The Effect of Mind Mapping Strategy Towards Students Writing Skill at the Tenth Grade Students of MA Anwarul Hidayah Ciputri Menes Pandeglang in Academic Year 2022/2023

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ABSTRACT

This study aims to investigate the implementation of Mind Mapping strategy towards student's writing descriptive at the tenth-grade students of MA Anwarul Hidayah Menes Pandeglang. The study used quantitative approach, while the method used is quasi experimental method with pre-test and post-test design. It used a triangulation of data collection methods involving pre-test, treatment and post-test. The data obtained from 2 classes, they are experiment and control class. The experimental class for this research was XA and the control class was XB. Each class consists of 30 students. The total sample is 60 students. The experimental class's mean score on the pre-test was 50.23, while the control class's mean score on the pre-test was 48.57. On the other hand, the post-test result is, the mean score of experimental class was 69.07, while the mean score of control class was 63.33. The hypothesis calculating was done by using SPSS 22. The result obtained from hypothesis test is $0.00 < 0.05$ it means that there is significant effect of Mind Mapping strategy towards student's writing descriptive at the tenth-grade students of MA Anwarul Hidayah Ciputri Menes Pandeglang in academic year 2022/2023.

INTRODUCTION

English is one of the most important elements in education to develop human resources. It is hoped that it can make people aware of a future where English will be used in all fields, even now English can be found easily anywhere and anytime. Crystal (in Mc Key.2000: 7) says that English is rapidly taking on the role of a world language, and no other language has spread so widely throughout the world, making English a truly international language.

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Therefore, mastery of English is a must. In Indonesia, English is an important subject in the curriculum. Students must master four skills, namely listening, speaking, reading, and writing. Especially for writing, as we know, is widely used in various aspects of global literature such as agreements in the political and military fields, advertisements, business transactions, archives, legal documents, and newspapers.

Writing is the most difficult skill for second and foreign language learners. They define that writing is generating, organizing, and translating ideas into readable text. Their statement shows that students get more than one process in writing. It becomes a problem when students cannot process their ideas into a text, sometimes they don't even know what to do at the beginning of writing. That is the reason why learning techniques are needed in learning activities to help students.

From the observations made by researcher in MA Anwarul Hidayah Menes Pandeglang, researcher found several problems. The problems that researcher found came from students. The teacher gives them sample texts and explains how to make it. When the teacher asked them to write with their own ideas, they did not know how to write, students find it difficult to process their ideas into a text. This is because students feel afraid because there are several obstacles such as students find it difficult to express ideas in writing texts, low vocabulary or vocabulary owned by students. Finally, they feel lazy and they are not interested in learning to write. This of course will have an impact on student grades. Even the scores obtained by students in learning to write texts are still below the KKM (Minimum Completeness Criteria) of 70.

The use of learning methods that are not varied and monotonous causes students to be uninterested and students' creativity to be low. One of the students interviewed by the researcher revealed that they felt the same way. This student revealed that learning to write is one of the interesting lessons because the teacher only uses the lecture method and the reference for teaching materials is focused on books alone which causes students not to be interested so that students' creativity in writing is very low.

Mind Mapping will really help students in utilizing the potential of both sides of their brain. Good interaction between the two parts of the brain can trigger creativity which makes writing easier. Students who always use and develop the potential of their brain parts will achieve improvements in several aspects, namely concentration, creativity, and understanding, then they can develop writing through mind mapping.

Writing

Writing is a process that converts our thoughts or ideas into written form. These should be organized into coherent and cohesive paragraphs. Coherence means that the sentences must be unified, i.e., the movement from one sentence to the next must be logical and smooth "(Oshima and Hogue, 2006: 94). It holds together within and between paragraphs. Sentences in paragraphs should show the coherence of paragraphs.

Mind Mapping

Mind Mapping strategy is a concept invented by Buzan. According to Buzan (2009:2), the concept of Mind Mapping is based on how the brain stores information. A credible study shows that the brain is a collection of nerve cell branches that can store information. It has so many branches. The brain has the ability to store a lot of information from word to word and even columns. In order to remember quickly, the brain needs a way that the parts that have been stored can be re-expressed in various forms.

Before making Mind Maps, students need several materials, namely blank paper, pens and colored pencils, and imagination. Buzan (2008: 21-23), suggests that there are seven steps to making Mind Mapping. The seven steps are as follows.

1) Put the main idea in the middle

Placing the main idea or topic in the center of the page will give maximum room for other ideas to radiate out from the center. It gives the freedom to expand ideas in any direction which is a perfect example of brilliant thinking in action.

2) Using pictures or photos for a central idea
Pictures have a strong impact on imagination and memory. It is also pleasing to the eye and keeps attention focused.

3) Using color
The use of color is an excellent memory marker. Colors in mind mapping are not only to actively involve the right brain, but also to help group information.

4) Connect the main branch to the middle image and connect the second and third branches to the first and second.
Try to connect the main branch to the middle image and connect the second and third branches to the first and second, and so on because the brain works according to associations. The human brain likes to connect two or more things at once. Connections between branches make it easier to understand and remember.

5) Creating curved line connectors instead of straight lines

Draw connecting curved lines on each branch to make it more attractive and beautiful.

6) Using one keyword for each line
One keyword provides more energy and flexibility for mind mapping.

7) Using pictures
An image has many meanings because it can replace keywords or just strengthen keywords that have been written before.

Based on Feez and Joyce (2002:27), there are several stages used to teach writing. These things can be described as follows.

1) Building Knowledge of the Field (BKOF)
At this stage, the teacher brainstorms with students. They have to think about what they are going to learn. They can share with their teachers and friends. This is a pre-topic before students study the material in detail.

2) Modeling of Text (MOT)
The teacher shows the sample text to the students and the teacher has to explain from general to specific about the material they will learn.

3) Joint Construction of the Texts (JCOT)
At this stage, students must participate to do writing exercises related to the topic. They can do it in groups, in pairs or individually.

4) Independent Construction of the Texts (ICOT)
The students should be able to practice their speaking. For example, students could tell a story about their experience in front of the class. In the writing aspect, students are expected to be able to put their ideas into writing and develop their ideas using mind mapping.

5) Linking Related Text
At this stage, students must recall or conclude what they have learned in this lesson. Thus, the teacher must ensure that the tasks in the previous stages: Building Field Knowledge, Text Modeling, Combined Text Construction, and Text Independent Construction have been completed properly so that students are able to do the independent task.

METHODOLOGY

This research uses quantitative approach. Cresswell (2018:41) stated that quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures. In addition, this research also uses quasi-experiments method Creswell (2018:229) also stated that in quasi-experiment, the investigator uses control and experimental groups. According to Ary*et al* (2012:339) "quasi-experimental designs are considered worthwhile because they permit researchers to reach reasonable conclusions even though full control is not possible."

In quasi experimental, there are three stages, namely pretest, treatment, and post- test. As a result, before the researcher began treating the students, the researcher gave a pre-test to determine the students' initial knowledge, then the researcher gave a treatment using mind mapping strategy as a method in learning, and finally the researcher gave a post-test to test students' writing skill. The comparison between the pre-test and post test scores are determined the success of the research.

This study was conducted at the tenth grade of MA AnwarulHidayah Menes Pandeglang, that had the population and sample 60 students that consisted of 30 students for experimental class and 30 students for control class.

Before test given to both student experimental and control classes, the instrument test was tested the validity and reliability. The validity test was to measure the feasibility of the instrument, while the reliability test was to determine the data's validity if it was examined repeatedly. Phakiti (2014:84) stated that validity is concerned with the precision, legitimacy, and correctness of tests and observations made during in the collection of data, as well as the validity of conclusions produced using the data. Ary *et al*,(2014:229) stated that reliability of a measure refers to its capacity to deliver consistent results each time it is used.

This study used an achievement test. According to Ary *et al*,(2014:672) an achievement test is a measurement of how well a person has learned certain facts or skills, usually as a result of specific education.

In collecting the data, the researcher collects the data by employing these procedures:

The first test is a pre-test where the researcher gave a test to the students to find out the students' previous abilities. This initial test was given to the experimental and control classes. This test was given before treatment using a mind mapping strategy in the experimental class and using the Think -Talk-Write strategy in the control class. Pretest was conducted to determine the results of the writing test.

After the researcher gave a pre-test, the researcher conducted learning in class according to the lesson plan. In this section, researcher used the Mind Mapping Strategy in the experimental class while the control class used the Think-Talk-Write strategy. Students watched short videos about mind mapping and think-talk-write strategy and how to use them.

The last test was post-test, this test was given to determine the improvement of their writing ability after undergoing treatment. This test was given to experimental class and control class. From the results of this test, researcher identified the effect of using Mind Mapping strategy towards writing skills .Data analysis technique

The data's results analyzed by some tests, the first normality test to investigate the data that obtains from the experimental class and the control class either normal or not., homogeneity test, and hypothesis test. According to (Ilmi & Hudaib, 2018):

The normality test is used to examine data and identify whether it is normal or not. It was also used to ensure that the data was dispersed correctly. This is because the parametric technique requires that the data be normal.

The second homogeneity test to investigate the data that obtains from the experimental class and the control class has the relative same variants or not. Ary *et al*,(2014:677) stated that homogeneity is a measure of a test's inter-item consistency. And the last was hypothesis test, the authors conducted the hypothesis test to decide whether the hypothesis was accepted or rejected, and the authors used T-test to do the hypotheses test. Ary *et al*,(2014:96) stated that

The most important characteristic of a "good" hypothesis is testability… A testable hypothesis enables the researcher to establish through observation and data collecting if deductively implied consequences actually take place.

RESULT AND DISCUSSION

This research was conducted at MA Anwarul Hidayah Menes Pandeglang in the academic year 2021/2022. There were several factors behind the researcher conduct this research in this school. One of the reasons was the lack of students' writing creativity. The learning strategy chosen by the researcher is the Mind Mapping strategy. Researcher examined the comparison of the usage of Mind mapping as a learning strategy. To compare the usage of Mind mapping as a learning strategy and the data obtained, the researcher chose two classes. Tenth graders in classes A and B were chosen as the control and experimental groups, respectively. There are exactly 20 students in each class. While the experimental class used Mind Mapping and the control class used Think Talk Write. These two learning strategies were chosen by researcher because these strategies are very effective in increasing students' writing creativity. The usage of these two learning strategies aims to improve students' writing skills.

The objective of this research ware to determine whether an effect of using mind mapping as a learning strategy on the writing skills of tenth grade at MA Anwarul Hidayah. This research applied usage of Mind Mapping developed by Tony Buzan a psychologist from the UK. Mind mapping is a learning strategy that is packaged in an image that contains the main ideas that must be developed by students from an image to a text, especially descriptive text. So that teachers can measure students' writing skills and use of vocabulary in English.

Table 1. The Data of Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test experiment	30	40	67	50.23	7.440
Post-test experiment	30	52	80	69.07	5.872
Pre-test control	30	40	60	48.57	5.667
Post test control	30	52	76	63.33	7.671
Valid N (listwise)	30				

Based on the table above, showed that the number of samples from both classes is 60, the smallest value of the pre-test in the experimental class is 40 and the smallest value of post-test in experimental class is 52, the highest value of pre-test in the experimental class is 67 and the highest value of post-test in experimental class is 80, the value of mean of pre-test in experimental class is 50.23 and the value of mean of post-test in experimental class is 69.07, the value of standard deviation of pre-test in experimental class is 7.440 and the value of standard deviation of post-test in experimental class is 5.872.

On the other hand, the smallest value of pre-test in control class is 40 and the smallest value of post-test in control class is 52, the highest value of pre-test in control class is 60 and the highest value of post-test in control class is 76, the value of mean of pre-test in control class is 48.57 and is the value of the mean of post-test in control class is 63.33, and the last is the value of standard deviation of pre-test in control class is 5.667 and the value of standard deviation of post-test in control class is 7.671.

In this study, the authors determine the pre- and post-test scores for the experimental and control classes by using SPSS 22 program. It is utilized to investigate normality of the data that will be examined to see whether both classes have a normal distribution. The following step the authors use the following formula to analyze the normality of the data:

If Significance > 0.05 = data is normal distribution
If Significance < 0.05 = data is not normal distribution

The result of the tests normality of pre-test and post-test by using the computer-assisted program SPSS 22 version could be seen as follows:

Tabel 2. Tests of Normality

	class	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
students learning outcome	Pre-test experiment	.151	30	.078	.941	30	.097
	Post-test experiment	.142	30	.126	.938	30	.081
	Pre-test control	.156	30	.059	.940	30	.089
	Post-test control	.101	30	.200*	.933	30	.058

Based on the table above showed that pre-test experiment sig 078 > 0.05 the data is distributed normally, post-test experiment sig 126 > 0.05 the data is distributed normally, pre-test control sig 059 > 0.05 the data is distributed normally, and the last is post-test control sig 200 > 0.05 the data is distributed normally.

To investigate the data that obtains from the pre-test and post-test experimental class and the control class have the relative same variants or not, the authors analyze the data by using SPSS 22 version.

The criteria of homogeneous are as follows:

If Significance > 0.05: homogeneous
If Significance < 0.05: not homogeneous

The result of the homogeneity test could be seen on the table below.

Tabel 3.

Homogeneity test of the data of pre-test in experimental and control class

Levene Statistic	df1	df2	Sig.
2.529	1	58	.117

The table above stated that the score of homogeneity of pre-test between experimental and control class is sig > 0.05, so the data is homogenous.

Table 4.

Homogeneity test of the data of post-test in
experimental and control class

Levene Statistic	df1	df2	Sig.
2.974	1	58	.090

The table above state that the score of homogeneity of post-test between experimental and control class is sig > 0.05, so the data is homogenous.

In this research the hypothesis test used a statistical test (T-test) paired samples test (pre-test and post-test in experiment class and pre-test and post-test in control class) by using the SPSS 22 program for window with the criteria:

If sig (2-tailed) < 0.05, H_o is rejected and H_a is accepted.
If sig (2-tailed) > 0.05, H_o is accepted and H_a is rejected.

The t-test result could be seen in the table below.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pre-test experiment - pre-test control	1.667	9.904	1.808	-2.032	5.365	.922	29	.364
Pair 2	pre-test experiment - post-test control	-13.100	11.263	2.056	-17.306	-8.894	-6.371	29	.000

The statistical hypothesis as follow

Ha : There is significant effect of Mind Mapping strategy towards student's writing descriptive at the tenth grade students of MA Anwarul Hidayah Menes Pandeglang.

H_0 : There is no significant effect of Mind Mapping strategy towards student's writing descriptive at the tenth grade students of MA Anwarul Hidayah Menes Pandeglang.

Based on the output SPSS above stated that the null hypothesis is rejected and alternative hypothesis is accepted, because the value of sig (2-tailed) 0.00 < 0.05. It means that there is a significant effect of Mind Mapping strategy towards student's writing descriptive.

CONCLUSION

The test in this research conducted to know the effect of Mind Mapping strategy towards student's writing descriptive at the tenth-grade students of MA Anwarul Hidayah Menes Pandeglang. The researcher tested an instrument at another school with a similar grade before conducting this research. There was one instruction was tested. The researcher conducted a validity test and reliability test after obtaining the result of the instrument test.

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After the instrument test, the researcher conducted the pre-test, this aimed to know student's prior knowledge before giving treatment in both of classes, after the pre-test the researcher did treatment three times, in this step the researcher used Mind Mapping as a strategy learning in experimental class, while the researcher used Think-Talk-Write as a strategy learning in control class. The purpose of using Mind Mapping as a strategy learning media was to improve the students' writing descriptive. The researcher selected Mind Mapping as a strategy learning because the researcher expected it would be more interesting and easier to use.

From the result of this research that the Mean of pre-test score obtained by the students of tenth grade of MA Anwarul Hidayah Pandeglang in the class XA as experiment class is 50.23 higher than 48.57 the Mean score of class XB as control class. The highest score of pre-tests in experiment class is 67 and the lowest score of pre-tests in experiment class is 40, on the other hand the highest score of pre-tests in control class is 60 and the lowest score of pre-tests in control class is 40. It means that the distribution of pre-test score in experimental class is higher than control class.

Next is the Mean of post-test score in experimental class is 69.07 higher than 63.33 the Mean score of control class. The highest score of post-tests in experiment class is 80 and the lowest score of post-tests in experiment class is 52, on the other hand the higher score of post-tests in control class is 76 and the lowest score of post-tests in control class is 52. It means that the distribution of post-test score in experimental class is higher than control class.

Before the researcher did the hypothesis test the researcher should did normality and homogeneity test, in this research the normality test used a Kolmogorov-Smirnov test by using SPSS 22 for program windows with the criteria: If the significance value of sig > 0.05 the data is normally distributed, while If the significance value of sig < 0.05 the data is not normally distributed. The homogeneity test in this research used Levene test by using SPSS 22 for program windows with the criteria: If the significance value of sig > 0.05 the data is homogenous, while If the significance value of sig < 0.05 the data is not homogenous.

Based on the result showed that pre-test experiment sig 0.078 > 0.05 the data is distributed normally, post-test experiment sig 0.126 > 0.05 the data is distributed normally, pre-test control sig 0.059 > 0.05 the data is distributed normally, and the last is post-test control sig 0.200 > 0.05 the data is distributed normally, so the data is normally distributed. In homogeneity test the researcher compared the pre-test result and post test result of the two classes, the result of the homogeneity test was showed that the score of pre-tests between experimental and control class is sig > 0.05, so the data is homogenous, The table above state that the score of homogeneity of post-test between experimental and control class is sig > 0.05, so the data is homogenous, based on the result those data both of pre-test and post-test are homogenous.

The hypothesis test, often known as the t test, this test was the final data test in this research. In this research the hypothesis test used a statistical test (T-test) paired samples test (pre-test and post-test in experiment class and pre-test and post-test in control class) by using the SPSS 22 program for window with the criteria: If sig (2-tailed) < 0.05, H_o is rejected and H_a is accepted, on the other hand If sig (2-tailed) > 0.05, H_o is accepted and H_a is rejected.

Based on the result above, the researcher concluded that there is significant effect of Mind Mapping strategy towards student's writing descriptive at the tenth-grade students of MA AnwarulHidayah Menes Pandeglang.

The researcher delivered some suggestion that might be useful. The suggestion are for teacher, students, and researcher, they are:

1) For teacher
   The teacher should select the strategy or technique that relevant and can help students to improve the skill, for example the teacher can use Mind Mapping strategy for learning writing skill.

2) For students

The students can use anything strategy and technique that can improve their skill and knowledge, because it is time to try what the students want to try.

3) For researcher

The researcher can find out and research the strategy and technique that are more attractive and modern to help the teacher and the students in learning process.

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