

Chapter Three

Methodology

This chapter presents research design, setting and participants of the research, research instrument, and data collection. Moreover, data analysis is also presented in this chapter.

Research Design

The researcher examined the effects of skimming and scanning to develop reading ability of students. In this case, the researcher used the experimental method. Based on Creswell (2003), experimental method was suitable for finding the relationship among variables and posing this in terms of questions or hypothesis. This means that the experimental method was a good way to find the relationship between one variable to another variable. Experimental design was included in quantitative research. The researcher wanted to test an idea and to determine the influences from the research instruments.

There are some types in experimental design, namely true experiment, quasi-experiment, and factorial design. Based on Creswell (2012, p. 309-315), “quasi-experiment is divided into two types. There are time and non-equivalent control group design”. Cohen, Manion, Morrison(2007) defined that “quasi-experiment is a type of experimental design that the researcher undertakes his study with groups that are interact, that is to say ,the

groups have been constituted by means other than random selection”(p.212).

In this research, the researcher used quasi experiments. She chose quasi experiments because this type of experiments uses a whole group class. It was supported by Lodico, Spaulding and Voegtle (2010) that said “quasi- experimental study, involves random assignment of whole group of treatment” (p.261).Cohen, et al. (2007) added that “the groups have been constituted by means other than random selection” (p.212).The group of quasi-experimental was chosen by using random selection and that was the same as what the researcher already chose for the sampling.

This research was conducted by using an experimental research which had two variables and two groups. The two variables were skimming and scanning techniques as an independent variable and reading comprehension as the dependent variable. Then, there were two groups that one group as an experimental group was taught using skimming and scanning technique and another one as the control group was taught without using skimming and scanning techniques. The design of the research is shown in table 1.1.

Table 1.1			
<i>Research Design</i>			
Group	Pre – test	Treatment	Post – test
Experimental	√	Skimming and Scanning Technique	√
Control	√	Without Skimming and Scanning Technique	√

List of Table 1.1 *Research Design*

In this research, experimental group was given a treatment which was skimming and scanning technique. The treatment was supposed to have a good effect towards students in reading comprehension. On the other hand, control group was not given any treatment. In here control group was taught as a normal class. The control group did the same activities that the students had to do reading comprehension, but the researcher did not give any input. Before the treatment, the researcher did pre-test because she wanted to know the ability of the students in reading comprehension. After the treatment, the researcher did post-test for experimental group and control group so that she could compare the results before the treatment and after the treatment. Then, the researcher would teach both

experimental and control group to make sure that the results were valid.

Population, Sample and Sampling

Population. The population of this research was students of grade 8 at SMP Muhammadiyah Kasihan. The reason of choosing SMP Muhammadiyah Kasihan as the research setting was because the school was near the researcher's boarding house so that it would ease the researcher to gather the data in term of accessibility of place. It was supported by Plumber (1983) as cited in Cohen, et al.(2007) stating that "accessibility of place and availability of time, and the awareness of the potential informant of his or her particular cultural milieu" (p.199). The researcher got suggestion from her teacher that students of grade 8 were better the research participants than students of grade 7 and 9. For one reason, students of grade 7 were still adapting to the situation of school which was different from elementary school so that they were considered having limit of reading comprehension experience. The other reason was that students of grade 9 were busy preparing themselves for their national exam. Therefore, grade 8 was the best level in reading comprehension because the students already had more experience than students of grade 7. Indeed, there were 6 classes of grade 8 at SMP Muhammadiyah Kasihan.

Moreover, the researcher found that the school had been applying some materials of skimming and scanning in reading activities. This circumstance was really helpful for researcher because the students have already known the basic of skimming and scanning so

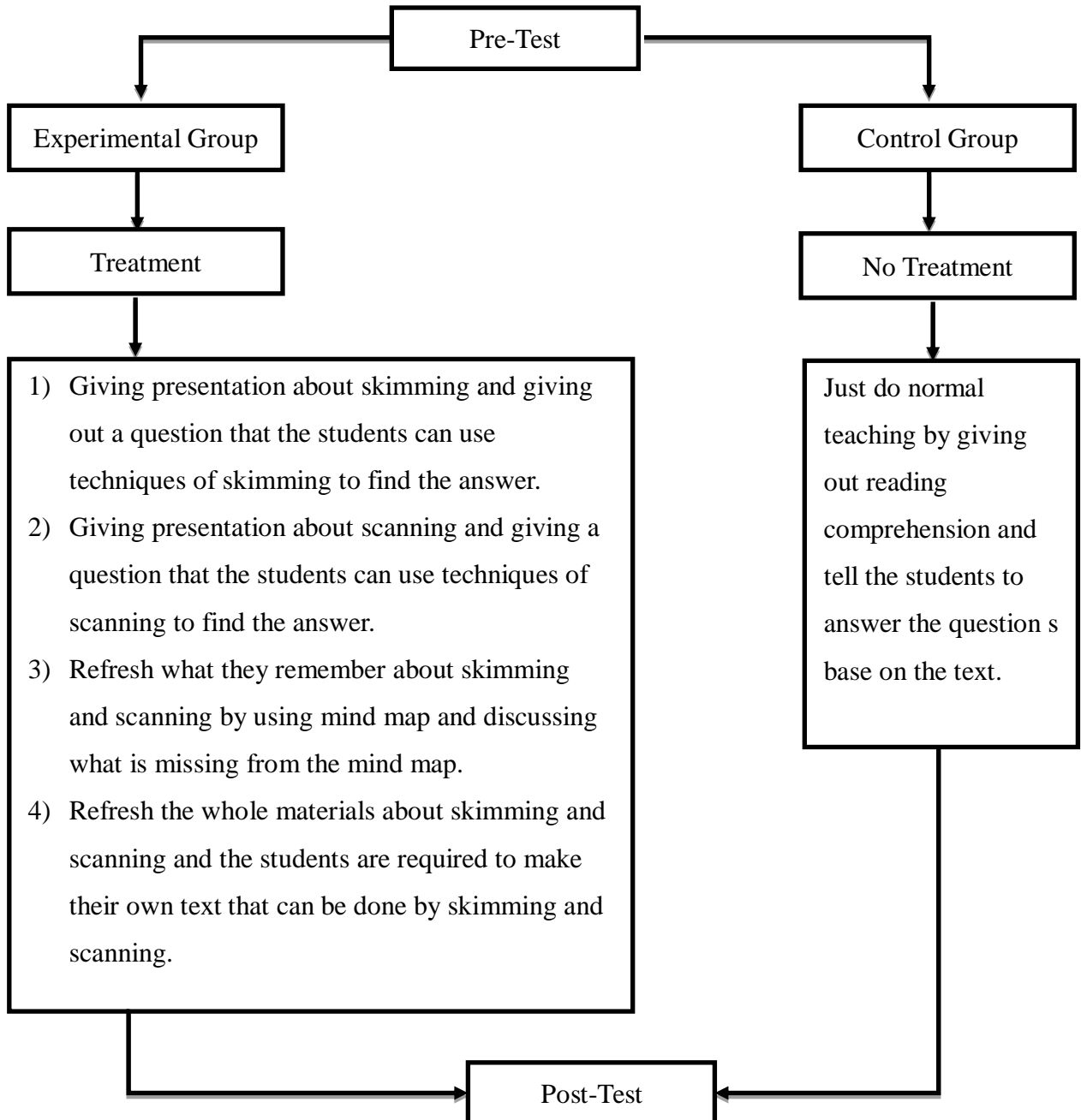
that the researcher just needed to give in depth information of skimming and scanning activity and refresh what they had already known about skimming and scanning.

To conclude based on the interview with the English teacher at SMP Muhammadiyah Kasihan, the students were very enthusiastic about learning English even though they needed a lot of support when they were studying. In here the research chose grade 8 as the population because the students were not as busy as students of grade 9 who would have their final exam soon. Meanwhile, students of grade 7 have not studied skimming and scanning yet so that students of grade 8 were suitable for the experiment because they had a lot of experience of reading activities.

Sampling and sample. Kothari (2004) stated “sample is definite plan for obtaining a sample from a given population” (p.55). The sample of this research was class A as the experimental group and class E as the control group. Johnsen and Christensen (2012) defined sampling is the process of sample from population. Random sampling was used when a researcher chose specific research targets within the population for a particular study or research project. The researcher chose to use random sampling to conduct this research because this method was a good way to choose sample as representatives (Darmadi, 2011). The researcher selected two classes as participants regarding the random sampling technique. The way the researcher did the random sampling was by making a lottery to decide two classes as the experimental group and the control group in this

research. Class which went out first from the lottery was the experimental group and the second class which was out from the lottery was the control group. The researcher had done the lottery and the experimental group was class A and the control group was class E.

Figure 2. Data Collection



The researcher used an experiment as an instrument to collect the data. According to Lodilco, Spaulding, and Voegtle (2010, p. 228 – 229) “experimental distinct from other forms of quantitative research is that the researcher controls or manipulates how groups of participants are treated and measures how the treatment affects each group.”. In this experiment, there were two groups. Based on Darmadi (2011), the groups are a treatment group which will get treatment and a control group that will not get any treatment. Danscombe (2007) stated “instead of measuring the change from time 1 to time 2, we measure the difference between the control group and the experimental group at the end of the experiment at the time 2 (p.51)”. In experimental it is preference to have control group to make it easier to compare the results.

In this research, the research chose tests as data collection method as Cresswell (2012) stated that in experimental design some quantitative researchers seek to test whether an educational practice or idea makes difference for an individual. The tests that the researcher used were pre-test and post-test. Based on Darmadi H. (2011, p. 200), “a successful of treatment was definite by comparing the pre-test and post test results.”The pre-test was given before the treatment to know the ability of the participants and the post-test was given after the treatment. After the researcher got both pre-test and post-test results, the researcher analyzed and processed them. From the results, she could get the answer for the research question of this research how reading skills of the students in the experimental group are different from control group, and how effective skimming and

scanning are as medium for reading ability of students at SMP Muhammadiyah Kasihan.

The researcher used reading test of the national examination (UNAS) for the pre-test and post-test. The reason why the researcher used UNAS reading test was because UNAS reading test was used by the all junior high schools and all of the students are already familiar with it. Therefore, the validity and the reliability are undoubtedly.

In this research the researcher used UNAS reading test 2014 for the pre-test and post-test. The reason why the researcher used UNAS reading tests 2014 was because the students had done the reading test and most of them were familiar with the test. According to Anang's blog (2014), this UNAS reading test contains the prediction of UN and exercises UN base on a new latticework. It means that the validity and the reliability are not undoubtedly. Moreover, the reason why the researcher chose UNAS reading as the pre-test and post-test is that each year UNAS reading test has valid and reliable criteria. Before the UNAS reading test was given to the school, the reading test was already checked for the validity and reliability so that the researcher believed that she could get the valid data for this research. In addition, the researcher thought that UNAS test was suitable because UNAS test had very simple text and easy to understand, to skim and scan.

The treatment in the experiment was held four meetings. Before the first meeting, the researcher did pre-test to find out the students' ability before the treatment. Pre-test and post-test consisted of 20 questions and it had the same questions and reading passages.

Then, the first meeting was treatment. In treatment the researcher already prepared the lesson plan used to explain skimming and scanning. For experimental group, the researcher used treatment in form of the input skimming and scanning. On the other hand, the researcher did conventional activities for the control group. It was called conventional teaching because the researcher taught without giving input of skimming and scanning skill. In conventional group the teacher only gave the students questions from the reading comprehension of UNAS questions. Moreover, the students that were in experimental group did mini test in every meeting in the end of treatment. Last, the researcher did a post test for experimental and control group to find out the effectiveness of skimming and scanning after the treatment.

After the experimental and control group did pre-test and post-test, the research found the result of post-test and pre-test between experimental and control group, and the mean of both results. From those two results, the researcher found whether skimming and scanning are effective as medium for reading ability and how the reading skills of the students in the experimental group are different from control group.

Instruments

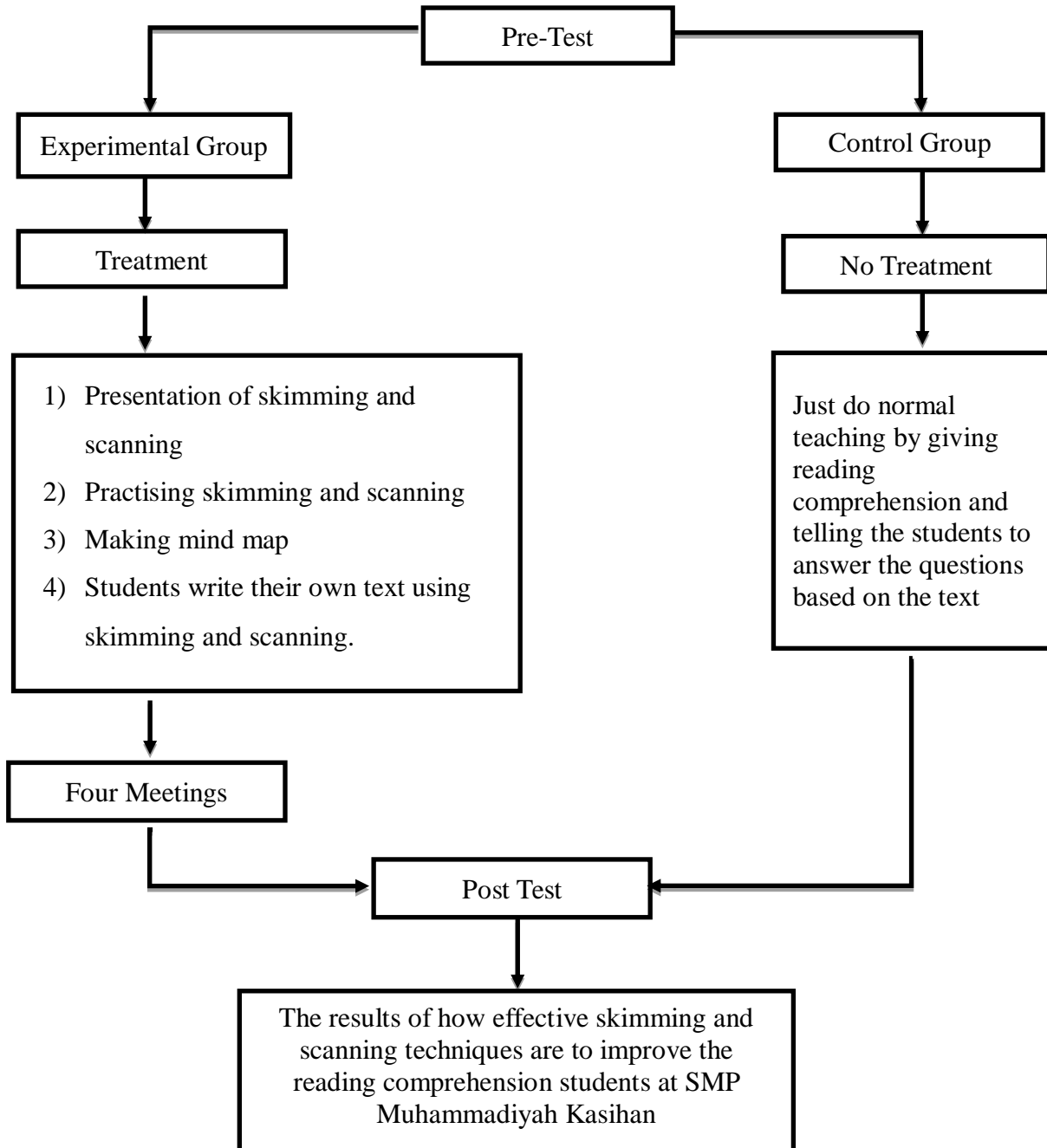
The researcher used three kinds of instruments. There were pre-test and post-test by using reading comprehension. Both groups did a pre-test before the experiment was started. The reason of doing a pre-test was because the researcher wanted to find out score that they

got before the treatment and the researcher compared it with the results of the post-test.

In here the students got twenty multiple choice questions for the test. The number of questions of pre-test and post-test was the same. The researcher made sure the validity and the reliability of the questions by choosing the right category of questions of the participants which was the UNAS reading test. The reason why the researcher chose that was because UNAS reading test is already known or familiar by all of the school in Indonesia and all of students of junior high school were already familiar with the structure of the questions. The students in experimental group did a treatment after having the pre-test. The treatment was form of presentation, practices to do skimming and scanning, working in group, and making a mind map. The treatment was conducted for four meetings.

In the last meeting, the researcher gave a post-test to identify the effectiveness of skimming and scanning. The supervisor and the researcher scored the results of how effective skimming and scanning techniques are to improve the reading comprehension of students of SMP Muhammadiyah Kasihan.

Figure 3. Instruments



Data Analysis

The researcher wanted to see the significance of the research instrument. It is shown by t-test. To analyze the data, the researcher used t-test. The t-test formula used in the research was written as follows:

$$t = \frac{\text{sample one mean} - \text{sample two mean}}{\text{standard error of the difference in mean}}$$

The reason why researcher chose dependent sample t-test was because this formula is usually used to compare and to find out the results between pre-test and post-test as supported by Cohen, et al. (2007) stating “t-test is used to discover whether there are statistically significant differences between the means of two groups, using parametric data drawn from random samples with normal distribution” (p. 543).

In data analysis the researcher analyzed one research question which is how effective skimming and scanning techniques to improve the reading comprehension of students at SMP Muhammadiyah Kasihan are. The researcher analyzed it by comparing the result of post-test between experimental and control group using t-test. The reason the researcher used t-test was because based on Vanderstoep and Johnston (2009) a t-test is use to test two-group. In here the researcher used SPSS to measure the t-test.