CHAPTER III

Research Method

This research aims to find out the strategic that is used to measure the effect of timeline strategy in writing recounts text. Because of those problems, this chapter presents research design, the location, subject, research instrument, data collection techniques and data analysis.

A. Research Design

In this research, the researcher wants to get information about the effect of timeline strategy to improve Students' writing ability in recount text at the Second year students in Hidayatul Ummah senior high school. In this research, the researcher will use the quasi experimental. According to Trochim research design provides the glue that holds the research project together. A design was used to structure this research, to show how all the major parts of the research project-sample of group, measures, treatments or program, and methods of work-assignment together to address the rental research question.[37]

This study was quantitative research. Quantitative research can be interpreted as research method which is based on positivism and philosophy, used in certain population and sample, uses data collection and research instrument, in data analysis

[37] William. *M.K. Trochim, The research Method Knowledge Base*, 2nd Editon (Itacha, NY: Cornell Cusmtom Publishing, 1999), 71

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uses quantitative/statistic characteristic, in purpose to testing the hypothesis that had been settle.[38] As this research aim to know the effect of timeline strategy in students writing recount text ability, this quantitative method matches the purpose of this research.

Quasi experimental design was applied in this research. Experimental research was the way to find a causal relationship between two factors that are deliberately caused by the researcher by reducing or setting aside other factors that interfere. Experiments are always done with the intent to see a treatment.[39] A quasi experimental design is one that looks a bit like an experimental design but lacks the key ingredient-random assignment. [40]

The design which is used in this research has some characteristics. The first characteristic is that the researcher conducted the research in two classrooms. Those two classrooms will divide into one experimental group and one control group. The second characteristic is that the researcher measured both groups twice. The first measurement serve as the pretest to find out their homogeneity before the treatment, and the second one served as the post-test to find out the effectiveness of technique employ. Then, the researcher manipulated the experimental group by using a particular treatment which is the use of timeline strategy, while the control group will not use it. Finally, the researcher measures the dependent variables' effect after the treatments

[38] Sugiyono, Statistika untuk Penelitian (Bandung: Alfabeta Bandung, 2010)8
[39] Suharismi Arikunto, Prosedur Penelitian Pendekatan Suatu Praktek (Jakarta: Bina AKsara,1987),3
[40] William. M.K. Trochim, The research Method Knowledge Base, 2nd Editon (Itacha, NY: Cornell Cusmtom Publishing, 1999), 215

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are completely given by using statistical analysis. There is one stage used in the process of analyzing the data. This is concerned with the descriptive statistics of which purpose was to reveal the characteristics of the data, like maximum score, minimum score, and mean score.

Table 3.1

The design of Experimental Research

Groups	Random	Pre test	Treatment	Post test
Experimental group	R	O1	X	O2
Control group	R	O3		O4

In which :

R : Random Sampling

O_1 : Pre Test of experimental group

O_2 : Post Test of experimental group

O_3: Pre test of Control group

O_4 : Post Test of control group

X : the treatment that given by the researcher to the experimental group by using timeline strategy

B. Research Hypothesis

This study consists of two hypotheses, they are:

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Ha : There is a significant difference in students' English writing recount text taught by timeline strategy and traditional technique at the first year of SMA Hidayatul Ummah Surabaya.

Ho : There is no significant difference in students' English writing recount text taught by timeline strategy and traditional technique at the first year of SMA Hidayatul Ummah Surabaya.

Explanations:

Ha will be accepted if t-value < t-table

Ho will be accepted if t-value > t-table

T-table is the score gotten from t distribution, while t-value is the score gotten from calculation using the formula of t-test.

C. Research Variables

In the experiment research, there are two variables that will be manipulated by the researcher. They are independent variable (X) and dependent variable (Y). Independent variable is a factor which is manipulated by the writer to determine the relationship between the phenomena observed. While dependent variable is a factor which is observed and measured to determine the effect of independent variable.

1. Independent Variable

The independent variable (X) is timeline strategy used in writing a

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recount text in the first year students of SMA Hidayatul Ummah.academic year 2015/2016.

2. Dependent Variable

The dependent variable is (Y) is student's ability in writing recount text in the first year students of SMA Hidayatul Ummah academic year 2015/2016

D. Population and Sample

This study addresses the population of first year students of SMA Hidayatul Ummah, since this is a quasi experimental research, cluster sampling was assigned and results two classes of first year. The sample will be taken in first year of SMA. It will take 2 classes as experiment class. The first class will become the experimental and control group. There are 2 classes consist of 18 students in class X-1 and class X-2 consist of 18 students. X-1 will become the control class and X-2 will become the experimental class. it will take the second semester of first year of SMA Hidayatul Ummah Surabaya.

E. Research Setting and Subject

The subject and setting of this study is the first grade of SMA Hidayatul Ummah Surabaya. SMA Hidayatul Ummah was located in Jl. Mulyorejo No.92 Surabaya. The students from first year of senior high school were selected as the subject of this study because they get a specific learning based on their class. Especially writing recount text.

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F. Research Procedure

The procedure of this study covered the following steps, namely: pretest, treatment 1, treatment 2 and posttest. To answer the research question of this study, pretest and posttest was collected. Pretest was conducted before treatment while posttest was conducted after treatment. Before the treatment was given to the experimental group, the researcher has been given some information to the teacher about timeline strategy and how to teach using timeline strategy because the researcher becomes an observer in the learning process. The English teacher of SMA Hidayatul Ummah has been taught the students in the experimental group using timeline strategy. There were some activities conducted to both groups to see the differences on achievement between experimental and control group. The research schedule is figured out in the text following table:

Table 3.2

The Research Procedure

No.	**Experimental Group**		**Control Group**	
	Date	**Theme/ material**	**Date**	**Theme/material**
1.	14th March	**Pretest**	**14th March**	**Pretest**
2.	**15th March**	**Treatment 1 teaching recount**	**14th March**	**Teaching recount text**

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		text using timeline strategy Material : Unforgettable moment		**with conventional technique Material : Unforgettable moment**
3.	**21st March**	**Treatment 2 teaching recount text using timeline strategy Material : Last holiday**	**21st March**	**Teaching recount text with conventional technique Material : Last holiday**
4.	**28th March**	**Post test**	**28th March**	**Post Test**

The researcher prepared the teaching process before administering the activities above. It was undertaken two steps: First, the researcher prepared a appropriate materials for teaching process. Second, the researcher organized teaching procedure in the control and experimental group.

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G. Data Collection Technique

In conducting a research, it is necessary to collect the data required. Data collecting can be done in many setting, various source and various means.[41] It also known that research was a system attempt to provide answer to problem or a question. Then to solve the problem, pre test and post test was taken to collect the data.

1. Pretest

   The data was collect through the pretest in both classes in order to know is the experimental group and control group having similar ability or not before the implementation of timeline strategy. Pretest was administered to both classes to measure the students' English writing ability before the treatment. The pretest conducted on March 15 2016.

2. Posttest

   After timeline strategy implemented, then the posttest was given. Posttest was given to know students ability result after the treatment. The result of the test was scored and calculated. It was conducted on March 28 2016.

H. Research Instrument

In quantitative research, instrument was applied to collect the data. The instrument of this research to measurable variable value that was accurate. In this research, test and observation used to collect the data. The test was the

[41] Sugiyono, *Statistika untuk Penelitian,* (Bandung: Alfabeta Bandung, 2010) 137

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main instrument to give the researcher data about the students' writing ability. The test was in form of essay writing.

In grading and scoring the researcher used analytic scales with explicit and detailed scoring adapted from Self (n.d) to get the more validity and reliable grading of the test. (Appendix 1) the rubric is a set of characteristic that used to evaluate writing, with rubric researcher can access and give the score of writing.

There were five components assessed on writing ability in recount text: they are composing style, word formation, usage and mechanism.[42] Each component of five aspects have maximal score and minimum score. The maximal score of all aspects are 4, and 1 for the minimum score. The score was based on the degree of control the students' paper exhibits for that component.

4 = consistent control

3 = reasonable control

2 = inconsistent control

1 = little or no control

1. Pretest

In this research, the pretest was used to find the students' English writing ability in recount text. It was conducted to all class X in SMA Hidayatul Ummah Surabaya. They were selected because their schedule subject of second semester was similar.

[42] Self (n,d)….

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2. Posttest

Afterward the posttest was conducted to measure the effect of timeline strategy used after the application treatment in experimental group. The use of posttest also determines whether was effective of not by comparing the achievement of post test in both classes, those are control and experimental group.

I. Data Analysis Technique

In this research, there was only one question with one data. The data of the question about the significant different of increasing writing achievement between who taught using guiding question technique and who was not taught without using guiding question technique. The data was collected from observation class activity and students' test.

After collecting the data of pre-test and pos-test from the experimental group and control group, the researcher tried to find out the difference between the achievement of the experimental group and the control group. Then, the data was analyzed using statistical calculation of t-test to find out whether the differences of the score between the experiment class and the control class are significant or not. T-test is used to measure and compare the differences of means score between experimental group and control group. [43]

[43] A E.Bartz,*Basic Statistical Concepts in Education and the Behavior Sciances* (Minneapous:Burgess Pub,Co, 1976), p.293

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To know is there any advantages in use of guiding question technique or not in teaching writing, t-test was applied in this research. Before that, the researcher was did normality test and homogeneities test. The normality test was used to check whether the posttest score of experimental group and control group were normally distribution or not. While homogeneity test was used to calculate the homogeneity of variance of both experimental and control group posttest score.[44]

1. Analysis of T-test

The data analyzed applying t-test formula to find out the influence of timeline strategy on improving students' writing skill.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{(N_1-1)S_1^2 + (N_2-1)S_2^2}{N_1+N_2-2}\right)\left(\frac{1}{N_1}+\frac{1}{N_2}\right)}}$$

$\overline{Xc}$ = the mean of the control group

$\overline{Xe}$ = the mean of the experimental group

Sse: sum of quadrate deviation of the experimental group

Ssc: sum of quadrate deviation of the control group

Ne: the number of experimental group

[44] Zaenal Arifin, *Metodologi Penelitian Pendidikan* (Suranaya: Lentera Cendikia, 2009) 123

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Nc: the number of control group[13]

Before calculating the t-test the researcher calculates mean, variance, and strandard deviation

a) Mean

Mean is computed by using the formula:

$$\bar{x} = \frac{\sum_{i=1}^{n} x_i}{n}$$

Where:

$\bar{x}$= mean

$\sum x$= sum of scores

N =number of scores

b) Variance

The variance of a group of scores is computed by using the following formula:

$$s = \sqrt{s^2}$$

Where:

$S^{2:}$ variance

X: individual score

N: number of scores in the group

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c) Standard Deviation

The standard deviation of a group of scpres was computed by using the following formula:

$$s = \sqrt{\frac{n\sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_1)^2}{n(n-1)}}$$

Where:

S: standard deviation

Xe: individual score

N: number of scores in group

After calculating the t-test, it shows the difference mean and standard deviation scores between students who are taught with timeline strategy and without timeline strategy. After that, comparing t-test with t-table.

1) If the value of t-test > from the t table it shows there is significance effect of timeline strategy on improving students' writing skill.
2) If the value of t-test < from the t table it shows there is no significance effect of timeline strategy on improving students writing skill.

2. Testing hypothesis

This research has two hypothesis, null hypothesis (Ho) and alternative hypothesis (Ha) that should be proved. The conclusion

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based on the significant value and t-test calculated based on hypotheses as follows:

a. Since significant value (to) > from the critical value (t), then null hypothesis (Ho) rejected and alternative hypothesis (Ha) accepted.
b. Since significance value (to) < from the critical value (t), then null hypothesis (Ho) accepted and alternative hypothesis (Ha) rejected.

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