students' reading comprehension achievement at SMP Negeri 5 Situbondo in the 2014/2015 academic year”.

In the t-test column we could see that the t-value with 62 degree of freedom was 2.388 and the value of sig (2-tailed) column was 0.002. The value of sig (2-tailed) column was lower than 0.05). The sig (2-tailed) was found to be significant at the level of $p < 0.05$ (confidence interval level 95%). Thus, it could be concluded that there was

statistically significant difference between the experimental and the control groups or there was a significant effect between those two groups. It means that the null hypothesis (H_0) formulated: “There is no significant effect of using a spidergram technique on the eighth grade students' reading comprehension achievement at SMP Negeri 5 Situbondo in the 2014/2015 academic year” was rejected. In the contrary, the alternative hypothesis (H_1) formulated: “ There is a significant effect of using a spidergram technique on the eighth grade students' reading comprehension achievement at SMP Negeri 5 Situbondo in the 2014/2015 academic year” was accepted.

From the formula of product moment correlation formula and continued by applying Spearman-Brown odd-even technique, the result of the score reliability coefficient was 0.83. It was considered reliable because the standard of reliability coefficient of the teacher made test is ≥ 0.70 (Sudijono, 1998:209). It means that the researcher did not need to revise the test items, and the test items of the post test could be administered as the real test.

Based on the difficulty index formula, the result showed all of the items which had difficulty index ranging from 0.20 up to 0.80. It means the test items belong to sufficient item. The difficulty index was categorized as fair when the range was from 0.20 up to 0.80. From the result of the try out, there were 100% items which were categorized as sufficient. The result of DRE was 11,4%. It means that the degree of relative effectiveness of using a spidergram technique in teaching reading comprehension was 11,4% more effective than teaching reading by using lecturing and question – answer technique.

The result of this research was in line with Cooper's idea (1999) and the previous research results that spidergram is a good technique for students in organizing their idea. It is a useful tool for helping learners construct, organize, and displayed the students' idea (Cooper. 1999:21). Further, Gerson and Gerson (1997:184) say that spidergram technique help readers to determine their focus of the topic. This technique provides a clear focus for their organizing pattern about the content of the text.

This research showed that the application of a spidergram technique affected the students' reading comprehension achievement. The statistical value also proved that there was a significant effect of using a spidergram technique on the eighth grade students' reading comprehension achievement at SMP Negeri 5 Situbondo.

CONCLUSIONS AND SUGGESTIONS

Regarding the result of hypothesis verification and discussion that had been discussed and interpreted in the previous chapter, it could be concluded that the use of spidergram technique had a significant effect on the eighth grade students' reading comprehension achievement at SMP Negeri 5 Situbondo in the 2014/2015 academic year. In addition the degree of a relative effectiveness was 11,4% which means that the effectiveness of a spidergram technique on the eighth grade students' reading comprehension achievement was 11,4% effective than the

students' reading comprehension without using a spidergram technique.

Since a spidergram technique had a significant effect on reading comprehension achievement, this technique could be used as a consideration to make the students ability in mastering reading comprehension much better because this technique can help the students activate what they have already known about the topic given that involves trying important ideas and specifying their relationship. Thus the researcher proposed some suggestion to the English teacher of SMP Negeri 5 Situbondo to apply this technique as an effective technique in teaching English language skills, especially in reading skill.

The students of SMP Negeri 5 situbondo are suggested to use spidergram technique in their study, especially in reading comprehension. They could use this technique to become effective readers which also affected to their reading comprehension achievement. By using a spidergram technique the students will be able to comprehend the text more easily because the ideas or the information are well organized and presented visually in more simple way. It is hope that the result of this research can be used as a reference and information for future researcher to conduct further research dealing with the use of spidergram technique by using different language skill such as in writing skill in different research design for example classroom action research for different levels' students.

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