

The strategy of mind mapping towards teaching reading comprehension of the eleventh grade students

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Abstract

This research discusses learning Reading Comprehension, which is always referred to as lessons are boring. The objective of this study is to find the strategy of mind mapping in improving students' reading comprehension achievement, especially for narrative text at the eleventh-grade students of SMA Negeri 1 Mojokerto. The researcher analyzed the data of the post-test by calculating-t-test. They calculated from the Null hypothesis and alternative hypothesis. The result showed that there is a different mean score between the Experiment group and the Control group. The mean score of the experiment group is 88 and for the control group is 72. The mean score of the control group is not better than the experiment group means that the Null hypothesis is rejected. Then, the researcher continued to calculate the alternative hypothesis. The result of the t-test is 10,869. After checking the t-table with *DK* 62 at level 0,05, it was found that the standard of significance is 1,670 which means that the result is significant. So, the alternative hypothesis is not rejected. Based on the theoretical hypothesis of this research which is the student learning reading comprehension with a Mind Mapping strategy better than the student learning reading comprehension without a Mind Mapping strategy.

Key words: *reading comprehension; narrative text; mind mapping strategy.*

Introduction

Reading is one of English skills that truly essential in English learning process. It is a skill in understanding words by words, sentences by sentences, paragraphs by paragraphs in a text. Reading is an important role in learning process because it gives knowledge, information, and idea to be applied in the speaking and writing. Narrative is considered appropriate to facilitate. It includes storytelling, which would interest the students to develop their curiosity (Astuti, Hesti Dwi, 2012). However, since the students in this study are the first graders of senior high school, they are also obliged to be familiar with the generic structure of the text. Hence, the duty of the students is not only to read the text but also to recognize the generic structure of the text (Apriliawati, 2009). This could be a boring activity for the students since the technique that is used would not be far away from Grammar Translation Method, therefore the teacher should be creative to find an appropriate technique that can lessen the boredom (Apriliawati, 2009).

The advantages of using mind mapping in narrative text are mind mapping helps organize and present the ideas, it also helps remember them and understand them better. Much of the Mind Mapping usefulness comes from the mindfulness needed to create the map (Ayu, S. Indrayani, 2014). You must think how to condense the key ideas into as few words as possible to maintain the meaning of the idea. You also have to be mindful about how to organize the

information in your map. Another advantage of using mind mapping is that when you come back to review the information, it is much easier to find an idea on a Mind Map compared to reading through long text notes. Every time you review your mind map, you also reinforce the learning of new information in your memory.” Eventually, you would be able to see the actual picture of your Mind Map in your mind, which is something that is hard to do with standard linear notes”. (Tony and Harry Buzan, 2002). Mind mapping as the technique for teaching reading comprehension. Explains that a Mind Mapping is powerful graphic technique which provides a universal key to unlock the potential of the brain. It harnesses the full range of cortical skills word, image, number, logic, rhythm, colour and spatial awareness in a single, exclusively powerful manner. In so doing, it gives you a freedom to roam the infinite expanses of your brain (Tony Buzan, 2005, 2006, 2007).

Based on the problem, it's considers that mind mapping can be an alternative technique for students when doing reading comprehension in achieving their academic success later. Mind mapping was supposed to be an interesting alternative technique that would helped the students to organize their ideas about the text they have read by their own schema, so that they can comprehend the text easily. This study focuses on student's mind mapping in interpreting the text, not on their creativity with entitles “The strategy of Mind Mapping Towards Reading Comprehension of The Eleventh Grade Students at SMA Negeri 1 Kota Mojokerto in Academic Year of 2018/2019”.

Literature Review

Reading is a process when readers learn something from what they read and involve it in an academic context as a part of education (Grabe, 2009: 5). In the classroom, some teachers often use texts or books as media to deliver material of a subject. Furthermore, the teacher asks the students to read the texts to grab information in order that they could understand the material. In summary, reading is the way to get some ideas and information from written text through continuously process in which the reader can decide to confirm, reject, or refine the ideas itself. Based on the writer research, drawing the meaning helps readers to easily understand what they interpret from the text. Here, the writer interprets, drawing the meaning by linking these words with drawing the readers interpretation of the text through mind mapping (Panatda Siriphanich, 2010). For visual readers and especially students, it really helps them to understand the text well. Narrative can be concluded as a text which is used to amuse and entertain the readers through its story. In addition, some steps to make a narrative text should be paid attention for better construction (Davies, 2010). Narrative sounds an interesting kind of text. In line with reading comprehension, it must be easy for students to understand and comprehend narrative text. Although reading comprehension is the ability that is not easy to do, but by doing this activity continuously in every single leisure time and adding by appropriate technique for students, it is not possible for them to comprehend narrative text easily (Harmer, 2009).

The mind mapping is a technique to use the whole brain by using visual and other graphic to create a meaningful impression (DePotter and Hernacki:2006). Using the whole brain can balance two sides of human brain: left and right brain. It means that human can maximize their brains to create meaningful things because of their brains power (John W. Creswell, 2008). Hence, the researcher agreed with Panatd's definition of mind mapping techniquein

Siriphanich, (Panatda & Laohawiriyano, 2010). It is teaching technique using mind mapping as a tool to represent students understanding by using words, picture with colour and symbols in a hierarchical or tree branch format. Reading comprehension is one of important English aspects which should be mastered by students. Using mind mapping as a technique would helped students comprehend what they read joyfully (Kristin Lems, 2010). As stated before, reading comprehension is important to be learned to increase students' comprehension especially in the target language text form. By arising students' interest in comprehending the text through mind mapping, students can explore their knowledge and vocabulary in the target language materials (Siriphanich, Panatda & Laohawiriyano, 2010). Helping students in comprehending what they read, especially narrative text, is good as long as the technique used to be able to increase student (Joko Priyono,2008).

Achievement in reading comprehension materials. In line with this, mind mapping becomes an alternative way in teaching reading comprehension. This technique is chosen because it can stimulate the student's pleasure in teaching and learning process of reading comprehension; they are free to write and draw what they comprehend about the materials. If students get in used with this technique, the writer assumes that students get better achievement in reading comprehension. Moreover, it can be effective in teaching and learning process of reading comprehension in classroom. Therefore, the writer wants to teach reading comprehension, especially narrative text, by using mind mapping.

Method

Quasi-experimental design focuses on treatment, the data was taken from post-test and to know whether mind mapping was effective than expository technique in improving students' reading comprehension achievement. In this research design, there were two kinds of classes used. There are the experimental class which used mind mapping technique and the control class by expository technique. The procedures of experimental in this study consist of post-test. The post-test was given to take the score of the students' achievement after taught both by using mind mapping strategy. Then based score computed by using T-test find out if there was significant influence of teaching reading comprehension by used non mind mapping technique.

The researcher also provided posttest instrument that was 50 multiple choices of narrative comprehension test. This test was useful for the researcher to measure the student's reading comprehension after the treatment. Population is the generalization region consist of objects or subjects that have certain qualities and characteristics defined by the researchers to be studied and then draw conclusions. In this research, the population of all the tenth grade students of SMA Negeri 3 Mojokerto that consist of eight classes. Four classes of IPA (science) and four classes of IPS (social). There are 224 students consist of 126 female and 98 males, each class consists at least 32 students.

Samples are some object taken from the whole object under study and considered to represent the entire population. The researcher concluded the samples class XI-IPA and class XI-IPA2. In fact, the two classes have a same intelligent level especially English. The data source of the research gets categorized primary source and secondary source. Primary source is the data acquired directly from the subject of the research by using instrument. while secondary source is the data acquired from any resources, the data is not acquired directly from the subject of the research. Data collection is by conducted a reading comprehension test to students. After

the test was done, the result of the test was suitable the source of data collection. The researcher used test to measures the students reading skills as the instrument to get data. The test was arranged into 50 items of multiple choices from some students' English books and the questions of National Examination. The tests were given both to the experimental and control groups students. These are detail steps of collect the data. The instrument used measures the level of skill or knowledge that reached. The kind of the test is multiple choice questions that contain 50 multiple choice questions of narrative text reading comprehension.

The data or result of the assignment covered validity and reliability. The validity and reliability of an evaluation result had contrast meaning. Validity is the degree to which the evidence supports that the interpretations of the data are correct and the manner in which interpretations used are appropriate. The researcher would know if there is any significance achievement in reading comprehension in the experimental group after taught by used Mind Mapping strategy by proving the hypothesis with *t*-test determined. Later, the researcher compared the *t* value and *t* table. The researcher had to find out the value of *t* table based on the significance level 5%. To find out the value of *t*-table, the researcher had to calculate the degree of freedom (*df*). Then, if *t* value is bigger than *t*table ($t_{\text{value}} > t_{\text{table}}$), the Null Hypothesis (*H*₀) is rejected. It means there is a significant difference between using Mind Mapping strategy and teaching used non-Mind Mapping strategy. If *t* value is smaller than *t*table ($t_{\text{value}} < t_{\text{table}}$), the Null Hypothesis (*H*₀) is accepted. It means there is no significant difference between teaching used Mind Mapping strategy and teaching used non Mind Mapping strategy.

Result

The data finding showed the result of student's posttest. The student's posttest used reading comprehension test had administered by the researcher to the eleventh-grade students of SMAN 3 Mojokerto both in experimental class and control class. In this research, the researcher implemented Mind Mapping strategy in experimental class. After the researcher implemented this strategy, the researcher gives a post-test. This post-test required the students rear narrative text, answer the question and analysis used mind mapping strategy. The data that has been used in this research was 32 student's post-test score from experimental group and 32 student's post-test score from control group. The students' scores in experimental class were averagely higher than the students' scores in control class. It could be seen from the mean scores that the students taught using Mind Mapping strategy gained higher mean score that was 88,31 than the students taught using non Mind Mapping strategy that was 71, 68 (88, 31 > 71, 68). Most students in experimental group gained score above the average but most students in control group gained score below the average.

Interpretation of the t-test Result

The result of the *t*-test showed a significant difference between the group taught using Mind Mapping strategy and the group taught using non-Mind Mapping strategy. The *t* value was bigger than *t*table ($t_{\text{value}} > t_{\text{table}}$) that was 10,869 > 1,670. It meant that the null hypothesis (*H*₀) was rejected and the alternative hypothesis (*H*_a) was accepted. It means that the eleventh-grade students at SMAN 1 Mojokerto were taught by using Mind Mapping strategy gain better score than the eleventh-grade students at SMAN 1 Mojokerto were taught without using Mind Mapping strategy.

The result of the t-test was used to refuse the H₀ (there is no difference significant in reading comprehension between the eleventh-grade students at SMAN 3 Mojokerto taught by using Mind Mapping strategy nor without using Mind Mapping strategy) and to accepted H_a (the eleventh-grade students at SMAN 1 Mojokerto taught by using Mind Mapping strategy achieve better score in reading comprehension narrative text than those thought using non-Mind Mapping strategy). Because the t-obtained was higher than t-table, it meant that H_a was accepted ad H₀ was rejected.

Discussion

As stated in the previous chapter that the purpose of this research is to measure the effectiveness of Mind Mapping strategy to teach reading comprehension by calculating the data from posttest. And after doing the research activity and analyzing the data, the researcher finds the result. From the calculation of post-test, the mean of experimental group was 96. Meanwhile, the mean score of control group is 86. Students enjoyed the strategy during the teaching and reading activity. It can be seen from the result of post-test and the value of the t-test that after treatment, the experimental group got higher achievement than control group.

The difference means was also very significance. In other hand, “why it is significance?”, because, when the researcher was collecting data in the research the researcher can find the same characteristics in the experimental and the control group, the characteristic in the experimental group is this class is easy to handle, felt curious and had a good attention to the teacher’s explanation. In the first meeting, this class shows good attention and communicate excitedly to the researcher as a new comer in their class. Although this class has a same naughtiness with other class, at least this class is cooperative with the researcher. They think that reading is a boring activity. Control group has many girls than boys.

To find out whether those variances of the groups were homogeneous, the researcher compared thet_{value} and t_{table}. The researcher found out the value of t_{table} based on the significance level 5% and calculated the degree of freedom (df) as follows:

df Numerator = 32 – 1 = 31

df Denominator = 32 – 1 = 31

F_{table} (with df numerator = 31 and df denominator = 31) is 2,38

F_{value}> F_{table} ----- 1,98 < 2,38

The calculation above showed that the F_{value} is smaller than F_{table} (F_{value}< F_{table}). According to the criteria mentioned before, it means that the variances were homogeneous (equal variance). It could be concluded that the number of sample was different (n₁= n₂) and the variances were homogeneous (σ₁² = σ₂²).

The calculation result above was appropriate with the criteria number 1 in the chapter III that is: “If the number of samples n₁= n₂ and the variances are homogeneous (σ₁² = σ₂²), the t-test can be used is separated varians or polled variance. To know t-table, the degree of freedom was df = n₁ + n₂ – 2.” So, the t-test that used by the researcher was t-test polled variance and it was calculated as follows:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

which:

$\bar{X}_1\bar{X}_1$ = The mean of Experimental group scores

$\bar{X}_2\bar{X}_2$ = The mean of Control group scores

$s_1^2s_1^2$ = Variance of Experimental group

$s_2^2s_2^2$ = Variance of Control group

s_1s_1 = Standard Deviation of Experimental group

s_2s_2 = Standard Deviation of Control group

n_1n_1 = Number of Experimental group

n_2n_2 = Number of Control group

$$\begin{aligned}
 t &= \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} \\
 &= \frac{88,31 - 71,68}{\sqrt{\frac{25,31}{32} + \frac{50,34}{32}}} \\
 &= \frac{16,63}{\sqrt{0,79 + 1,57}} \\
 &= \frac{16,63}{\sqrt{2,36}} \\
 &= 1,53
 \end{aligned}$$

$t_{value} = 10,869$

From the result of calculation above, the t-total obtained value of the research was 10,86 with degree of freedom (df) was $(32+32 - 2) = 62$ and level significant 5% ($\alpha = 1,670$), so the value of t-table was . It meant that t-obtained value was higher than t-table ($t_o < t_t$). The result of the t-test was used to refuse the H_o (there is no difference significant in reading comprehension between the eleventh-grade students at SMAN 1 Mojokerto taught by using Mind Mapping strategy nor without using Mind Mapping strategy) and to accepted H_a (the eleventh-grade students at SMAN 1 Mojokerto taught by using Mind Mapping strategy achieve better score in reading comprehension narrative text than those thought using non- Mind Mapping strategy). Because the t-obtained was higher than t-table, it meant that H_a was accepted ad H_o was rejected.

This class more crowded that experiment class but the students in this class still has good attitude. However, in this class all of the students has intention to reading narrative text better than the experimental group. From the calculated of t-test, it would be compared with the degree of comparison t-table. If the value of t-test was lower than t-table, the null hypothesis (H_o) was accepted and the alternative hypothesis (H_a) was rejected. In contrary, if the value of t-test was higher than t-table, the null hypothesis (H_o) was rejected and the alternative

hypothesis (H_a) was not rejected. From the calculation above, it shows that the students' reading comprehension in narrative text were taught by using Mind Mapping strategy was better than the the students' reading comprehension in narrative text were taught by using non-Mind Mapping strategy.

Conclusion

The objective of the research was to measure the effectiveness of Mind Mapping strategy to teach reading comprehension. In this research, the researcher used a quantitative research and the design was quasi experimental research design. In the quasi-experimental research, there were two group. They were experimental class and control class XI IPA 1 was selected was select experimental group and XI IPA 2 was selected as control group. The classes consist of 32 students. In XI IPA 1 class there are 13 boys and 19 girls and in the XI IPA 2 class there are 13 boys and 19 girls. Experimental group was given treatment by using Mind Mapping strategy and control group was given treatment by using Non Mind Mapping strategy (Three Phase Technique). After giving treatment, both of the groups were given post-test. The test is reading comprehension question that contain 50 questions of multiple choice (a,b,c,d).

Based on the statistical calculation, the result of the mean score of experimental class is 91,56 and the mean score of control class is 68,37. And hypothesis testing which has been analyzed in chapter IV, it shows that t_{value} is 21,672 and t_{table} is 2, 042 with the level of significance 5%. It can be seen that t_{value} is higher than t_{table} . Thus, the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. It indicated that there is significant difference between teaching reading comprehension using Mind Mapping strategy and teaching reading comprehension using non-Mind Mapping strategy.

Suggestion

The researcher would like to give the following suggestions based on the conclusion above, it can be delivered some suggestions that might be useful. Some suggestions are given as follow:

1. For the English Teacher
Mind Mapping strategy to make teaching learning process and make students become more interesting, enjoyable, effective, creative for students and increase the students reading comprehension achievement. The teacher should give clear instructions and explanation about the activities that students will do in the class.
2. The teacher should pay attention to students when in pairing and sharing.
Make sure they are paired up for discussion not to joke, and remind them that they should be able to respect the result of other partner discussion. For teacher who apply this strategy, should make a good plan before teaching.
3. For Further Researcher
Further researcher, this thesis can be source or reference to make a better research. From the explanation above, it can be concluded that the use of Mind Mapping strategy was effective on students' reading comprehension of narrative text.

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